Harnessing Research on Education in the UK: A Case Study of Ontario, Canada

One sentence summary: The Ontario Ministry of Education is committed to developing and implementing policies, programs, and practices that are evidence-based, research-informed, and connected to provincial education goals – this case investigates how the ministry's approach is influencing evidence informed policy and practice within the province.

Context

a) Summary of the key features of the education system within which the case study is located.

Ontario has come to be internationally recognized as an equitable, high-achieving, and continuously improving jurisdiction (Gallagher *et al.,* 2016: citing Brochu *et al.* in Second report from the 2009 programme for international student assessment. Council of Ministers of Education, Canada, Toronto, 2011; Mourshed *et al.* in *How the world's most improved school systems keep getting better*, McKinsey & Company, New York, 2010; OECD in *Strong performers and successful reformers in education: lessons from PISA for the United States*, OECD, Paris, 2010). A comprehensive overview of the Ontario school system is also provided by Gallagher *et al.,* (2016: 479). Key features noted in this overview include that:

- Education in Canada is the responsibility of each province and territory. There is no national or federal department or ministry responsible for governance of education. Nonetheless, the basic structures of provincial and territorial education systems across Canada are similar, each with three tiers—elementary, secondary and postsecondary, with compulsory schooling in Ontario lasting until students reach the age of 18 (unless they have already graduated from secondary school).

- Ontario has a tri-level system of education governance that consists of the Ministry of Education, district school boards and schools. Ontario is Canada's most populous province and among its most diverse, serving just over two million children in four different publicly-funded school systems (English public, English Catholic, French public and French Catholic). There are 60 English language and 12 French-language district school boards (DSBs), ranging widely in size from a few hundred students in rural areas to 250,000 students in the Toronto District School Board, one of the largest urban districts in North America.

- In total, there are approximately 4,000 elementary schools and 900 secondary schools in Ontario, each under the jurisdiction of a DSB. Across all Ontario DSBs, there are approximately 73,700 elementary school teachers and 41,300 secondary school teachers, represented by four different teacher unions.

- In order to teach in Ontario, teachers must be certified members of the Ontario College of Teachers. They are required to have an approved postsecondary degree and complete an accredited teacher education program that is four semesters, or 2 years, in length. Teachers are required to be members of a teachers' union. Directors of Education, superintendents and principals are all certified teachers who have additional qualifications and are members of their own professional associations.

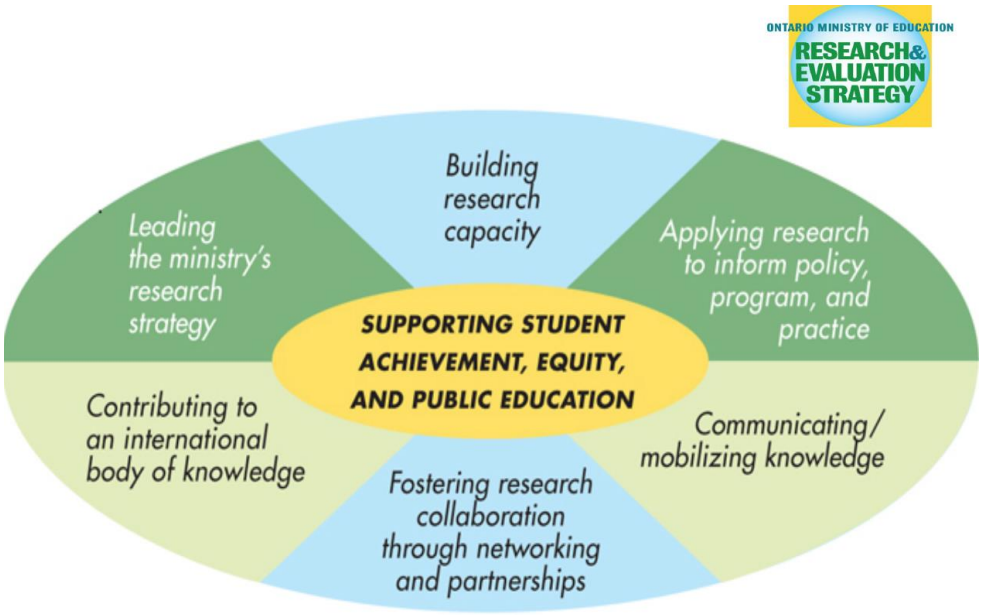
A recent study by Sá and Hamlin (2015) across Canada's 10 provinces identified the Ontario Ministry of Education as one of the most proactive in research use within Canada.

