

Standing on the Shoulders of Giants: Futures thinking and education research in, about & for Ontario

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“Prediction is very difficult,
especially about the
future”

Niels Bohr

Building on Past Knowledge

○ Bernard of Chartres
(circa 1130):

“We are like dwarfs standing upon the shoulders of giants, and so able to see more and see further than the ancients”

○ John of Salisbury (1159):
“Bernard of Chartres used to say that we are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness on sight in our part, or any physical distinction, but because we are carried high and raised up by their giant size.”



**"IF I HAVE
SEEN FURTHER,
IT IS
BY STANDING
ON THE
SHOULDERS
OF GIANTS."**

ISSAC NEWTON (1643 - 1727)

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Thank You!



“... stepping on the toes of
those who came before us
instead of climbing on
their shoulders”

Dan Ingalls (1980s)

Standing on the Shoulders of Giants

- Competition
- Individual
- Innovative
- Intellectual
- Collaboration
- Community
- Cumulative
- Applied

AERO's 40th Anniversary

AERO Core Values

We value:

collecting, analyzing, interpreting and reporting data ethically and clearly;

working collaboratively with all education partners, institutions and organizations;

working together as a professional learning community;

evidence-based approaches for establishing policy, decision making and implementing practices;

engaging in timely, public conversations on educational issues.

Futures Thinking

"Futures thinking is perhaps better understood as an immune system for our civilization. By examining and testing different possible outcomes – potential threats, emerging ideas, exciting opportunities – we strengthen our collective capacity to deal with what really does transpire. Thinking about the future, and doing so in a careful, structured, open and collaborative way, makes us a stronger civilization. Focusing only (on) the challenges of the present may seem imperative, especially when those challenges are massive and frightening. But without a sense of what's next, a capacity for understanding connections and horizons, and a vision of what kind of world we want, our efforts to deal with today's problems will inevitably leave us weakened, vulnerable, and blind to challenges to come."

Cascio (2009)



The Future of Schooling: 2051



The General Reality of Educational Change...



