

Modern
Learning
Environments
Part A

Stephen Harris
scil.com.au
@stephen_h





me

[@stephen_h](https://twitter.com/stephen_h)
scil.com.au

35 years in schools

SCIL: Founder Director Explorer
Principal: NBCS Sydney Australia
[f2f + blended + online school]

<http://stephenharris.me>

'This is the first generation of people that work, play, think and learn differently than their parents. They are the first generation to not be afraid of technology. It's like the air to them.'

Don Tapscott

What elements of current

classroom

pedagogy can be

problematic?

relational tensions

teacher as driver

absence issues

one size fits all

confrontation


control

It is **nothing** short of a miracle
that **modern methods** of
instruction have not yet entirely
strangled the holy
curiosity of inquiry.

Albert Einstein

why is this

important?



OCEANS OF INNOVATION

THE ATLANTIC, THE PACIFIC,
GLOBAL LEADERSHIP AND THE
FUTURE OF EDUCATION

– unprecedented in fact. They lay a foundation for the next 50 years – a much better foundation than exists in many Atlantic systems – but the mix of factors that brought those achievements will not be capable of meeting the challenge ahead.

Among other things, an education revolution will be required. It will need to be based not just on the growing evidence of what works, but on the capacity of the systems to innovate. It will need to unleash the leadership capacity that the next 50 years will demand. The Pacific region's future and its capacity to become an ocean of innovation is being shaped today, tomorrow and every day in the classrooms of Singapore and Kuala Lumpur, Melbourne and Valparaiso, San Francisco and Vancouver, Vladivostok and Shanghai, Hong Kong and Hanoi. On the success of those endeavours, all our futures depend.

Global Trends

2030

National Intelligence Council

GLOBAL TRENDS 2030:

ALTERNATIVE WORLDS

a publication of the National Intelligence Council



GLOBAL TRENDS 2030: AN OVERVIEW

MEGATRENDS

Individual Empowerment	Individual empowerment will accelerate owing to poverty reduction, growth of the global middle class, greater educational attainment, widespread use of new communications and manufacturing technologies, and health-care advances.
Diffusion of Power	There will not be any hegemonic power. Power will shift to networks and coalitions in a multipolar world.
Demographic Patterns	The demographic arc of instability will narrow. Economic growth might decline in “aging” countries. Sixty percent of the world’s population will live in urbanized areas; migration will increase.
Food, Water, Energy Nexus	Demand for these resources will grow substantially owing to an increase in the global population. Tackling problems pertaining to one commodity will be linked to supply and demand for the others.

GAME-CHANGERS

Crisis-Prone Global Economy	Will global volatility and imbalances among players with different economic interests result in collapse? Or will greater multipolarity lead to increased resiliency in the global economic order?
Governance Gap	Will governments and institutions be able to adapt fast enough to harness change instead of being overwhelmed by it?
Potential for	Will rapid changes and shifts in power lead to more intrastate and interstate conflicts?

Risk of water wars rises with scarcity

Almost half of humanity will face water scarcity by 2030 and strategists from Israel to Central Asia strife.