b) Summary of the education research landscape

Malik (2016: 7) argues that research use (or knowledge mobilisation efforts)[1] have been an increasingly important part of the policy changes in Ontario over last twelve years. For instance, in 2005, Ontario's Ministry of Education established a Research Strategy to enhance 'evidence-based decision-making for policy and programming work'. In the same year, Dr. Lorna Earl was appointed researcher-in-residence to support efforts to improve research use in the Ministry and the sector. In 2006, the Ministry of Education appointed Dr. Carol Campbell as its first Chief Research Officer, with responsibility for leading research and knowledge mobilisation efforts. Dr. Campbell further developed the Research Strategy so that it also included evaluation (see Figure 1, below). In 2008, the Ministry created a Research and Evaluation Strategy Branch to support the implementation of this Research and Evaluation Strategy. Underpinning much of the Ministry's work is the idea that strong partnerships can support greater spread of research collaboration (Cooper, *et al.,* 2009).

[1] Knowledge mobilization is the term actively used within Ontario and defined by Malik (2016: 10) as 'the active and dynamic process whereby stakeholders (e.g., researchers, practitioners, policy makers and community members) share, create and use research evidence to inform programming, policy, decision-making and practice'.

Figure 1: Ontario Ministry of Education's Research and Evaluation Strategy



As in many other jurisdictions, educational research in Ontario can enter the system indirectly: for example, via the production of top down strategies designed to tackle issues such as numeracy or literacy in schools (Gallagher *et al.,* 2016). At the same time, however, the 'expert witnesses' engaged with to help develop this case[2] identified four key policy drivers currently focused on developing Ontario as an evidence-informed school system.[3] These policy drivers cover policy/policy-making, DSBs, professional organizations, teachers and researchers. Their remit thus includes all aspects of educational decision-making and practice, the production of research and research brokerage. An outline of each is set out below:

Ontario's Research and Evaluation Strategy (ORES):
http://ncee.org/wp-content/uploads/2017/01/Ont-non-AV-9-Ontario-Ministry-of-Education-Research-and-Evaluation-Strategy-brochure.pdf
and:
http://www.edu.gov.on.ca/eng/research/strategy.html
The priority educational goals of the Ontario Ministry of Education are:

- improved levels of student achievement;
- reduced gaps in student achievement; and
- increased public confidence in, and support for, public education.

As a key strategy in advancing these goals, the Ontario Ministry of Education is committed to 'developing and implementing policies and programs that are

[2] This comprised two Ontario Ministry of Education staff, two Ontario academics and one Ontario school principal.
[3] A comprehensive list of other knowledge mobilization initiatives/organizations engaging in knowledge mobilisation within the province may be found in Malik, (2016: 208).

evidence-based, research-informed and connected to the priority educational goals'. As such 'the Research & Evaluation Strategy is important because developing, applying and communicating about research and evaluation are central to our way of working and to achieving our priority goals'.

It is also noted that the ORES is being developed and implemented both 'internally' and 'externally'. *Internally*, the Ministry of Education is engaging in a series of activities to move itself to a place where 'evidence-based and research-informed policy and program development and decision-making is the norm'. These activities are intended to help ministry staff improve their ability to access, understand, commission and apply research and evaluation appropriately to inform policy and program decisions and to achieve our priority goals'.

Ontario Education Research Panel (OERP):
Externally, the ministry is 'working collaboratively with educators, researchers and other key partners to engage each of these groups in connecting research to policy, programs and practice'. In particular, the OERP has been established to facilitate discussion and collaboration among Ontario's school boards, faculties of education, researchers, professional organizations, community agencies, and ministries relating to:

- research priorities for Ontario education;
- the state of knowledge in specific areas;
- opportunities for and impediments to the advancement of research; and the
- potential for future partnerships.

Both the research page on the ministry's public site http://www.edu.gov.on.ca/eng/research/OERP.html [which enables researchers and educators to link up to identify research priorities, share findings, and collaborate on connecting research to practice] and the annual **Ontario Education Research Symposium** [an annual event where some 350 teachers DSB staff, researchers and ministry staff come together to learn about research and evidence-informed effective practice] are tools in helping make these connections.

