



Advisory

The Council of Ontario Directors of Education (CODE) is an advisory and consultative organization composed of the CEOs of each of the 72 District School Boards in Ontario; Public, Catholic and French Language.

Using Data to Support Effective Leadership and Increase Student Achievement

What do I need to know about using data to support effective leadership and increase student achievement?

The way in which supervisory officers use data has a great impact on their effectiveness as system leaders.

People make decisions on the basis of the information they have and their personal values. Good data means better decisions and better choices. Good data supports leaders as they initiate and implement change.

Supervisory officers hold positions of leadership and help to improve student achievement and equity of educational opportunities. Supervisory officers deal with vast amounts of data. Being able to interpret, evaluate, and disseminate data leads to more positive results for students. Effective leaders stimulate positive and sustainable change through decisions based on accurate, current, and relevant data.

What does the Ministry of Education stipulate about using data?

The Ministry of Education supports the effective use of data in school districts to improve student achievement, close the achievement gap, and build public confidence. The Ministry and the public expect that school boards will collect, analyze, and interpret a wide range of data to inform instructional decisions and plan system improvement initiatives. Transparency and accountability have become key factors in board decision-making.

The Ministry expects boards to collect and use data from a number of reliable sources:

- **Ministry of Education:** The Ministry collects a wide variety of data and supports board staff in their use of data through the Managing Information for Student Achievement (MISA) funding. A way of allowing boards to have greater interactive access to provincial data is still under development.
- **Education Quality and Accountability Office (EQAO):** An interactive resource to inform leadership action has been developed by EQAO. This tool for directors and supervisory officers integrates EQAO data, standard demographic data, and EQAO contextual data for all schools in Ontario. It correlates the data and allows the user to select the schools and data needed for local purposes. This tool provides examples of how data can be integrated into an interactive model.



“...real accountability is much more than accounting (providing information or justifications in an annual report or a press release or even student report cards). It is a moral and professional responsibility to be knowledgeable and fair in teaching and in interaction with students and their parents. It engenders respect, trust, shared understanding, and mutual support.”

Earl, Lorna M. & Katz, Steven. (2006). *Leading Schools in a Data-Rich World*. Thousand Oaks, California: Corwin Press. p. 10

Victoria Bernhardt's book provides an introduction to data collection and analysis. It includes suggestions and sample surveys for collecting data about perceptions of schools.

Bernhardt, Victoria. (2004). *Data Analysis for Continuous School Improvement*. (2nd edition). New York: Eye on Education.



- **Statistics Canada:** Statistics Canada provides a range of data that can be used by boards to support schools and board staff as they analyze and interpret local data bases.
- **Local Data Bases:** The board's student information system provides a wealth of data. The supervisory officer needs to take on a key advocacy role and ensure that the data collected are available and presented in ways that make it easy for system and school staff to understand and use. It is also important to ensure that the information requested is needed and not already available before collecting new and additional data.

Collecting data is easy. Accessing, analyzing, presenting, interpreting, correlating and evaluating data is much more difficult, but much more productive.

Boards are expected to:

Boards are expected to make community-based, effective, and sustainable decisions to improve student achievement. These decisions can only be undertaken when boards have accurate and relevant information, described in a context that is understood and meaningful.

The factors to consider include:

- **Demographic Data:** Consistent demographic data can provide a richer understanding of a school context. Key demographic factors include family income, education levels, family structure, mobility, and cultural and linguistic background. There is a compelling need to have consistent data, collected in the same manner, for all schools. Without this, the demographic data cannot effectively inform decision-making. Schools and boards cannot control or alter the demographic context, at least in the short term. However, they need to understand this context as a starting point since it may be an important consideration in the allocation of resources.
- **Perceptual Data:** The attitudes, beliefs, and perceptions of the people connected with a school community provide important data. The data needs to be collected over time. Victoria Bernhardt provides suggestions for collecting and organizing this type of information. Perceptions and attitudes can be changed with time and good information.
- **Input Data:** Input information deals with all board responsibilities:
 - building and grounds
 - staff
 - programs and classes
 - timetable and policies
 - Ministry requirements
 - collective agreements
 - resources
 - professional development

It also includes all principal and teacher actions and staff use of time and resources available for education. Policy makers and people of influence can change the organizational context of a school community, and teachers can change the classroom environment.

- **Output Data:** The primary forms of output data for schools are student achievement results. EQAO provides the provincial data while teacher evaluations provide a wealth of local data. Attendance patterns, graduation rates, and student, parent and teacher attitudes are other examples of output data.

It is incumbent upon schools and systems to increase school achievement results and improve attitudes. It is essential to have good information by which to measure results and changes in student learning.

Supervisory officers are required to:

Supervisory officers are required to use data to support effective leadership and increase student achievement. The Ministry of Education requires boards to develop and implement a multi-year plan which requires the effective collection, interpretation, evaluation and dissemination of data.

A supervisory officer's repertoire of data management skills include:

- **Setting a richer context for dealing with issues:** Stating the issue clearly and establishing a rich context for the issue promotes and supports better decision-making. Good information helps supervisory officers establish environments within which to discuss issues and plan the most effective way forward.
- **Checking assumptions:** Everyone brings assumptions and perceptions to every situation. Often these ideas are supported by the local culture. While it is not possible to change personal values, clear data can provide new perspectives that may create dissonance about long-held assumptions and perceptions. This is a prerequisite for change. When individuals challenge their assumptions and perceptions, they are more likely to accept the need for change.
- **Overcoming inertia and resistance to change:** Change is not comfortable for most. There is a tendency to continue doing things the same way with the same results. Leaders must promote change. Data can create a sense of urgency, highlight the need for change, and manage progress toward desired outcomes.
- **Thinking outside the board:** To get an accurate picture of progress and success as a board, system leaders need to study provincial and international data. Information from a wider context can help boards to develop a broader outlook, and consider options and opportunities that have been identified in other systems.
- **Verifying change:** Without data there is no clear picture of progress. Effort, personality, and the "halo effect" are often substituted as the indicators of success. Data can document change and increase district confidence in conclusions about growth.

