

**Developing a Province-Wide Strategy to Increase the Role of  
Research and Evidence in Ontario Education**

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The Ontario Ministry of Education has designed and implemented a strategy to increase the role of research and evidence in Ontario education. The strategy is a key element of the Ministry's overall reform agenda focused on improving student outcomes through evidence-informed policy and practice.

The ability to promote evidence-informed policy and practice has been limited in the past due to a shortage of relevant research aligned with the Ministry of Education's policy and program priorities, an insufficient amount of quality educational data, varied analytical capacity and ineffective communication and dissemination of research and evidence. The Ministry strategy is aimed at addressing each of these barriers.

### **Description of the strategy**

The strategy has five key elements related to strategic management, leadership, networking and partnerships, capacity building, and communication.

#### **Strategic Management:**

Two important steps were taken to promote a more comprehensive and strategic approach to addressing the research gaps as noted. A Researcher in Residence position was created in 2005 to raise the profile of research within and outside the Ministry. Dr. Lorna Earl was selected to serve in this role with a focus on fostering greater coherence in the research agenda, initiating capacity building and increasing networking.

This was followed by the establishment of an Assistant Deputy Minister's (ADM's) Research Steering Committee in the fall of 2005 to provide oversight to the re-alignment of ministry sponsored research activities in keeping with the Ministry's strategic directions. The Committee reviewed existing research activities to identify gaps relative to ministry priorities. In particular, ministry priority initiatives related to Literacy and Numeracy, Learning to 18/Student Success and Primary Class Size required the further development of major research and evaluation work. The Committee also underlined the need for a more comprehensive approach to internal capacity building.

#### **Leadership:**

To supplement the leadership role of senior ministry management in research undertakings, Dr. Carol Campbell was named the Ministry's Chief Research Officer (CRO) in October, 2006. The CRO supports the ADM's Research Steering Committee by focusing research and evaluation activities on the Ministry's strategic directions. This includes developing ministry-wide co-ordination of research activities aligned to priorities and building internal capacity to effectively and appropriately connect research to policy decisions and program development, implementation and evaluation. Collaboration and increased communication with external partners is also fostered through a shared agenda of supporting the use and application of research to inform educational policies, programs and practices.

Currently, there are over 60 research activities related to the Ministry's strategic goals and priorities. These research activities support the Ministry's goals of high levels of student

achievement, reduced gaps and equity in student achievement, and increased public confidence and support for public education. The Ministry is supporting a wide-range of studies that support one or more of these goals, including studies on reducing primary class sizes, supporting better literacy and numeracy outcomes, improving high school graduation rates, Aboriginal education, education leadership, parent involvement and engagement, school discipline and safety, student health, special education, and teacher development. The purpose of commissioning, conducting and using a range of research activities is to enable the Ministry to access and apply research findings to inform decision-making and implementation of effective practices for student achievement goals.

#### Networking and Partnerships:

The Ministry is also encouraging research partnerships, particularly for research focused on policy priorities, in Ontario by hosting the annual Ontario Education Research Symposium and through the establishment of the Ontario Education Research Panel (OERP).

The Ontario Education Research Symposia have brought together key players within the research and education communities including researchers, board and school educators and policy-makers. One hundred and sixty participants attended the first Research Symposium in January 2006 and 170 participants attended the second Research Symposium in January 2007. Papers presented at the 2007 Symposium reflected the priority themes of achievement, equity and public confidence. The specific presentations are listed below (copies of the papers are available at <http://www.edu.gov.on.ca/eng/research/symposium.html>):

- What have we learned about reading comprehension?, John R. Kirby, Queen's University
- Word study and reading comprehension: implications for instruction, Ruth McQuirter Scott, Brock University
- Helping students who are experiencing persistent and/or serious discipline problems to succeed in school: The state of the evidence, Shelley Hymel and Natalie Rocke Henderson, University of British Columbia
- Fresh starts/false starts: A review of literature on the transition from elementary to secondary school, Kate Tilleczek, Laurentian University
- Supporting Aboriginal student success: Self-esteem and identity, a living teachings approach, Pamela Rose Toulouse, Laurentian University
- Where there's a will there are ways to close the achievement gap for children with special education needs, Marcia A. Barnes, University of Guelph
- Parent engagement: Creating a shared world, Debbie Pushor, University of Saskatchewan

The Symposia provided an important opportunity for participants to network, to gain an insight into existing research relative to ministry priorities and to identify gaps for future research.