The Knowledge Network for Applied Education Research (KNAER):
http://www.edu.gov.on.ca/eng/research/knowledge.html
KNAER Phase 1 was established in 2010 through a tri-partite agreement among the University of Toronto, Western University and the Ontario Ministry of Education. The aim of KNAER was to advance and apply robust evidence of effective practices through:

- promoting research use;
- synthesizing state-of-the-art knowledge from existing bodies of evidence; and
- facilitating networks of policy makers, educators, and researchers to work collaboratively, to apply research to practice.

This phase of KNAER funded 44 projects that focused on mobilizing research-based evidence throughout the province. In total these projects involved 150 partners, including 60 partnerships with community organizations, 46 with school boards, 22

with universities, 10 with health organizations, and 8 with colleges (Briscoe *et al.,* 2015: 25). Malik (2016) estimates that the work funded by KNAER in phase 1 totalled $4 million (CDN).

In 2014, an analysis of the utility of KNAER along with a review of knowledge mobilization literature, interviews with knowledge mobilization experts, and strategic planning sessions with Ontario educators and researchers, led to the development of recommendations for a renewed KNAER. A key recommendation was that the KNAER continue to build on its successes and identified challenges, while evolving towards a systems approach to knowledge mobilization. As such, over the 2015-2020 period, the KNAER will support thematic knowledge networks that employ a systems approach to research use to enhance knowledge mobilization on clear and specific priority themes.

The University of Toronto and Western University continue to act as KNAER Secretariat and:

- Support and connect thematic knowledge networks and communities of practice,
- Provide and champion knowledge mobilization and knowledge network expertise; and
- Build capacity for knowledge mobilization and broker research-practice connections.

The KNAER Secretariat will also provide training, tools, and resources to assist networks in developing knowledge mobilization plans and using effective knowledge mobilization strategies that support sharing, co-creation, and evidence use.

MISA Professional Network Centres:
http://www.edu.gov.on.ca/eng/research/PNC.html
The Managing Information for Student Achievement (MISA) initiative was put in place in 2004 to build provincial and district level capacity to work with data to support improved student outcomes (Malik, 2016). An important part of the Local Capacity Building portion of the initiative includes supporting seven MISA Professional Network Centres (PNCs) across Ontario. The MISA PNCs function as linked professional learning communities and complement the efforts of individual boards and schools. The centres assist in building local capacity to work with data in support of evidence-informed decision making and undertake a broad range of local research in this area.

In addition to the above, it is noted by Malik (2016: 6-7) that the Ministry of Education produces a research monograph series for teachers;[4] and the Ontario College of Teachers (OCT) conducts research of its own through its annual teacher survey, sharing the results through its professional magazine. What's more school board research departments have also demonstrated efforts to make use of research findings at the decision- making and practitioner levels.

[4] See:
http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/whatWorks.html

Impact requirement

c) A description of the impact research on education is having and/or practice and an analysis of factors that contribute to educational research having impact.

Malik (2016: 190) notes that 'measuring impact [of research to practice activity in Ontario] is an area that is identified as one that **needs considerable attention and greater focus, learning, practice and action**'. Indeed, the expert witnesses engaged with to help produce this case could not identify any impact work undertaken in relation to the Ontario's Research and Evaluation Strategy, the Ontario Education Research Panel or the MISA Professional Network Centres initiatives described above (two citing a lack of appetite within the Ministry of Education and more widely). What's more a detailed search of Ontario Ministry of Education website/policy documents (e.g. http://www.edu.gov.on.ca/eng/research/) as well as a search of the academic literature for the last five years revealed no evaluation of this work.

While there has been some analysis of the impact of KNAER phase 1 (see: http://www.knaer-recrae.ca/blog-news-events/knaer-have-we-practiced-what-we-ve-preached), this is limited in scope, with its principal findings including statements such as:

- The majority KNAER projects did connect researchers and practitioners together.
- That KNAER projects were selected with context in mind ensuring that they focused on the (then) four ministry priority areas: teaching and learning, transitioning, equity, and engagement in order to maximize relevance use value

Rather than any explicit linkage of research use to changes in practice or student outcomes. It is also noted within the evaluation, however, that it was 'difficult to determine any type of systematic evaluation of the full KNAER initiative because each KNAER knowledge mobilization project focuse[s] on a different educational issue and approached each issue in a different manner and included different partners'.