Chris Arsenault Last Modified: 26 Aug 2012 09:47

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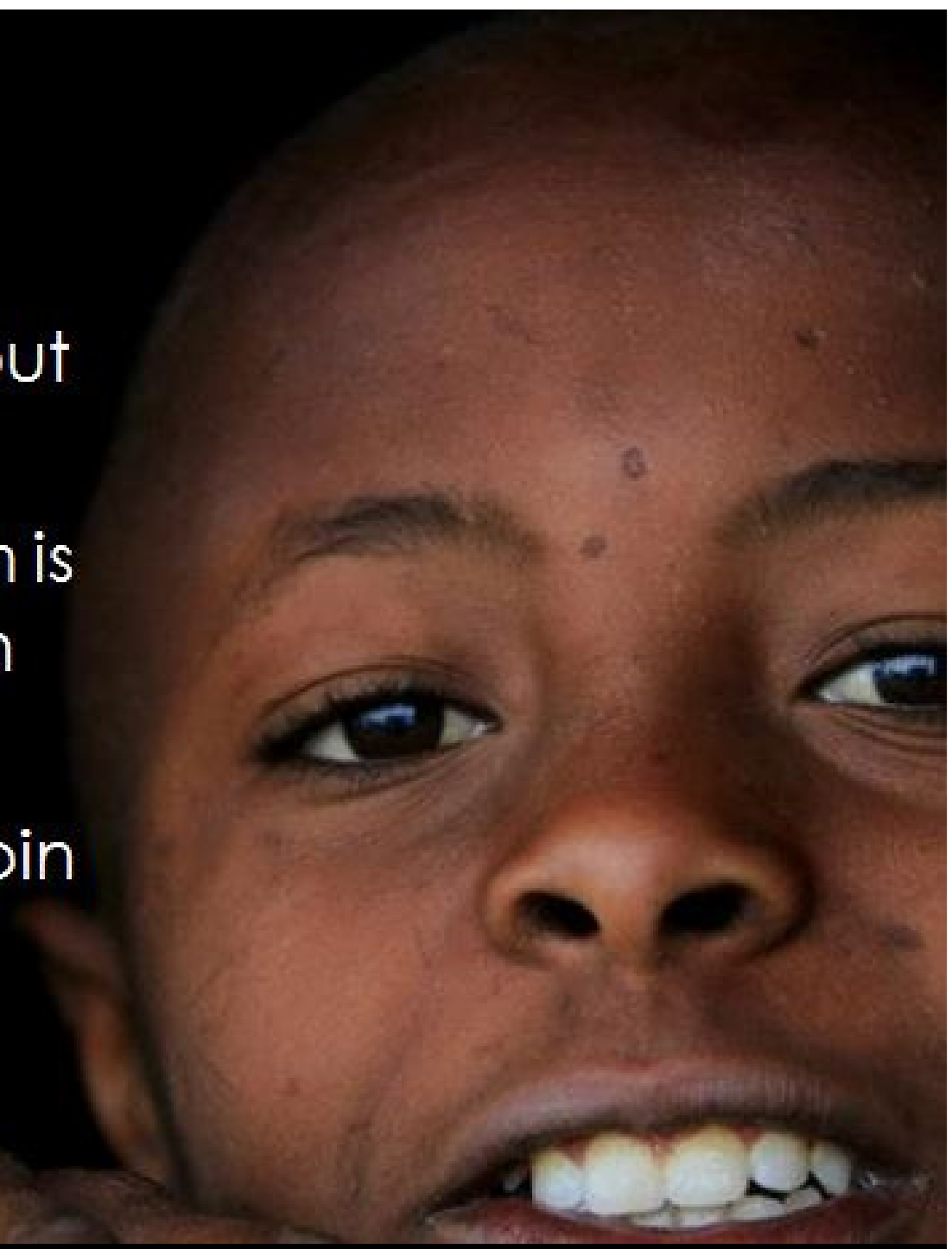


Why change?



Freedom is a
bigger game than
power. Power is about
what you can
control. Freedom is
about what you can
unleash.

Harriet Rubin



*“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot **learn**, **unlearn**, and*

***relearn**.”*

Alvin Toffler



What is

paradigm

shift?

A paradigm shift (or revolutionary science) is, according to Thomas Kuhn, in his influential book *The Structure of Scientific Revolutions* (1962), a change in the **basic assumptions**, or paradigms, within the ruling theory of science ... Since the 1960s, the term has also been used in numerous non-scientific contexts to describe a **profound change in a fundamental model** or perception of events ...



UK: school or **prison**?



UK: school or prison?
silence, separation & surveillance

2012 UK expenditure per child = £6,500 (av)
2012 UK expenditure per prisoner = £37,000 (av)



How does a paradigm change?

What happens when a **paradigm** changes?

What does **change** look like in an
educational context?

What is the
pedagogy of the
new paradigm?

... in the background of our thinking ...

