I am most interested in improvement rather than innovation in isolation from the larger purpose of advancing excellence and equity in and through education. I offer four considerations about research and innovation for educational change.

First, we need definitional clarity and conceptual development for understanding “innovation”. Alongside long-standing debates about innovation in educational change, there is a current explosion of interest (as exemplified in the AERA 2014 theme). I Googled “innovation and education” and received 213 million hits! There is a cacophony of terminology around the term yet, by definition, “innovation” is simply a noun to denote “the introduction of something new”1.

While most of the existing terminology originates in the business literature, as educational change scholars, it is important that we clarify the concept of innovation for something new in and through educational change to make something different (and better).

Second, we need to further develop theorizations and practical approaches to innovation within educational change processes. Deep implementation of 100 innovations is not an effective change strategy; it is initiative overload. We have a substantial body of ‘what’ to do to reform education systems, yet my concern is that people, or, indeed, countries could attempt to implement lists of ‘what works’ without consideration of the ‘why’, ‘how’, ‘for whom’, ‘so what’ and ‘now what’ questions that are crucial to appropriate educational change. This is an issue that I am taking up in my latest research to develop the concept of Whole System Education Leadership2 to examine the leadership practices and experiences of individuals and groups leading whole system change.
Third, the issue of innovation in practices is one where education professionals are leading the way. For example, the Teacher Learning and Leadership Program (TLLP), a joint initiative between the Ontario Teachers’ Federation and the Ministry of Education, funds experienced teachers to lead, develop and deliver innovative projects. In our research with over 500 projects, a wide array of practices have been developed, including differentiated instruction to support students’ needs and integration of technology with pedagogical innovations. The focus on teachers developing other teachers’ professional knowledge, skills and practices is innovative and appreciated as an authentic and engaging approach to professional learning for experienced teachers. A further innovation is the requirement to share learning beyond the individual projects. Approaches include co-creation and sharing of lesson plans or assessment tools, and increasingly the use of social media to communicate widely. As a researcher, my role is to give voice and profile to the exceptional work of these teacher leaders – their practice is driving the research agenda, rather than research having ‘power over’ driving innovation as suggested by the AERA theme.

When I attend events where speakers bemoan the lack of educational innovation, I want to show them the blogs, resources and practices of Ontario’s teachers who are innovation leaders!

And fourth, we have an ethical and empirical duty to clarify ‘what does not work’. There is substantial evidence about the inequitable and/or ineffective consequences of some education policies that still hold fairly widespread appeal – for example, the social polarization associated with school choice, the exacerbation of educational and social disadvantage through tracking/streaming, and the fact that spending time and money on governance and structures is less effective than focusing on teaching and learning. Perhaps the greatest potential power of educational change researchers is to continue to demonstrate what causes harm in education and to develop arguments, evidence and change strategies to end these policies and practices.

The province of Ontario has gained an international reputation for the high performance of its education system. What role has research played in achieving such high levels of performance?

Evidence from research and professional knowledge is central to the Ontario strategies. I had the privilege of being recruited as the founding Team Leader/Senior Executive for Research, Evaluation and Data in the Literacy and Numeracy Secretariat (LNS). There is a longer story to tell about the role of research in the Ontario education strategies. But I will highlight three points here.

First, the role of research needs to be appropriately developed as part of a wider ‘theory of action’ that informs the approach to educational change. In Ontario, a key element of our theory of action is captured in the phrase “capacity building with a focus on results”. The research role was not for data-driven reform or accountability mandates. Rather, it was to build capacity. It was important to develop an approach to research which valued and integrated professional knowledge. For example, the LNS brought together educational leaders with instructional and education sector expertise, government officials with policy and operational expertise, and researchers with knowledge of local and international evidence. That combination proved to be very important for an effective change strategy and process.

Second, I was committed to embedding an approach which involved a range of methods and purposes, incorporating:

- **Research** to investigate policy and/or practice questions, reviewing international research to identify leading practices, conducting or commissioning research to
identify and spread promising practices, and supporting school-based inquiry projects.

- **Evaluation** of the implementation, impacts and outcomes of initiatives to provide formative feedback, ongoing monitoring and summative evaluation.

- **Data** systems and analyses to provide detailed information relating to contexts, demographics, programs and performance of the Ontario education system at provincial, district, school and student levels (as appropriate).

You need all of these types of evidence combined with policy and practice knowledge to support capacity for educational improvement.