Each project did though attempt to report impact, degree of influence, record outputs and outcomes and these may be found in the final report for KNAER phase 1 (Campbell *et al.,* 2014). Furthermore, an external evaluation concluded there were four key outcomes concerning the *utility* of KNAER, these are:

1. The large volume of research use (knowledge mobilisation) activities and outputs undertaken within short time period;
2. A culture shift in Ontario towards increased knowledge mobilisation
3. Increased knowledge mobilisation capacity; and,
4. The development of partnerships.

The external evaluation also described KNAER as 'a trailblazing initiative' (McGuire *et al.,* 2014: 9).[5] An evaluation of KNAER phase 2 is planned but not yet underway.

[5] This was cited from Campbell et al., (2014) with the full report not publically accessible.

Whilst impact analyses of these specific research to practice initiatives is relatively weak (or non existent), examples of research use can be seen in the development of other Ministry of Education initiatives. For example Ontario Leadership Framework (Leithwood, 2012: 4) is grounded in 'school system practices initially identified in several comprehensive reviews of research about characteristics of "high performing" school systems and modified to reflect the Ontario context'. What's more it is felt that evidence-use by teachers AND the factors that facilitate evidence use are evident in a key approach to professional development within the province: the Teacher Learning and Leadership Program (TLLP) (e.g. se Malik, 2016). Detail on TLLP is provided below.

We might also reasonably expect the initiatives above to be successful in connecting research and practice since they tap into factors identified as instrumental to making this happen. These include:

- **Developing a culture that encourages research use:** Leadership support is key to fostering a culture of research-use (Brown and Zhang, 2016; Roberts, 2015). Such support can be witnessed in a number of the initiatives detailed above. The OERS, for example, explicitly promotes research use as a goal and also sets out how the Ministry of Education is attempting to 'normalize' decision-making informed by research evidence. The ministry also appointed a high ranking civil servant (the Chief Research Officer) with responsibility for leading research and knowledge mobilisation efforts.

- **Giving policy makers/teachers hand-on experience of EIP:** First-hand experience is vital if individuals are to buy-in to new ways of working, such as that represented by using research evidence (e.g. Fullan, 2011). Teachers/policy-makers also need to feel *able to experiment* if they are to fully engage in EIP type activity (e.g. Katz *et al.,* 2009; Roberts, 2015). Key to increasing EIP therefore is that system, policy and school leaders ensure teachers and policy makers are able to access, engage with and apply research when attempting to improve their practice. Both OERS and KNAER facilitate this by making research available and accessible and crucially are designed to help teachers and policy makers 'learn' in relation to research findings. Furthermore the MISA initiative was explicitly designed to build provincial and district level capacity to work with data to support improved student outcomes.

- **Ensuring networked collaboration:** Brown (2017) argues that research use by educators is optimal when undertaken in a networked and collaborative way. For collaborative research-informed activity to take root and flourish it must have high level support (Rinćon-Gallardo and Fullan, 2016). In particular, however, school leaders and policy makers should promote the idea of 'community' while also ensuring staff are both encouraged and supported to engage in research-use in a networked way (Brown, 2017). As can be see from the above, the ministry through OERP tries to work collaboratively with educators, researchers and other key partners to connect research to policy,

programs and practice. Likewise the KNAER is designed to facilitate networks of policy makers, educators, and researchers to work collaboratively in order to apply research to practice.

Many of these also feature as part of TLLP which is now described below:

Teacher Learning and Leadership Program (TLLP)

Ontario's Teacher Learning and Leadership Program (TLLP) represents an approach to teacher development that centres on teachers leading their own professional learning (Campbell *et al* (2016). The TLLP began in 2007 as a joint initiative between the Ontario Ministry of Education and the Ontario Teachers' Federation (OTF), with aims to:

1. Create and support opportunities for teacher professional learning;
2. Foster teacher leadership; and
3. Facilitate the sharing of exemplary practices for the broader benefit of Ontario' s students.
   (Ontario Ministry of Education, n.d., p. 3)

The origins of the TLLP reflect a shifting wider international discourse that spotlights teacher agency as fundamental to improving teacher quality: in particular that teachers should be central and instrumental to educational change rather than positioned as the recipients of externally mandated reforms. The result of this shift, sees teachers engaged as professionals with adaptive expertise, based on the assumption that they are best able to direct their own learning to better serve their students. As a result teachers are charged with leading changes in educational policy and practice in partnership with educators at all levels throughout the education system (i.e. at school, district, provincial, national, and potentially even international levels) (Campbell *et al,* 2016; Gallagher *et al* 2016).