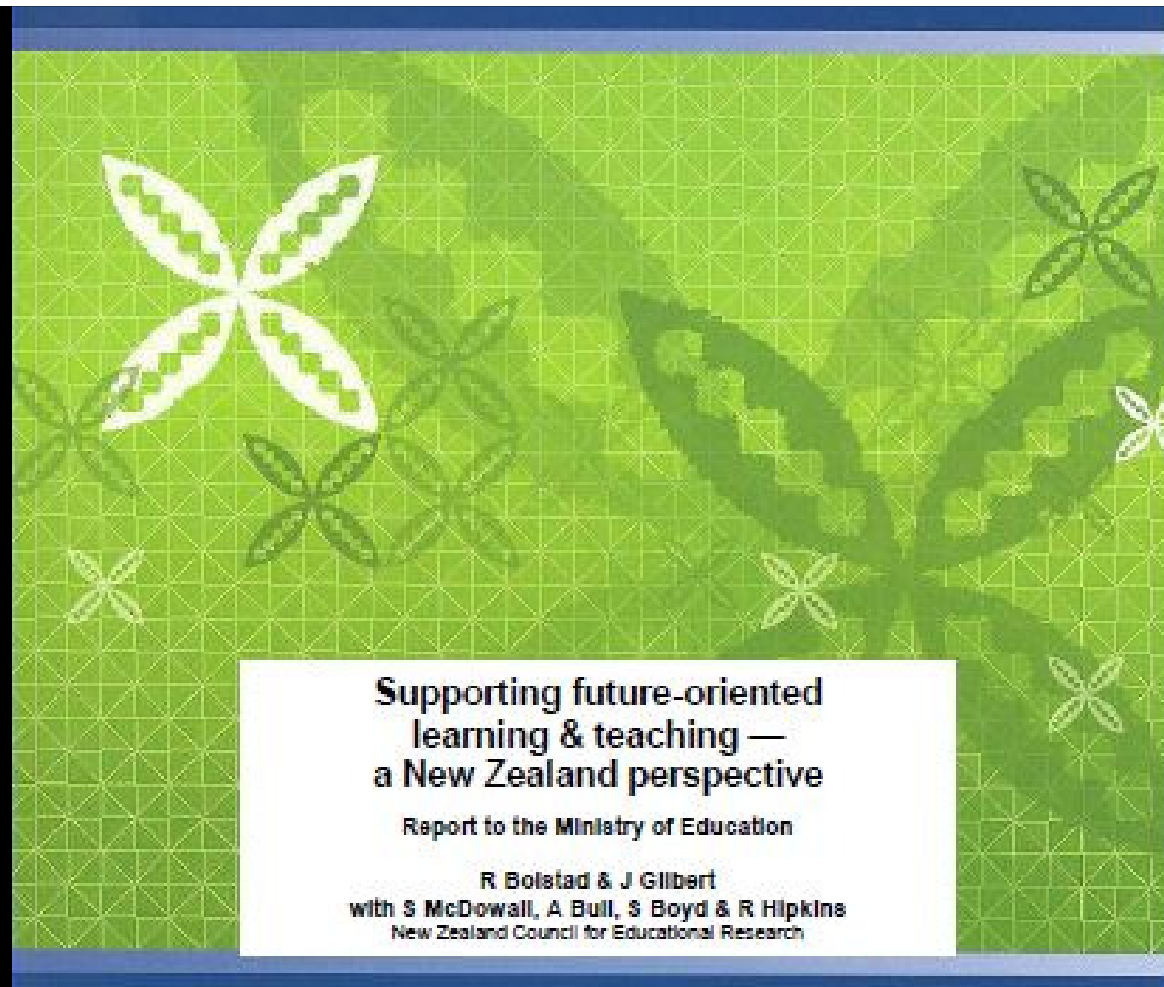
Blooms

Habits of Mind

21st century skills

Multiple intelligences

5 minds for the Future



Supporting future-oriented learning & teaching:
a New Zealand perspective.
Report to the Ministry of Education
free PDF 2012

