Fast-forward to New Basics…
Understanding the Modern Learner’s Context for Transformative 21st Century Policy Leadership
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WORLDWIDE AROUND 1 IN 4 YOUNG PEOPLE IS NOT IN WORK OR EDUCATION

Percentage of 15-24 Year-Olds

2012

= 290M
THE PROPORTION OF YOUNG PEOPLE NOT IN WORK OR EDUCATION REMAINS A WORLDWIDE PROBLEM

Percentage of 15-24 Year-Olds

- OECD COUNTRIES: 15%
- EAST ASIA & THE PACIFIC: 18%
- SUB-SAHARAN AFRICA: 22%
- LATIN AMERICA: 23%
- SOUTH ASIA: 31%
- MIDDLE-EAST & NORTH AFRICA: 41%

2012
EVEN AFTER SPENDING FOUR YEARS IN SCHOOL, 250 MILLION CHILDREN STILL CANNOT READ OR WRITE
OVER 770 MILLION ADULTS AROUND THE WORLD, 2 OUT OF 3 OF THEM WOMEN, CANNOT READ OR WRITE

Adult Population over Age 15

2011-2012

17% OF THE GLOBAL ADULT POPULATION CANNOT READ THIS SENTENCE IN THEIR NATIVE LANGUAGE
The Challenge of Schooling in the 21st Century…

For the **most able**…..the USA…

….**how are they doing?**

- Less than 65% of secondary students complete 12 years of education
  - more than 50% of minorities **drop out**.
  - One million American students **drop out** of school every year
How the demand for skills has changed
Economy-wide measures of routine and non-routine task input (US)

The dilemma of schools:
The skills that are easiest to teach and test are also the ones that are easiest to digitise, automate and outsource

(Levy and Murnane)
In the new world of work, unemployment is high, yet skilled and talented people are in short supply

*The Economist, Sept 2011*
The Challenge of Schooling in the 21st Century Education...

Increase Reach
57 million not at school
290 million not engaged
The Challenge of Schooling in the 21st Century Education...

- Increase Reach
- Increase Quality

250 million schoolchildren are illiterate after 4 years
The Challenge of Schooling in the 21\textsuperscript{st} Century Education...

Rethink Pedagogy
Too many educated young people are unemployed

Increase Reach
Increase Quality
The Challenge of Schooling in the 21st Century Education...

- Rethink Pedagogy
- Increase Reach
- Increase Quality
Understanding the Modern Learner’s World
ideasLAB aims to challenge the way we think about learning and teaching, and find new ways to take technology into the classroom.

Download the ideasLAB June showcase publications including:

- Big ideas, Unlimited Possibilities & Agile Development
- Virtual Pedagogies for Contemporary Teaching

ideasLAB's new white paper explores a new model for Collective Knowledge Construction - download it now!

How can Collective Learning Environments influence form course design?

Theme: Understanding Virtual Pedagogies

Pulse enables anyone to track and analyse websites. Launching at ETE - June 27th.
We’ll never solve these issues if we keep looking back.
We have to look forward.

We must look to the way our young people are living in the modern world and how that impacts on how they learn and the relevance of their schooling.
This is schooling in an Age of Abundance and Exponential Change
Next year more than ONE BILLION photos will be uploaded & shared every day.
**Video** = 100 Hours Per Minute Uploaded to YouTube, Up from ~Nada Six Years Ago

YouTube Hours of Video Uploaded per Minute, 6/07 – 5/13

Mary Meeker / Liang Wu  May 29 2013
This is schooling in an Age of Ambiguity and Uncertainty
“The transformation of work requires much more than a mastery of a fixed curriculum inherited from past centuries.

Success in the slowly changing worlds of past centuries came from being able to do well what you were taught to do.

Success in the rapidly changing world of the future depends on being able to do well what you were not taught to do.”

Vision for Education: Caperton & Papert
Where students are learning is changing

When students are learning is changing
What students are learning is changing

How students are learning is changing

Where students are learning is changing

When students are learning is changing
Rethink...

How does the availability of diverse, high-quality and easily accessible content change the way our students learn?
The Shifts in the Modern Learning Environment....

- **The Social Learner**
  - …moving from Me to We

- **Self-directed**
  - …moving from Dependency to Autonomy

- **Inquiry-based**
  - …moving from the Known to the Unknown
Modern Learning Principles

Principle 1: Modern learners understand that facts are always at hand.

Principle 2: Modern learners understand the continuous feedback is crucial to learning.

What are they?

Principle 6: Modern learners understand that it is more effective to contribute to an existing project than to starting their own project.

Principle 7: Modern learners understand that it is better to repurpose someone else’s project than to start their own from scratch.