Finally, the role of research varies at different stages in the educational change process. Discussions of ‘evidence-informed policy and practice in education’ often assume a rational, linear process in which research evidence informs policy at the outset, policy is made, and then it is implemented. This is not how it happens in reality! The very first phase of the LNS involved establishing shared understanding that it was important to focus on literacy and numeracy, and developing positive and productive partnerships across Ontario to fulfil this purpose. As part of this process, we initiated research projects to identify, document and celebrate existing successful or promising practices in Ontario school districts, schools and classrooms. This was important for demonstrating our commitment to partnership with educators. We reviewed also the existing relevant local and international research to inform our strategies. At the same time, we were developing our data infrastructure and analyses to improve our understanding of contextual and performance data about Ontario’s schools. This became increasingly important as the strategies became more precise to target support and capacity building for schools and student groups with differential performance and to foster networks across schools. As the strategies were implemented, the need to develop capacity for ongoing monitoring plus formative and summative evaluation became critical at all levels of the education system to inform adaptations to individual initiatives and the overall strategy. Over time, as capacity has been developed throughout the Ontario education system, school self-assessment and professional collaborative inquiry have become keys to integrating research and evidence in educators’ practices for further improvements in schools and classrooms. Another vital role has been to communicate research in accessible ways to inform changes in practice, for example integrating research into professional learning resources and policy documents.

My advice on the role of research in supporting improved performance would be to start with an educational change mindset rather than a technical view of data-driven results.

It is well known that there is way more research evidence and knowledge about effective teaching and learning than what effectively is put to use in large numbers of schools and across educational systems. From your experience as former Chief Research Officer at the Ontario Ministry of Education, what can be done to effectively use and leverage research for improvement across an entire education system?

I would like to say our approach to leveraging research was rigorously research-informed, but in large part we were ‘building the plane as we were flying’ to use the cliché. There is a body of knowledge about research utilization and how to support research use that did inform my approach. However, back in 2006 when I became the Ontario Ministry’s first Chief Research Officer, there was limited existing evidence on how to develop an evidence-informed system. Of course, we need to support capacity and action at all levels – classrooms, schools, districts, networks, and entire systems – but in terms of research use, it is the systemic capacity that is
I wanted the Ontario Research and Evaluation Strategy to be a *strategy*, i.e. to move beyond a set of individual activities to something with thoughtful purpose and coherence that could be communicated with clarity and engage people in the process. Our strategy had six components: Leading, applying, building capacity, networking, communicating and mobilizing knowledge, and contributing to evidence-informed education. There is a tendency to focus on component two – applying research – as it connects most closely to conducting research and intended use. However, all six components are needed individually and, even more powerfully, in combination. I have been working on a case study of the Ontario Research and Evaluation Strategy with my successor as Director of the Education Research and Evaluation Strategy Branch, Doris McWhorter, which has informed specific recommendations for governments - or systems - seeking to develop improved research use:

**1. Leading:** Governments/systems need to pay attention to both an infrastructure and culture which values and demands evidence. Senior political and professional leadership is essential to setting the tone, modelling and requiring such an approach. Furthermore, leadership must extend beyond individual positions to a broader, shared leadership. Dedicated strategic and operational leadership are required, alongside distributed leadership to engage people throughout the government, education sector, research and stakeholder communities.

**2. Applying:** A basic but vital starting point is to conduct research that is designed to contribute to policy and practice knowledge, and that is made accessible and communicated effectively. The importance of applying evidence has to be embedded in values, behaviours and systems, and evidence has to be available that is appropriate, clear and timely in order to compete with political opinions, pragmatic demands, and personal preferences.

**3. Building capacity:** No matter how much research is available, it is futile if attention is not also paid to building individual and collective capacity to access, understand, critique and apply evidence. Building capacity must be continuous and multi-faceted, from in-depth support and training on engaging in and with research, to online resources and materials available as and when needed, to opportunities for discussion and learning.

**4. Networking:** Opportunities for researchers, policymakers and educators to engage with one another supports shared learning, increased awareness and knowledge connecting research, policy and practice, and encourages trust for longer-term relationships. Networking and collaboration needs to be both purposeful and meaningful and can extend across partners and locations, including locally and internationally.

**5. Communicating:** You can never pay enough attention to communication. Such communication must be multi-faceted both about the importance of connecting research, policy and practice, and also about the specifics of evidence relating to particular policies and practices. The use of online media is helpful, as is the development of brief clear written materials.

**6. Contributing.** Research is essentially about inquiry and knowledge development, as well as application to improved education. Part of being committed to research use involves also a willingness and indeed enthusiasm to contribute to debate, scholarship and evidence.

*Where would you like to see public education in Ontario moving forward?*

We have had a decade of educational change focused on three goals: increasing student achievement; reducing gaps in student achievement; and increasing public confidence in publicly funded education. The Ontario education system is held in high regard with 95% of children attending a publicly funded school. There have been substantial improvements in
performance. In 2012-13:

- 71 percent of students overall achieved or exceeded the provincial standard in literacy and numeracy tests compared to 54 percent in 2003.
- 83 percent of students graduated from high school within five years, compared to 68 percent in 2004.