Innovation Unit UK free PDF 2012



Work that matters

The teacher's guide to
project-based learning

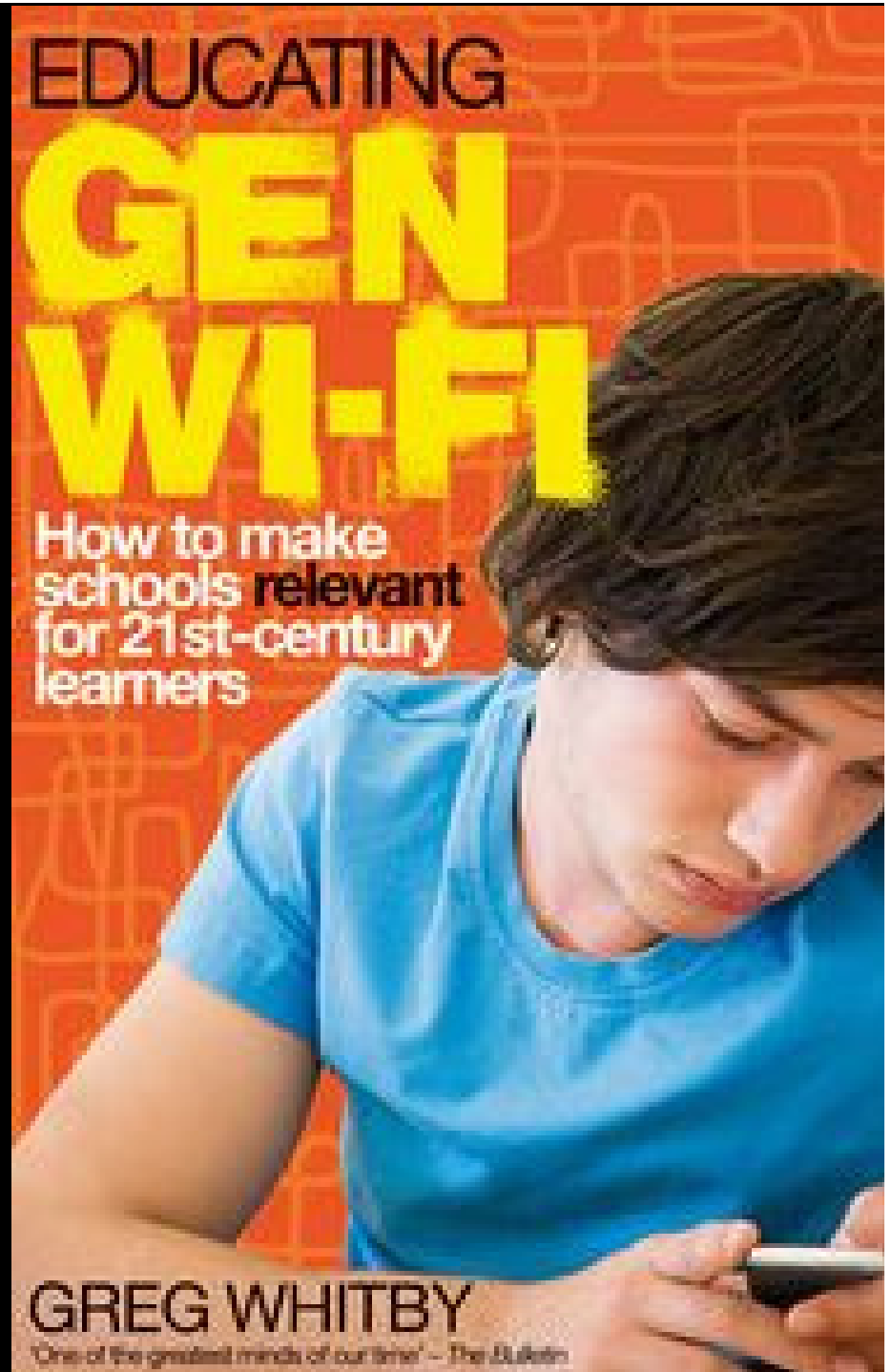
Greg Whitby
2013

EDUCATING
**GEN
WI-FI**

How to make
schools **relevant**
for 21st-century
learners

GREG WHITBY

'One of the greatest minds of our time' - The Atlantic





***Design
Thinking
for
Educators***

Version 1.5 | September 2012

IDEO
2012 2013
(free download)

Innovation Unit
UK 2013

(Kindle - Amazon - edition \$9.99)

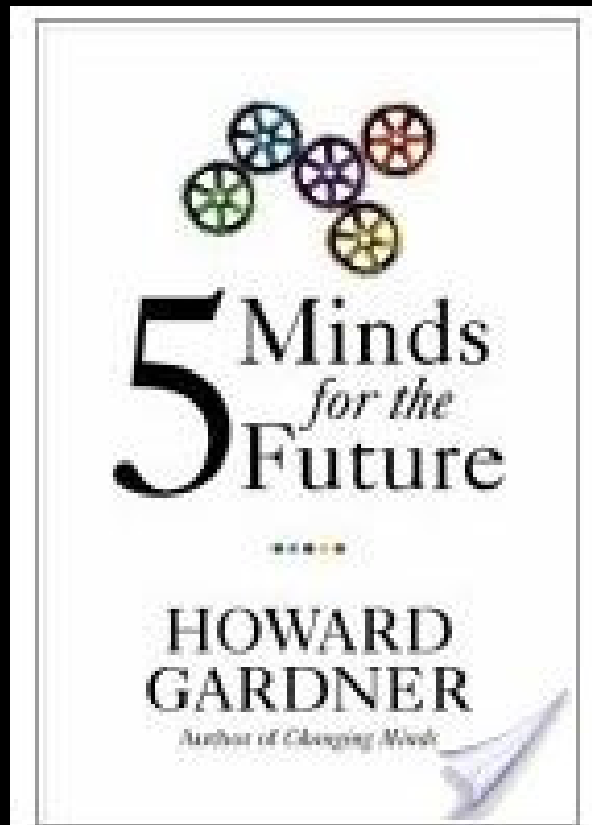


**REDESIGNING
EDUCATION**

SHAPING LEARNING SYSTEMS
AROUND THE GLOBE

INNOVATION UNIT
for the Global Education Leaders' Program

Gardner's 5 Minds for the Future



Disciplined
Synthesizing
Creating
Respectful
Ethical

The four “c’s” of the
21st century

Creativity

Collaboration

Critical thinking

Communication

Many schools have
5 year **strategic** plans or even
10 year **development** plans,
but fail to have
pedagogic vision!

2 yrs + 13 yrs + 4 yrs + 2014
Preschool + school + university + date

= 2033

Schools need a 20+
years pedagogic vision!

‘Invent the

future,

don't prevent

the future’

The contexts for life are changing:

- social
 - economic
 - technological
 - relational
- generational
 - mobility
- globalism




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EMERGING TRENDS

TREND 2: DIGITAL INTEGRATORS



4,000,000,000
VIEWS PER DAY



500,000,000
TWEETS PER DAY



4,700,000,000
SEARCHES PER DAY



1,000,000,000+
ACCOUNTS



1,400,000
APPS IOS/ANDROID



NAVIGATION

NEWS

CLOCK

WEATHER

CAMERA

SHOWROOMING

61%

OF GEN Y

HAVE USED

SMARTPHONES

IN-STORE TO...

TAKE A PHOTO

CHECK PRICES

ACCESS CONSUMER BLOGS

EMERGING TRENDS

TREND 6: FRAGMENTATION

POST-SCHOOLED



EMPLOYMENT

GAP YEAR

INTERNSHIP

PRIVATE COLLEGE

VOLUNTEER

UNIVERSITY

VOCATIONAL ED.