The thirteen member OERP was selected in the fall of 2006 from a highly qualified group of individuals who applied or were nominated for membership. The general aim of the Panel is to strengthen relationships and forge partnerships among actors at the Ministry, universities, school boards and other related bodies to increase research activity in priority areas. The OERP members have identified their overall vision for their work as being:

- To harness, encourage, promote and disseminate the many good examples of research-to-practice already being developed in education;
- To build capacity for education research by creating and strengthening relationships among existing organizations and individuals to address priority research needs.

This connects with their strategy to be a catalyst for research, identify research needs, create a culture of inquiry and foster collaboration among education sectors, and to support knowledge exchange. To date, the OERP has met on four occasions and consulted with education researchers, policy staff, and educators

#### Capacity Building:

A central strand of the Ministry's research strategy is support for capacity building, both for staff working within the Ministry and those working within school boards and schools. At the start of the Ministry's work to support a movement towards evidence-based decisions and practices, a clear need to increase capacity at the provincial, board and school level to ensure the availability and effective use of quality data was identified, as this is a key prerequisite for linking research to policy and practice. The implementation of the Managing Information for Student Achievement (MISA) initiative by the Ontario Ministry of Education is increasing the capacity of teachers, principals, board administrators and ministry staff to work with data in support of strategies for improved student achievement.

MISA is a key enabling initiative aimed at supporting the use of research and evidence for policy and practice. A 2004 ministry survey examined the technology, data management and human resource capacities of school boards relative to their ability to manage and use data to support student achievement. The survey found that there was a wide range in the capacity of school boards across the province. These findings set the stage for the development of guidelines and tools and the allocation of funding to help support the sector toward a common level of functionality in working with data to inform effective instructional practice and new strategies for improved student achievement. This local capacity building initiative works in tandem with concrete measures taken by the Ministry to improve its capacity to work with data to help inform provincial policies and enhance public reporting.

MISA has been developed in a collaborative fashion with key players in the education sector. Since 2005, the MISA Advisory Committee has brought together teachers, principals, board administrators, researchers and ministry staff to discuss the MISA initiative. The Committee provides strategic advice on the general approach to the MISA initiative and valuable insights into issues that can be anticipated related to the large-scale change necessary to transform to an evidence-informed environment in the sector.

At the local level, MISA is increasing the capacity of teachers, principals and school board staff to use data and evidence for decision-making in support of improved student achievement. The Ministry identified technology, data management and human resource capacities as three core areas critical to the use of data and information to support student achievement. In 2005, the Ministry requested that school boards submit three year plans for growing capacity in each of the core areas consistent with ministry guidelines. Based on these plans, the Ministry transferred a total of \$23 million in 2005-06 and \$33.5 million in 2006-07 to lever local capacity building activities by school boards.

In addition, there appeared to be a need to facilitate collaboration amongst school boards concerning the considerable challenges that they faced relative to the MISA initiative and the move to an evidence-informed environment. The Ministry's response was to establish Professional Network Centres (PNCs) across all regions of the province. In total, six English-

language and one French-language PNCs have been established with the objective of promoting collaborative approaches to building capacity to work with data under MISA and to growing links to the research community. Each PNC has received \$230,000 annually from the Ministry to support its activities. As self-directed learning communities, the Centres have assumed ownership of the MISA goals and have contributed to the success of local capacity building at school boards by facilitating the sharing of effective practices and promoting joint endeavours concerning technology acquisition and training on data management and use. Increasingly, the Centres are becoming virtual agencies for the promotion of change to an evidence-informed environment and there are excellent opportunities for alignment with the activities of the Ontario Education Research Panel in the future.