Draisine
1816



High wheeler
1873



Macmillan's self-propelled
bicycle
1839



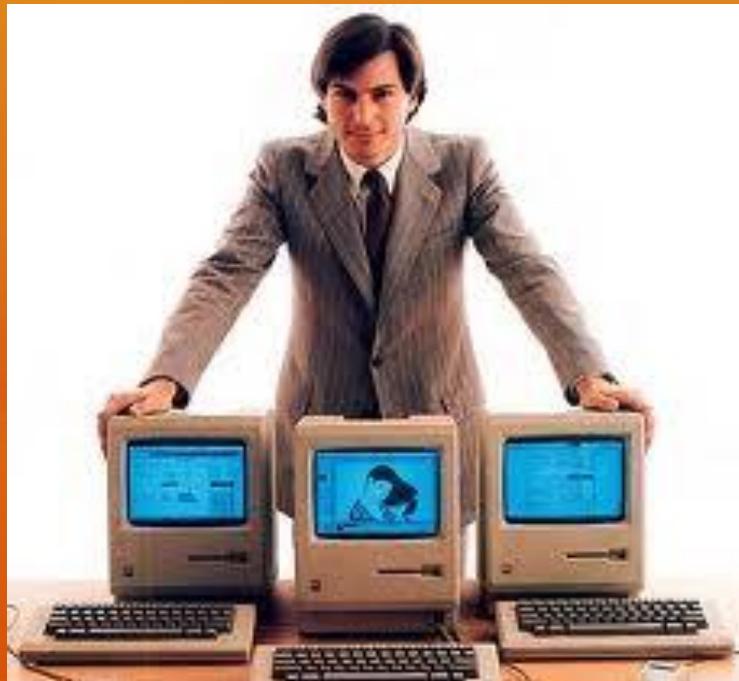
Modern touring bicycle



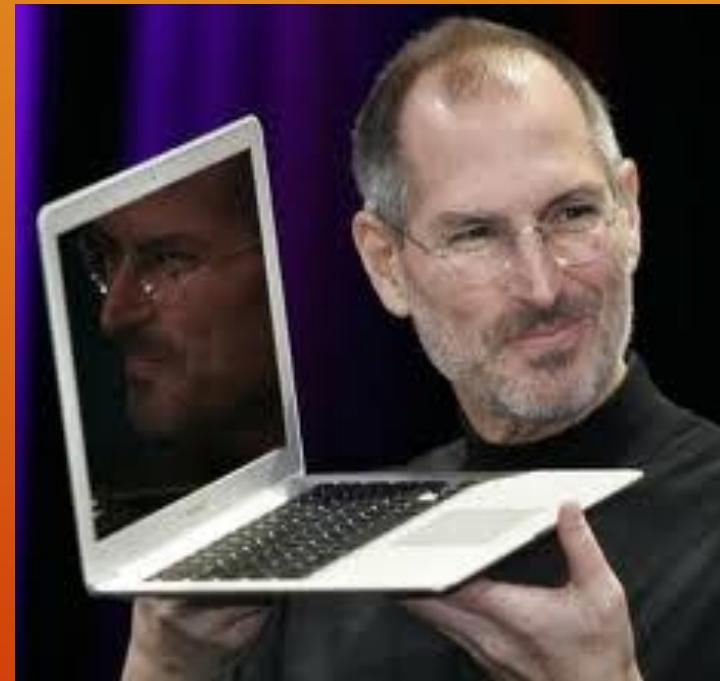
Modern mountain bicycle

The Increasing Pace & Complexity of Educational Change

1984



2008 - 2011





An Evidence-Informed Approach...

- Strategic thinking
- Systems perspective
- Intent focus
- Intelligent opportunism
- Hypotheses/questions
- Environmental scanning
- Trends analysis
- Mapping possibilities
- Scenario development

Futures

- Probable
- Possible
- Preferable
- 'Wild card'!

Schooling for Tomorrow Project (OECD, 2000s)

What is shaping the future of schooling?

Trends identified across OECD countries:

- Declining birth rates
- Increasing income inequality
- Increasing economic globalization
- Declining working hours/increasing part-time work
- Expanding world wide web
- Changing social interaction

Canadian Research for Today and Tomorrow

Social Sciences & Humanities Research Council (SSHRC) Strategic Priorities, 2010-2012. Three intended outcomes:

- 1. Developing talent**
- 2. Building knowledge and understanding**
- 3. Mobilizing knowledge**

Ontario's Immediate Future: Speech from the Throne (Nov. 22, 2011)

- “Ours is a time of significant global change, upheaval and uncertainty”
- Priority focus on strengthening Ontario’s economy and creating jobs
- Continued priority focus on education and health
- Education part of building future workforce and economic competitiveness
 - Expand full-day kindergarten
 - Increase literacy and numeracy results
 - Increase graduation rates
 - Expand postsecondary education and training provision and access: “We know that 70 per cent of all new jobs in the global economy will require postsecondary education and training”
- Balance the budget and seek efficiency and quality in public service: “Any reforms adopted must lead to better value for money through improved efficiencies and greater productivity”

Ontario's Futures

- Shifting global/provincial/local relationships
- Changing economies & workforce needs
- Changing societies, demographics & families
- Innovating to be a world-leader & embracing new technologies
- Expanding quantities & variable qualities of information & evidence
- Developing higher order skills & knowledge for 21st century needs
- Expanding educational opportunities & lifelong learning
- Furthering educational excellence
- Addressing inequities and inequalities
- Supporting individual, family and community health, well-being and development
- Attending to civic engagement and responsibilities

Ontario's Futures

Dealing with new realities
& uncertainties...

Being proactive to shape
our futures....

Futures for Education Research

In...

About...

For...

Ontario.

Education Research In Ontario

Probable:

- Ongoing educational, policy and public interest in high quality, timely and relevant research to inform decisions and actions
- Continued development of research culture & infrastructure
- Variable research capacity and infrastructure within and across education sector
- Wide range of researchers in different organizations/locations – school districts, universities, agencies, provincial organizations, government
- Loosely-coupled networks around general research interests/roles/shared commitments
- Range of forums, networks and mechanisms for connecting researchers and research
- Expectations that educators engage *in* and *with* research
- General economic constraint will place demands on increased efficiency, effectiveness, productivity and impact

Education Research *In* Ontario

Preferable:

- Well developed and sustainable research culture & infrastructure
- Identified research leaders and champions at all levels of the education system: all schools, all boards, all ministries, all universities
- Provision & development of professional learning, resources & materials to increase research capacity in schools, boards, ministries, universities
- Strong research literacy and capacity within and across education system to access, understand, evaluate and apply research
- Growth of current and future generation of education researchers with commitment & expertise high quality & relevant research applied to educational improvement
- Being an education research is a high demand, high value, high profile & status occupation
- Being leading-edge in methodologies, technologies and knowledge for conducting, communicating & applying research
- Tighter networks of researchers with increased collaboration on research, coherence of research activities and priorities, and commitment to shaping the future, including stronger networks (formal, semi-formal) around specific research themes/topics and approaches/methods

Education Research *About* Ontario

Probable:

- Wide range of small-scale short-time line projects, plus some larger-scale medium-term projects
- Continued duplication and/or isolation of effort
- Continued interest in 'telling our story' and providing evidence/data locally, regionally, provincially and beyond
- Despite volume of researchers and research activity, only a few may have significant profile and impact provincially, nationally and/or internationally
- Concerns to synthesize existing knowledge and evidence about Ontario
- Interest in what we know and can develop from cumulative bodies of knowledge
- Growing calls for and commitment to knowledge mobilization to share research about Ontario

Education Research *About* Ontario

Preferable:

- Demonstrated valuing of researchers throughout education system and substantial profile of education research in, about and for Ontario
- Robust up-to-date and well used forums and mechanisms (on-line, in person) for sharing Ontario research on common topics of research, policy and practice importance
- Easy, routine and useful access to existing and new data sets and evidence (quantitative and qualitative)
- Development of syntheses of what we know about education in Ontario from research, evaluation & data analysis
- Development of cumulative bodies of knowledge about education policies, practices and outcomes in Ontario through research collaborations within projects, across projects and over time
- High priority commitment and actual delivery of leading-edge knowledge mobilization about Ontario education research, including activities, networks, events and products
- Increased evaluation & reporting of processes, outputs & outcomes

Education Research For Ontario

Probable:

- Continued focus (at least short/medium term) to: Increased student achievement; Reduced gaps in student achievement; Increased public confidence in publicly funded education
- Continued influence of provincial priorities, contexts and results – both successes and challenges for education specifically and for wider economic & social development
- Enduring and emerging priorities for policies, practices & results, including:
 - Mathematics
 - Science
 - Higher-order skills across curriculum, instruction & assessments
 - 21st Century learning and education systems
 - Student engagement, personalization, pathways & progressions
 - Well-being
 - Equity – FNMI, special education, gender, ELL, poverty, diversity, sexuality
- Need to balance provincial priorities, local needs & research expertise/interests
- Increased focus on evidence to inform and evaluate efficiency, effectiveness, quality, economy & productivity
- Expectations that policy-makers and educators will use evidence
- Expectations that researchers will demonstrate value, quality and impact of research on measurable improvements & outcomes

Education Research For Ontario

Preferable:

- Clarity of ministry, university, board and school research agendas and actions
- Strong support for both breadth and depth of research activity, foci & methods
- Attending to short-term priorities plus longer-term development of research contribution and impact, particularly for emerging prospects & transformations in educational knowledge, understanding & action
- Research contributing to Ontario being an excellent and equitable education system, including expanding focus for next stages of:
 - Professional learning, leadership, peer collaboration & system improvement,
 - Continuous, sustainable & scalable school improvement,
 - Excellence in teaching & learning across subjects & grades,
 - Leading-edge in assessment and understanding of authentic learning, knowledge, skills & abilities,
 - Student engagement & equity,
 - Removing barriers to learning and advancing well-being,
 - Preparing global citizens,
 - Use, mobilization and impact of research connected to practice & policy

Education Research For Ontario

Preferable:

- Being evidence-based, research-informed (really!)
- High expectations for and delivery of high quality evidence from research, evaluation & data analysis
- Increased attention to evaluation as central to all education programs, initiatives and funding
- Routine methods exist and are used for discussing, sharing and supporting research priorities and actions across the education system connecting researchers, educators, policy-makers and other partners
- Ongoing opportunities for local sharing, regional development, provincial networking and international benchmarking of research activities, projects and findings
- Demonstrated connections between research, policy & practice as regular way of working, thinking & being

Ontario's Education Research Future...

Standing on the shoulders of giants...

Being leading-edge for the future...

Change agents together!

“Take hold of the
future or the future
will take hold of you”

Patrick Dixon

Thank you!

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