POST-LINEAR

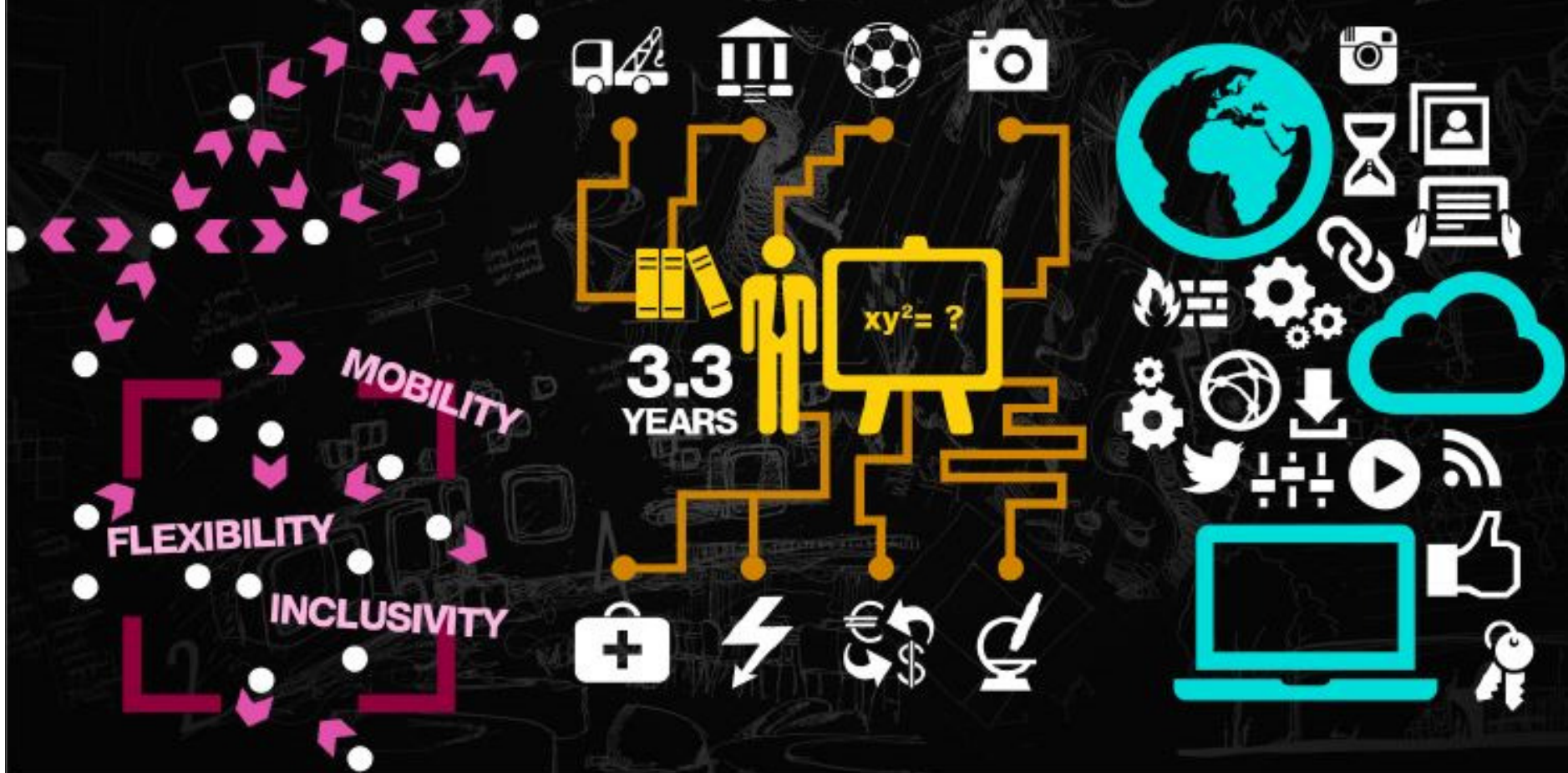
EMERGING TRENDS

TREND 3: XYZ SCHOOLS

GEN X
LEADERS

GEN Y
TEACHERS

GEN Z
STUDENTS



Change.



Google's Trillion-Dollar Driverless Car -- Part 4: How Google Wins



35 comments, 32 called-out

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Part Four of a Six-Part Series

Driverless cars have the potential to save millions of lives and throw trillions of dollars in existing revenue up for grabs while sending a tsunami of business disruption across multiple industries.







Do your children view schooling as being like a **long distance economy** plane journey?

You strap yourself in, find as many distractions as you can, disengage and bunker down for the long haul **hoping the destination** is worth it!