Aided by the efforts of the PNCs, school boards have taken a variety of approaches to increasing the availability of quality evidence at the local level through MISA. They have enhanced Student Management Systems (SMSs), acquired decision support tools, established business practices that promote data integrity and conducted training sessions for teachers and principals on the collection and use of data. A MISA Leader has guided these efforts at each school board. The Ministry required that these positions be established at each board to enable a focal point for communication and to serve as a local change agent for the MISA initiative.

At the provincial level, the phased implementation of a new web-enabled system to collect data from school boards and the development of a data warehouse has been key capacity building initiatives. The Ontario School Information System (OnSIS), in the final stages of implementation, collects data on students, teachers, courses, classes and school and board administration. Data is now collected from both the elementary and secondary panels at an elemental level and unique identifiers have been provided for students and educators. OnSIS incorporates strict business rules and the effort of board and school staff to cleanse administrative data to meet the new rules has resulted in a much higher level of data integrity. With the implementation of OnSIS, coupled with the development of the Elementary-Secondary Data Warehouse, the capacity now exists to conduct longitudinal cohort analysis and intersections of contextual, school process, student achievement and survey data to help inform important research and policy questions and enrich the dialogue at all levels on strategies for improved student achievement.

Within the Ministry itself, several initiatives are addressing the need to build internal staff capacity for using research and evidence to inform policy decisions and program development. The Ministry Research Coordination Team comprised of staff from across the Ministry was established to support the development and implementation of internal capacity building activities. With the support of the Researcher in Residence, the Research Coordination Team surveyed branches to identify capacity needs. Building on the findings of this review, a strategy for increasing the capacity of staff was developed. Central to this strategy is the Ministry's newly established Evaluation and Research Learning Program. The aim of the program is to equip managers and professional staff from across the Ministry with the knowledge and ability to plan, coordinate, undertake and manage evaluation and research activities. This increase in staff knowledge and skills will help to support the ongoing shift in the Ministry to an organizational culture that places greater emphasis on evidence and research to inform decision-making at all levels. The first participants began the Learning Program in January 2007 and are scheduled to complete the program in November 2007. Participants will complete six modules covering reviews of research, the use of data and information, and the development of evaluations connected to policy and program priorities.

### Communication:

Finally, the research strategy aims to increase the communication of research and evidence. Where relevant evidence exists to inform policy, program and practice decisions, it is important that this evidence be made accessible in a manner that is practical for all potential users, including teachers and principals. All of the initiatives noted above are helping to increase awareness of relevant research. There remains a need, however, to bolster the general communication effort with specific strategic activities to improve the dissemination of research throughout the Ontario education sector.

The Chief Research Officer (CRO) is currently involved in developing a research dissemination strategy aimed at bringing research findings, effective practices and other materials that promote the value of evidence-informed decision-making to individuals throughout the education sector. The CRO is analyzing research dissemination strategies in external organizations to identify practices that are shown to support successful research communication. The Research Dissemination Partnership Planning Group is supporting the development of the research dissemination strategy through collaboration with key stakeholders from the education sector and research community, including representatives from federations, principals' councils, supervisory officers and Directors' organizations and from research organizations. Partner organizations have agreed that they will identify research materials that relate to the Ministry's strategic directions and are of potential interest to Ontario's educators, so these materials can be made available to all partners. Education organizations will disseminate selected material to their members through their communications and the Ministry will have links to the materials through its website.

The research dissemination strategy will advance the internal and external communication of research and evidence. To support internal research communication, a research component of the Ministry's intranet site is being developed. These web pages will include information on the Ministry research strategy, ministry research and evaluation projects, research capacity building resources and information about research connections with external partners. External research communication, to educators and the general public, is delivered through several avenues. The "Research in Education" page (<http://www.edu.gov.on.ca/eng/research/>) on the Ministry's public website contains information on the Ministry's Research Symposia and links to Canadian and International research. The Ministry also publishes materials such as the "Unlocking Potential for Learning" Research Monograph series and the "What Works? Research into Practice" series, which are available at <http://www.inspirelearning.ca/>. The Ministry will continue this communication work through its research dissemination strategy.