Principle 8: Modern learners understand that complex learning requires continuous learning.

Principle 9: Modern learners understand that modern learning requires modern tools.
Emerging web technologies are providing an “architecture for participation”...for all students

We are now...

• challenging traditional approaches to how our students learn.
• challenging our assumptions about classrooms and teaching.
• challenging our assumptions about knowledge, information and literacy.

What are the implications for your schools?
Rethink...

How do schools respond to students as autonomous, socially-connected, inquiry-based learners?
This is possibly the most disruptive moment ever in education
Yet there has never been a more **inspiring** time to be a teacher...
..or a more exciting time to be a learner.
..or a more challenging time to be a political or policy leader.
In light of the **context** of our young people growing up in a **digitally-rich, abundant, ambiguous and uncertain** world, ...
What are the implications for policy around...
Curriculum
Assessment
Pedagogy
Budgets
Staffing
Infrastructure and Scheduling
More profoundly, in the context of the world our modern learners are growing up in, isn’t it about time we thought much more ambitiously ….

…about exactly what technology might make possible for learners, teachers and schooling?
Surely it’s a time for exploring new basics..

...new models of school,

...new roles for teachers

...and learners
...and for defining **new literacies** ..

...that **better** equip our young people for their lives in the modern world which they are now part of?
What are your expectations about what technology now makes possible for learners, for schools, and for teachers?
Aligning expectations and the assumptions they are based on...

.. and the implications for Policy
So why do so many ICT policies have limited impact?

- Not a policy but projects—policy in bits and pieces
- Current policies are replaced by the new government
- The policy focuses only on ICT
- The policy provides a short-term strategy without a sense of where this will go in the long-term
- The policy is organizationally isolated
- The policy does not specify measurable goals
- Researchers describe a gap between rhetoric in government policy and reality of education practice
- Policies are too often based on incorrect assumptions, which create unrealistic expectations for what can be realistically achieved.
Clarifying Expectations... about access

Providing a computer Lab provides adequate access to technology for students

Assumptions

- Scheduled access is adequate c.f. on demand.
- This is the best model of access available.

* The Golden Rule of Access- more matters, focus wins
..it’s about affordable access to a broad range of technologies...

The Maker Movement: Fabrication and Additive Manufacturing
Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software.

It's intended for artists, designers, hobbyists and anyone interested in creating interactive objects or environments.
Clarifying Expectations... about access (part 2)

Students can bring their own device to school. (BYOD)

Assumptions

• They have a device to bring
• All devices are the same
• The diversity of devices is manageable, both in the classroom and technically
• This is equitable
Clarifying Expectations...

Technology can be used to deliver traditional pedagogy effectively.
Clarifying Expectations...

Technology can be used to deliver traditional pedagogy effectively

Assumptions
• This is transformative. Delivery or pedagogy?
• Completion rates will be similar
• This is the best we can expect from a shift to the digital medium
• This is cost-effective
Clarifying Expectations... around digital textbooks

Providing each child with a tablet and digital textbooks will provide significant cost savings to our education budget.

Assumptions

- Digitizing textbooks has benefits besides a change of medium
- Digital learning materials will engage and motivate our children
- Such use gives worthwhile ROI

“Many people are surprised to discover that calculating costs associated with the introduction and use of digital teaching and learning materials is often a non-trivial endeavor.” World Bank
Clarifying Expectations… ‘The Hole in the Wall’

Technology allows all learners to be more self-directed
“Education is a self-organizing system, where learning is an emergent phenomenon.”

Sugata Mitra 2013
Clarifying Expectations... ‘The Hole in the Wall’

Technology allows all learners to be more self-directed

Assumptions

• Such a process does not necessarily require the mediation of a teacher... or at least the intervention of a very highly trained teacher.
• The student also always has access to the internet

*What are we assuming self-directed actually means?
Clarifying expectations... around transformation

Providing each student with access to a laptop or tablet will transform teaching & learning.
But what if every child had her own laptop,

...and nothing changed?
Providing each student with access to a laptop or tablet will transform teaching & learning.

Assumption
• There is something innate in a laptop or tablet that will drive transformation.
“Our goal must be to find ways in which children can use technology as a constructive medium to do things that they could not do before; to do things at a level of complexity that was not previously accessible to children”

Prof. Seymour Papert
Mathematician, Scientist, Educator
Clarifying Expectations... about teachers

To ensure effective use of technology we expect to have to provide extensive, and expensive professional development for teachers.

Assumptions

• Professional Development is something we must deliver
• Teacher competence and confidence is directly related to the amount of PD that is provided.
Teacher competence, and confidence in innovating with technology...