Let's
consider



19th century transportation

21st century transportation



19th C banking



tual Bank 21st century banking

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19th century architecture



21st century architecture



19th century medicine



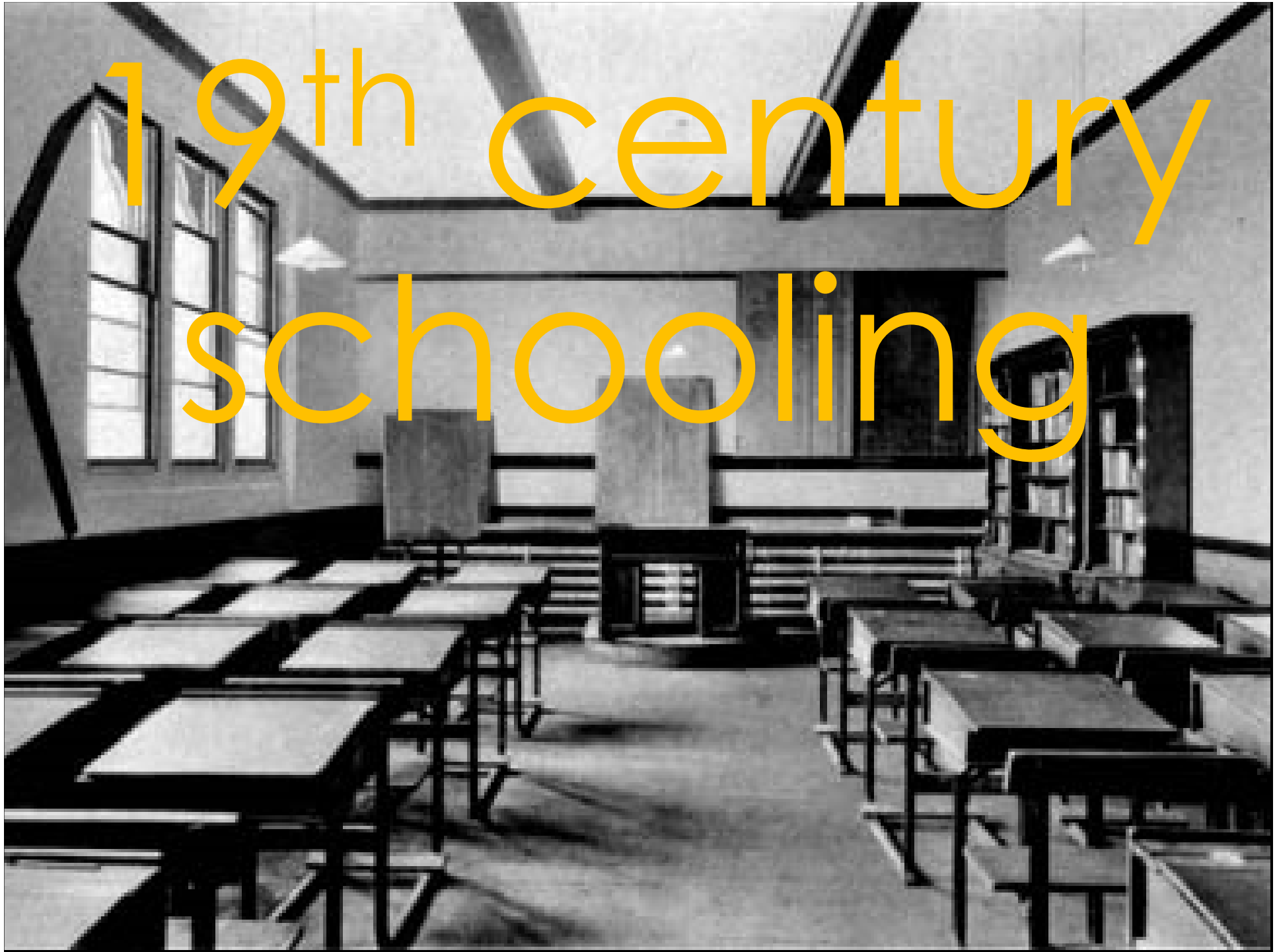


21st century medicine

but



19th century schooling



with



21st century
schooling



21st century
schooling

What is the new
paradigm?