### **Use of evidence in support of this initiative**

While it is too early to definitively gauge the success of this strategy, early indications are that steady progress is being made in establishing the building blocks necessary for an evidence-informed environment. The efforts of the Ministry to reach out to the research community to promote greater alignment have been met with enthusiasm by the key stakeholders involved. In the education sector, notwithstanding the challenges of implementing infrastructure for data management, there is a growing excitement about the potential for using evidence to inform policy and practice. Professional Network Centre events are well attended by a cross-section of administrators, researchers and practitioners and, while more work needs to be done, there are

impressive displays of targeted use of assessment and achievement related data to assist teachers, principals and board administrators throughout the province.

Measurements of success have been identified for evaluating initiatives under this strategy on an ongoing basis. For example, when implementing the OERP the Ministry identified three measures for gauging the success of the initiative: frequency and scope of collaboration in research and education in Ontario; quality, quantity and relevance of research and evaluation to educational policies and practices in Ontario; and, extent of dissemination and use of research and evaluation results to inform Ontario education policy and practice.

Evidence has also been used to inform ministry decision-making related to MISA local capacity building activities. The Ministry monitors financial reports, as well as outcome measurements related to each of the three core-capacities under MISA. The Ministry has provided a MISA Common Core Capacities Continuum to school boards to help them evaluate their progress in developing sustained capacity for evidence-informed decision-making. Increases in technology capacity are monitored by tracking the Student Management Systems and Decision Support Tools implemented by school boards. The quality and timeliness of data submitted to the Ministry by school boards is another indicator of movement toward a healthy data culture necessary to support evidence informed decision-making.

As noted, there are clear signs of greater interest in the sector as evidenced by well attended events of the Professional Network Centres including: fourteen symposia/conferences, nine research priority sessions, four workshops and five training sessions in approximately the past two years. The growth of research staff in the education sector is a further indicator. Over the past three years membership for the Association of Educational Researchers of Ontario (AERO) has grown from 85 members in 2003-04 to 135 members in 2006-07.

### **Implications for research and policy**

The Ministry's implementation of the strategy for increasing the role of research and evidence in Ontario education has offered several lessons that may prove useful to others.

The Ontario experience suggests that a balance must be achieved between standardized and differentiated approaches to capacity building. In short, there is no effective "one size fits all" approach to capacity building particularly when dealing with a range of local needs. While local strategies can vary, it is essential that they are moving toward a common vision or desired end state. The Ontario Research Strategy and MISA set out a common vision that is shared with stakeholders in the education and research communities. Without a shared vision, it is difficult to have shared accountability for achieving the goals of the strategy. Actors at all levels must feel a shared ownership of the work. MISA Professional Network Centres have grown their learning communities with a clear sense of ownership and purpose relative to the goals of MISA. In short, a partnership approach is essential for sustainable capacity building. The research strategy is a deliberately inclusive strategy focused on building a shared commitment to the appropriate and effective use of research, data and other forms of evidence to support decisions and practices to benefit students and educators.

Work on the strategy has also demonstrated the challenges associated with data management. The implementation of new local and provincial data collection systems have encountered significant challenges related to technology and data cleansing and these are to be anticipated.

These challenges are grist for the mill for resistors, but it is critical to stay the course when dealing with transformational change and in particular when dealing with the complex and difficult establishment of infrastructure. Accurate and timely data, business processes that support a healthy data culture and knowledgeable staff are key pre-requisites for evidence-informed decision-making. Steady progress in achieving this capacity is a key success factor.

Finally, it must be recognized that creating an environment that values the use of research and evidence involves a journey. The challenge for Ontario will be to sustain growth in capacity building to the point where there is systematic use of research, data and other forms of evidence. Increased public reporting of success indicators across all key policy areas will help to drive the transformation to an evidence-informed environment and more work needs to be done to track school process indicators to help to identify effective practices. There is also a clear need to continue to look for ways to improve the skill and knowledge base of ministry staff, board administrators, principals and teachers concerning their respective roles in the effective use of data and research to support strategies for improved student achievement.