...has far more to do with attitude, access, culture and expectations, than the amount of formal professional development courses they might take.
If we expect our students to be more self-directed in their learning...

...shouldn’t we surely expect it of our teachers also?
Clarifying Expectations... about ‘The Natives’...

Once there are more younger teachers in the workforce, they will use technology in innovative ways.

Assumptions

- All young teachers are ‘power’ technology users.
- All young teachers will naturally use the technology to be pedagogically innovative.
- Undergraduate studies are preparing them for such practice.
Clarifying Expectations...

Technology allows us to extend the place and time of learning beyond school walls to better embrace informal learning opportunities.
Clarifying Expectations...

Technology allows us to extend the place and time of learning beyond school walls to better embrace informal learning opportunities.

Assumptions

- Children will have access to both a computer and the internet when not at school.
Clarifying expectations...

Increased access to technology lays down the foundation for a knowledge-based economy

Assumption

- The level of access is not important
- Increased access alone will bring about this shift
Clarifying expectations... *around assessment*

Providing improved access to computers will extend and improve our assessment options

**Assumptions**

- Assessment will be limited to the times students have access to computers
- Assessment pedagogy will transfer easily from hard-copy to the digital format.
Clarifying expectations… around personalisation

Access to technology will unlock the possibility of personalized learning for all our young people

Assumptions
• We have the resources, curriculum, new forms of assessment, and teachers who can adapt to such an environment
• What assumptions are making by what we mean by personalised? In what ways will we be personalising learning?
What expectations do your students have of what technology now makes possible for them?
Insights, Challenges & Possibilities: Snapshots from around the world
Argentina

Overview

• Connect Equality is delivered across the country 3.5 million Classmate PC’s to all students and teachers in public institutions of secondary education, special education and teaching, within approximately three years.

• Vision is for a digitally literate society in ICT’s, democratizing access to technology resources and information, without, economic or social discrimination space, reaching across country.
Argentina

Policy Implications

Insights
• Attention to detail (parent evenings, technical support) meant fewer problems.
• Content and professional support for teachers was critical

Challenges
• Scaling adaptable pedagogy.
• Connectivity. Election looming. Sustainable funding.

Possibilities
• The largest, fully scaled deployment to date in the world.
Take the world's best courses online, for free.

Join 3.98,646 Courserians. Learn from 300 courses, from our 83 partners.

How it works »

 MASSIVE OPEN ONLINE COURSE (MOOC)

Harvard Professors Raise Concerns over MOOCs’ Threat to Higher Education

Written by Michelle Shumate. Created on Thursday, 30 May 2013 13:32.
MOOC’s

Policy Implications

Insights
- unprecedented registrations from across the globe.
- For profits, and not-for-profits.

Challenges
- Access- device and connectivity.
- Retention rates. (currently <10%)

Possibilities
- Interesting option for scaling teacher training?
- Sustainable, affordable, scalable access to experts.
- Potential in K-12?
Portugal

Overview

• Pioneered a whole country deployment, Escola and Magellan from 2007.

• GDP same as Barbados.

• The Magellan initiative covered secondary schools, Escola primary.

• Nearly one million students over 3 years received fully connected laptop
Portugal

Policy Implications

Insights
• Built on an economic ecosystem: focusing on a sustainable economic model to fuel local job creation in local IT industries and expand international trade opportunities.
• Public-private partnerships- Telcos: Connectivity included
• Co-contribution from families

Challenges
• The order of magnitude of the initiatives
• Ensuring pedagogy leveraged the opportunity

Possibilities
• The economic benefits were both direct and indirect

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Overview

• Initiative to equip all Grade 5 and 6 students across Mexico with their own personal technology

• Proof of Concept now underway for 250,000 students across Mexico

• Rollout next year to 5 Million students, then 2.5 million every year thereafter.
Mexico

Policy Implications

Insights
• Proof of concept is to help craft and articulate a clearly defined vision for what this will reasonably make possible for students, and to refine implementation.

Challenges
• Many. Sustainable funding models, diversity,
• Telco coverage, geography and teacher ability.

Possibilities
• Exploring co-contribution.
• New roles might emerge to compliment the existing teaching workforce with more self-direction from students. Teachers as learning activators?
What stands between these challenges and possible solutions?
Visionary policy leadership based on informed assumptions and experience.

Let us ensure over the next 2 days we truly re-imagine the possibilities for technology within the context of our modern learner’s world.
Modern technologies provide students with the potential for experiences of unprecedented breadth, depth and relevance.
We can now have the conditions for modern learners to tackle projects of a complexity previously unimaginable.