Elements to

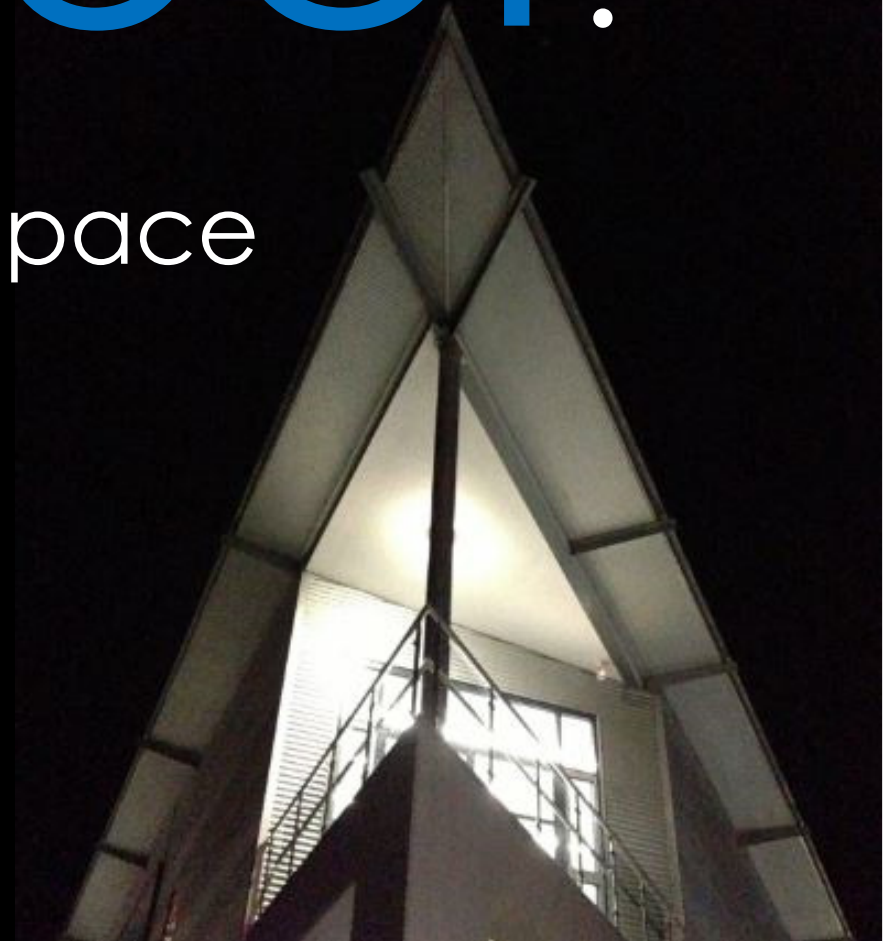
connect:

Pedagogic space

Physical space

Virtual space

Cultural space



What could **new**
pedagogy look like?

highly collaborative

Teachers **team** as

in a game of soccer or netball

moving to where the
ball will be, not where it is

Elements of collaboration:

- shared **language**

- high **trust**

- **modular** design

- clearly **owned**

- highly **professional**

innovation and
creativity should abound

Elements of collaboration

take time to

mature in an organisation

Real estate is both

physical and

virtual

Agile space – constantly
transforming,
adjusting and
responding

Spaces for:

expertise, information,
interaction

contemplation, **casual**

collisions and collaborations

inspiration, creativity, and

reflection

Move away from the 'factory-style' paradigm

Separate rooms

Separate and separated educators

Separated class groups

Separate desks & chairs or rows

Separate preparation

separate



Find schools or companies from whom
you can **learn**

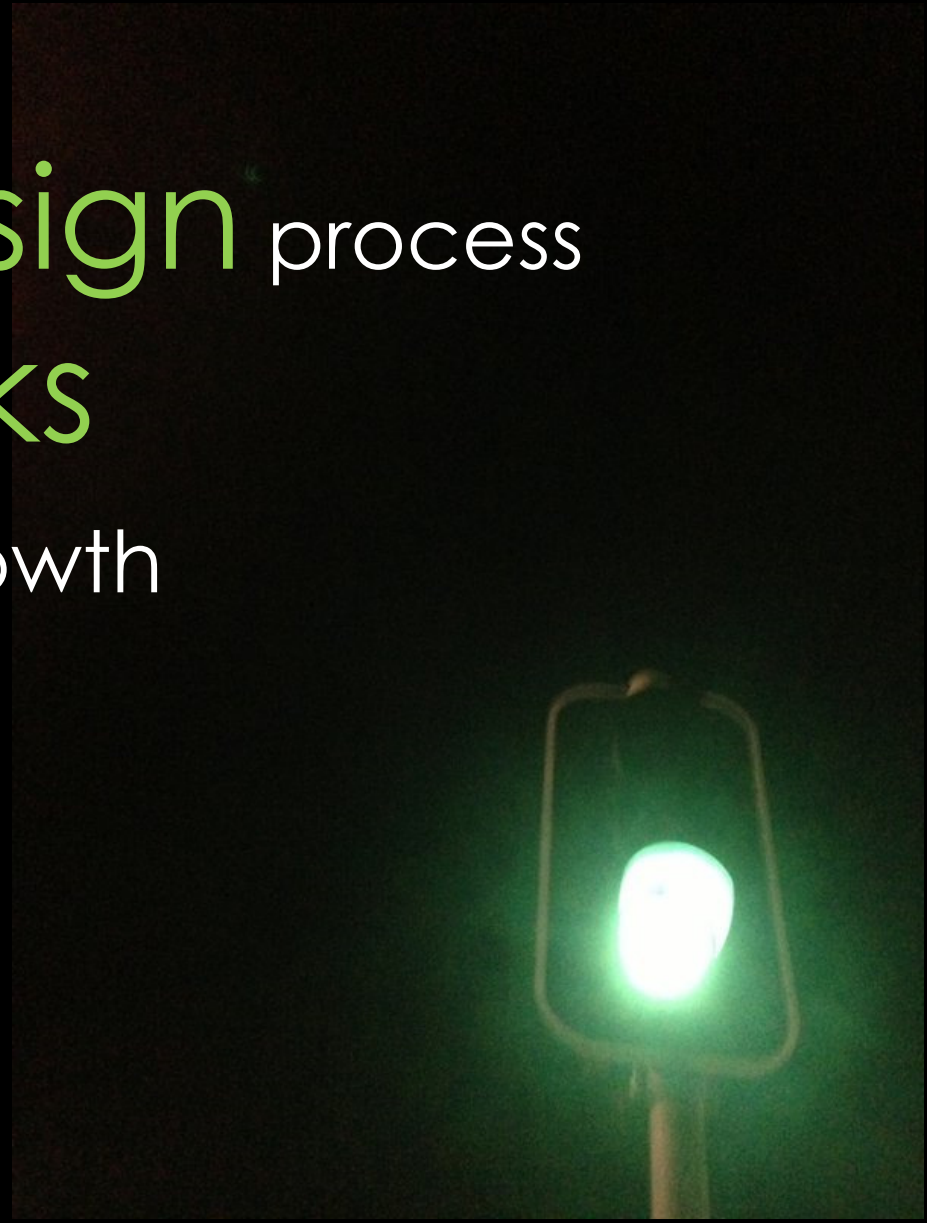
Engage with the **design** process

Dream big & take **risks**

Embrace failure as growth

opportunity

Move confidently





Ask some **BIG** questions

Does my practice **reflect** my educational beliefs?

What if we believed **every** person can be successful?

What are we prepared to **change** in order to maximise engagement?

How many school buildings
designed in the last 10 years
are already needing
modification?

Will school buildings as
currently designed
and built have **currency** in
one or two decades?

What **implications**
does **mobile** technology hold
for education?

How might school

design have an

impact on helping keep
technology as the pedagogic

tool, not the **driver**?

How might the
economics of learning
impact the **future** of
schooling?

The **future** of education
will be

what **we** make it to be!

What spaces do I like?



bridging the divide



mono-functional to multi-functional

push to pull teacher to teams

control to empowerment

management to engagement

teaching to learning passive to active

static to mobile batch to personal

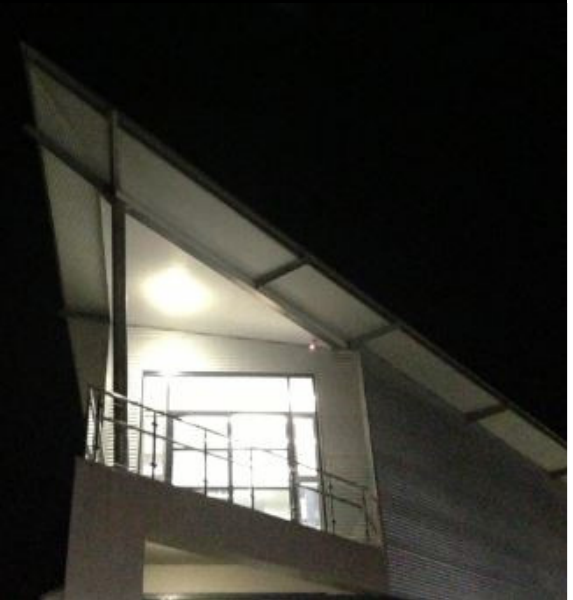


Design considerations for NBCS:

- don't design a **future** problem
- design to **inspire**
- think **longer** term, not short term
- design an **agile**, blank canvas
- **think** differently

design principles for buildings & spaces:

- **agile**, mobile, adaptive
- educative, **practical**
- **multi functional**, multi modal
- **sensitive** (voice, touch)
- personal, **relational**
- **community**-building
- diverse, **authentic**
- **transparent**



How has **education design**
responded to this challenge?





Sorry, **inadequate**.

No disruption of mental models there.
The encouragement would be to

revert, not relearn.



The end product of education
has to have a **purpose**:

- **Social cohesion**
- **Community development**
 - **Job creation**
- **Purpose & meaning**
 - **Future oriented**
- **Growth**

Some

questions to

frame our

conversation:

Adapted from Edna Sackson

whatedsaid.wordpress.com/2013/08/03/10-questions-to-help-you-become-a-better-teacher

1. What do I **believe**
about learning?

2. Does my practice
reflect my beliefs?

3. How do I **shift** my focus from what I teach to how they learn?

4. Is the learner at the **centre** of everything?

5. Do my students
own their learning?

6. How can I 'make
friends with the
curriculum'?

7. How do I encourage
creativity?

8. How can I ensure the
learning **space**
promotes learning?

9. How can I ensure I
am a **learner** first?

10. How can I
contribute to a
culture of learning?

How should this affect
curriculum design?

How should this affect **spatial**
design principles?