For their TLLP proposals, teachers self-identify an area of practice or an issue that they are interested in investigating, which also has the potential to benefit their students and/or school (Campbell *et al.,* 2016: 227). Project proposals are required to include: a description of the proposed project; how the project will contribute to student learning and Ontario's priorities for educational excellence, equity, well-being and public confidence; and a rationale for the proposed TLLP team's professional learning objectives (Campbell *et al.,* 2016: 223). Since the program began, over 4,000 teachers have been directly involved in TLLP; with some 100 TLLP teacher-led projects funded every year (Campbell et al., 2016: 223). TLLP projects vary in size and budget; with the average TLLP project comprising a core team of two to four members and budget of $14,000 (CDN) (ibid).

The TLLP process is described in detail by Campbell *et al,* (2016: 226-227). In particular it is noted that successful teacher applicants receive substantive training, support and funding for their TLLP projects. In the May prior to the school year in which they embark on their TLLP projects, teacher leaders attend a Leadership Skills

for Classroom Teachers training to support their preparation to take on the professional learning, project management and leadership expectations of a TLLP. There are also activities to support professional inquiry and research; for example, researching the use and outcomes of new teaching strategies or conducting needs analysis for teachers' professional development. TLLP teacher leaders are expected to develop and implement their projects throughout the following school year.

Provincial Knowledge Exchange: At the end of their TLLP projects, TLLP teams attend the *Sharing the Learning Summit*, which enables them to showcase completed projects and to share their practices. In addition, to further spread learning from their projects, school districts can apply for Provincial Knowledge Exchange funding to provide resources for release time and travel to enable TLLP teacher leaders to share their knowledge and practices with other teachers, schools and school districts across Ontario (Campbell *et al.,* 2016: 223). An online platform, Teach Ontario (https://www.teachontario.ca), has also recently been created and is becoming widely used by teachers to share resources.

Evaluation of the TLLP

The TLLP is grounded in the five key characteristics of effective professional learning (Ontario Ministry of Education, 2007, pp. 4-5), the fifth of which is the principal of being evidence-informed: 'professional learning should be considered and be built upon current research as well as both formal and informal data'. And while it is not a necessary requirement that TLLP projects include the use of research evidence, they often heavily involve practitioners attempting to connect research and practice. This is evident in the evaluation of TLLP undertaken by Campbell *et al.,* (2016) who used a mixed methods design that included an analysis of 93 final TLLP final reports; a survey of 243 TLLP participants across all cohorts and interviews with nine TLLP teachers and case studies of extant TLLP projects. Based on analyses of a sample of 20 percent (n = 33)[6] of TLLP final reports from cohorts 5 and 6, Campbell *et al.,* (2016) note that the top three goals for the majority of TLLP projects were to develop and improve knowledge (79 percent), strategies (67 percent) and skills (48 percent), mainly with a focus on improving teaching and learning. In order to achieve these goals, almost half of the projects reported engaging in action research (48.6 percent of responses) or using research methods to gather data and act on it (e.g. 56.8 percent of respondents reviewed research literatures) (Campbell *et al.,* 2016: 229).

Furthermore, working in this way appears to have had a positive effect on teachers and their practice (albeit relying on self report data). For instance, in a survey of TLLP teacher leaders, the majority noted improvements in knowledge and/or understanding, instructional practice, communication and collaboration between teachers, energy and inspiration, self-efficacy and technological skills. The improvements in teachers' knowledge, practice and skills suggesting that the TLLP helps develop teachers' individual capacity or human capital; while improvements in communication and collaboration mean that the program promotes conditions that

[6] Total reports = 164

support social capital development (Campbell *et al.,* 2016: 232).

It would seem therefore that although many of the key initiatives outlined above have not been formally evaluated, their conceptual or ambient impact is evident in other approaches designed to further professionalise teachers within Ontario. In other words, it would seem that a high number of teachers in the province have actively responded to approaches designed to foster agency and leadership in professional development and self-improvement by actively turning to research evidence. It can be concluded therefore that explicitly using research evidence to help identify key areas for development or to provide the means through which to guide professional enquiry is now seen by these teachers as the norm.

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