The Organization for Economic Cooperation and Development (OECD) has identified Ontario as a system demonstrating both excellence and equity. The impact of socio-economic status on achievement is less in Ontario than the OECD average and immigrant students perform at a level similar to non-immigrant students.7

There is much to be proud of about Ontario’s education system and the hard work of all involved. Yet, we are committed to further improvement and recognize that there continue to be schools and students that struggle, for example our Aboriginal students. Our performance in literacy is stronger than in math. We need to continue to support educators and also reach out to engage parents and communities as partners in our ongoing educational improvement. And in the context of rapid and global change, we recognize that standing still is not an option. That is why the government conducted a consultation on the future of Ontario’s public education system. The resulting vision, Achieving Excellence,8 outlines four renewed goals. I support these four goals and a linked plan of action:

1. Achieving Excellence: Children and students of all ages will achieve high levels of academic performance, acquire valuable skills and demonstrate good citizenship. Educators will be recognized as among the best in the world.

2. Ensuring Equity: All children and students will be inspired to reach their full potential, with access to rich learning experiences that begin at birth and continue into adulthood.

3. Promoting Well-Being: All children and students will develop enhanced mental and physical health, a positive sense of self and belonging, and the skills to make positive choices.

4. Enhancing Public Confidence: Ontarians will continue to have confidence in a publicly funded education system that helps develop new generations of confident, capable and caring citizens.

Moving forward, I would like to see Ontario further extending and deepening our approach to supporting, respecting, and engaging educators in the change process. Professional capacity and leadership have been keys to our success so far and will be vital to future improvements. As part of an International Teacher Policy study, I have been interviewing teachers, administrators and provincial leaders across Ontario. It is clear that we have what Andy Hargreaves and Michael Fullan refer to as strong ‘Professional Capital’9 – the human capital of high quality educators, the social capital of professional collaboration, and the decisional capital of opportunities for informed professionalism. There is attention to fostering opportunities to engage educators in partnerships for educational change. Nevertheless, I am hearing voices of educators who want further enhanced opportunities to influence the direction of change, to engage in designing and innovating policies and practices, and to have more professional responsibility and flexibility to lead improvements within and across schools. There are other educators asking for more direct support to assist with their professional learning and practices. We have paid considerable attention to trying to develop an appropriate balance between the perennial top-down/bottom-up, too tight/loose dilemmas in educational change. The next phase of Ontario’s change strategies will require further evolution – and indeed innovation to return to the first question – in valuing developing and integrating educators’
leadership, voices, capacities and actions. At the same time, there are important
government responsibilities to further develop
and provide clarity and coherence of policy
directions, adequate resources, and
appropriate capacity building supports. The
language of ‘top down’ or ‘bottom up’ is
inadequate for the necessary multi-directional
networks of influence and action to achieve
excellence.

Which direction would you like to see education
research moving in the next ten years?

I would like to see an expanding and diverse
group of researchers embarking on an array of
topical research problems and questions and
paying increasing attention to the educational
change and learning processes required to
mobilize and apply research in a way that is
informed and appropriate to people and
contexts in education to support the larger
goals of educational excellence and equity.

There will be many future educational
change questions, problems and issues
requiring an array of research designs,
methods, and reporting. There remain
perennial issues of how to truly achieve
educational excellence and equity, and there
will be new emerging issues associated with
global and local changes. I value the
Educational Change SIG for the variety of
voices, perspectives and experiences our
members contribute. We need more diversity
of researchers and research, not less.

I also support further advancing approaches
to synthesizing, mobilizing and applying existing
and emerging research for educational change.
I am currently co-Director, with Katina Pollock,
of the Knowledge Network for Applied
Education Research (KNAER), a tripartite
initiative funded by the Ontario Ministry of
Education with OISE, University of Toronto, and
Western University. KNAER funded 44
projects to increase the mobilization and
uptake of existing research. A key lesson has
been that ‘doing’ knowledge mobilization and
building partnerships do not happen
automatically or easily; considerable attention
to building capacity and skills are required. I
would like to see more dedicated funding for
the mobilization and use of research in
education and linked capacity building for
researchers and educators.

Finally, I support the move to evidence-
informed policy and practice. To date, most of
the attention has focused on what ‘evidence’
(both quantity and quality of evidence) and
then the application to ‘policy’ or ‘practice’.
These are vital considerations; however, I think
we need equal attention to the ‘informed’
piece of this work. How do we ensure informed
use of evidence? Often, in policy and practice,
the temptation is to move from finding to using
without the learning and change processes
associated with individual and collective
understanding and sharing of research to be
informed about which research to reject, adapt,
contextualize or apply. Being evidence-
informed requires research knowledge
combined with professional judgment. The
Education Endowment Foundation (EEF) in
England is funding interesting projects to pilot
and evaluate approaches to supporting
research use in schools. As part of an Advisory
Group for that work, I encouraged EEF to
include a criterion of ‘understanding’, alongside
the EEF’s criteria of ‘awareness’, ‘action’ and
‘attainment’ to evaluate the impact of research
use in schools. For educational change
researchers, there is a substantive issue of
conducting research on what it means to be
informed producers and users of research for
educational improvement and there is a
process issue of how we are going to generate
and embed such informed understandings in
practice.
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