What are the important practices for effectiveness?

Effectiveness in the collection and use of data is connected to a number of important considerations:

- **Is It Valid?** Are the data sets relevant to the decisions being made? With substantial data available, system leaders should ensure that they are using the most valid data in relation to the current issues.
- **Is It Reliable?** Supervisory officers must consider: (a) Does the data provide consistent, unambiguous information? (b) Has the data been collected in a consistent way? (c) If the information were collected again would the data be comparable?
- **Is It Multi-sourced?** The best decisions are made when multiple sources of data are used to illuminate and inform the discussion.
- **Is It Multi-year?** Use of data is most effective when it is considered over a number of years. Single-year data is variable. Looking at trends over time and studying rolling averages provide better understanding.
- **Is It Comparable?** Are boards using the same data to compare schools? Even within a board, data may not be collected in the same manner. Problems are magnified when data from a number of boards are compared. As data collection matures, there is greater potential for a layer of data to be collected in the same manner for all schools in the province, and to be available in interactive databases.

“Intelligent accountability involves a set of policies and practices that 1) actually increases individual, and especially collective, capacity so that shared responsibility carries most of the weight of effective accountability; 2) makes internal and external accountability almost seamless; and 3) leaves external accountability to do its remaining, more manageable task of necessary intervention....The key here is to focus transparently on what needs to be improved and to do so in a way that motivates and helps schools to improve. Most of the needs of accountability are addressed through the transparency and open measurement of achievement.”

Fullan, Michael.
(Summer 2010).

“The BIG Ideas Behind
Whole System Reform”.
Canadian Education
Association. Education Canada.
Vol. 50 (3). p. 26

[http://www.michaelfullan.ca/
Articles_10/BigIdeas-CEA.pdf](http://www.michaelfullan.ca/Articles_10/BigIdeas-CEA.pdf)



Links to additional information

An article in *EQAO Connects* provides a rationale for including demographic data as part of decision-making.

Moffatt, Peter & Kozlow, Michael. (Spring 2008). "Data in Action: Looking through the Demographic Lens". *EQAO Connects* Web Magazine, Issue 2. <http://www.eqao.com/eMagazine/2008/05/eMagArticle.aspx?Lang=E&ArticleID=08&ItemID=23>

A LNS document describes the statistical neighbours project initiated by The Literacy and Numeracy Secretariat. Data is available for schools through the School Effectiveness branch. Schools and boards cannot access the data directly.

Ontario Statistical Neighbours: Informing Our Strategy to Improve Student Achievement, LNS, June 2007.

<http://www.edu.gov.on.ca/eng/literacynumeracy/osneng.pdf>

An *Educational Leadership* article provides a set of essential questions about data that "can mobilize staff, promote data literacy, and help raise student achievement".

Ronka, D., Lachat, M., Slaughter, R. & Meltzer, J. (Dec. 2008/Jan. 2009). "Answering the Questions That Count". Volume 66. No. 4. <http://www.ascd.org/publications/educational-leadership/dec08/vol66/num04/Answering-the-Questions-That-Count.aspx>

What strategies should be considered in order to use data positively and effectively?

- 1. Collect information, and then move on to the educational issues.** Identify sources of data, interpret the data, and move on. It is important to discourage perseveration on data and sources.
- 2. Data should inform action.** When the use of particular data becomes the focus, the discussion is usually going in the wrong direction. It is important to redirect the focus to consider what the information indicates for classroom instruction and/or system improvement.
- 3. Don't expect data to make the decisions.** Data can provide indicators, but each layer of data is only part of the context. Decisions should be based on the best data available, recognizing that new data are constantly being generated. Use data to enrich understanding, inform teaching practice, and build system capacity.
- 4. Data can be intimidating.** Many people are intimidated by data and can be uncomfortable with numbers and masses of information. Supervisory officers must stress the need to use data to support educational objectives. Ask questions. Have others explain how the data supports different positions. Having the data displayed graphically may help to keep the discussion focused on key issues.
- 5. Adjust the lens constantly.** Zoom in and out with data. Aggregate, disaggregate, and reorganize the data. Different perspectives may provide different insights. Use the data to challenge local perceptions and assumptions. Look for wider comparators.
- 6. Always take a long view.** A single piece of information is not reliable. Look for trends over time. For small numbers, consider combining several years of data into rolling averages.
- 7. Use data to find successes.** Good data can help identify growth and achievement. When data is used to identify incorrect practices rather than to build upon successes or focus on action, people will resist the use of data.

Where can I go for assistance?

If as a supervisory officer, I have concerns and need assistance, what should I do?

- Many boards have a research department or staff familiar with data use. Consult internal staff and supports before accessing outside assistance.
- Regional MISA networks and leads are also helpful. The Ministry of Education can provide additional supports related to the collection and use of data.
- The Student Achievement Division through its Student Achievement Officers and regional supports can also be helpful to system staff in interpreting data and developing a multi-year plan.
- It is useful to access support through CODE, OPSOA, OCSOA and CODELF, as well as from boards that have demonstrated leadership in the area of data collection and interpretation.

