

The Literacy and Numeracy Secretariat

Ontario Statistical Neighbours

Informing Our Strategy to Improve Student Achievement



June, 2007

Dear Colleagues,

The ability to use data for decision making is one of the founding principles of the Literacy and Numeracy Secretariat (LNS). Ontario Statistical Neighbours (OSN) is an innovative tool that allows us to access school performance, program and contextual data. This, in turn, provides supports to boards and schools that are based on identified needs to improve student achievement. OSN has played a major role in informing our initiatives and programs, such as the Ontario Focused Intervention Partnership (OFIP) and the Schools on the Move: Lighthouse Program.

We are extremely proud to present this unique tool that has been developed in partnership with the Information Management Branch of the Ministry of Education. We are grateful to our many partners who have provided valuable input.

Experts from other countries who have seen this tool have been very impressed and refer to it as being “one-of-a-kind” on the international scene. What they find most impressive is the fact that we have incorporated contextual data, not as an excuse for performance, but rather to provide a richer and more robust picture of the confluence of factors that may influence achievement.

In a recent visit to LNS, Professor Allan Luke from the University of Queensland in Australia had the opportunity to attend a demonstration of this tool. He said:

“State systems everywhere face two problems: getting good quality data on students and schools and putting these data in accessible formats that can be used constructively for policy and operational decisions. The Statistical Neighbours interface is a remarkable, world-class achievement by LNS, one that places Ontario well ahead of other systems.”

It is our intention, over time, to make this tool available to school boards in a timely and systematic manner. We are currently piloting an Information Service Desk version with a group of directors of education. The data from the pilot will help to inform future possibilities. In the meantime, we encourage you to continue to work with your student achievement officers to answer any queries you may have about the achievement of your schools and boards.

Sincerely,

Avis Glaze

Chief Student Achievement Officer and CEO
The Literacy and Numeracy Secretariat
Ministry of Education

Introduction

Improving school performance is not just about analysing achievement results. It is also about improving and enhancing the literacy and numeracy skills of all students. That is why LNS, along with the ministry's Information Management Branch and other partners, has developed an information system tool called Ontario Statistical Neighbours (OSN). This tool enables a dynamic analysis of school performance, demographics, and school program information.

Through our analysis, we can explore school performance data and contextual data such as percentages of students living in low-income households, students whose first language learned at home is different from their language of instruction, and students with special education needs. We can also include other school characteristics and demographic information in the analysis.

Using OSN, we have identified a number of significant performance trends. For example, schools are showing substantial improvement in a wide range of contexts, including challenging circumstances. We now know from this evidence that high achievement and improvement can be realized by schools in all contexts across Ontario.



OSN: Supporting Our Work to Improve Student Achievement



What Is Ontario Statistical Neighbours?

From Ontario Statistical Neighbours

In over 1,600 Ontario schools, the percentage of students achieving the provincial standard on the EQAO Grade 3 reading assessment increased by at least 10 percentage points over the past three years (2003–04 to 2005–06).

Of the 1,000 schools that have a high proportion of students whose first language learned at home is different than the language of instruction at school, 464 have improved between 2003–04 and 2005–06 in Grade 3 reading by at least 10 percentage points.

Of the approximately 3,400 elementary schools with Grade 6, over half of these schools had 65% or more of their Grade 6 students at or above the provincial standard in Grade 6 reading on the 2005–06 EQAO assessment.

Ontario Statistical Neighbours (OSN) is an information system that allows for the analysis of school performance, demographic and school program information, in combination or separately, depending on the analysis required. The unit of analysis is the school. Indicators include:

Performance indicators

- ▶ Grade 3 and Grade 6 reading, writing and mathematics achievement results as measured by EQAO assessments

Demographic indicators

- ▶ Percentage of low income cut-off (LICO) households within a school. These families spend 20% more than the average family on food, shelter, and clothing.
- ▶ Parents' education level: percentage of parents with some university education
- ▶ Percentage of students whose first language learned at home is different than the language of instruction

School characteristics

- ▶ School size:
 - 300 or fewer students
 - 301 to 500 students
 - more than 500 students
- ▶ Residence type: all urban, predominantly urban, urban/rural mix, predominantly rural
- ▶ Percentage of students with special education needs
- ▶ Percentage of students who have ESL/ALF or ELD/PDF needs

LNS program data

- ▶ Ontario Focused Intervention Partnership (OFIP)
- ▶ Schools on the Move: Lighthouse Program
- ▶ Legacy Turnaround Schools

OSN Indicators

School Performance

- EQAO data
- 1- and 3-year performance typologies

School Demographics

- Low income
- Parents' education
- First language learned at home
- School size
- Location type

School Programs

- Special Education
- ESL/ALF
- LNS Programs

OSN is dynamic and very flexible. It can provide answers to over 80 billion queries.

We can explore any combination of variables based on the data available through OSN.

The Purpose of Ontario Statistical Neighbours

The purpose of developing OSN was to enable a fuller understanding of data related to elementary schools across the province in order to support effective strategies for student achievement. All publicly funded schools in the province with elementary enrolment are included in the database. The tool is intended to inform improvement planning and to facilitate the sharing of relevant and effective practices across similar schools to assist in improving student achievement.

Where Do the Data Come From?

The data contained in OSN comes from three main sources: Statistics Canada, the Ministry of Education and EQAO. The Statistics Canada information is based on 2001 Census data collected from households with children aged 5 to 13 years. The Ministry of Education information is based on the October reports completed by schools across the province, as well as data supplied by the Information Management Branch and LNS. EQAO data are based on the results of annual provincial assessments in reading, writing, and mathematics in Grades 3 and 6, as well as information from student questionnaires and profiles.

Ontario Statistical Neighbours Does Not Rank Schools

OSN was specifically designed so that schools cannot be ranked. There are no predetermined lists or fixed clusters of schools. As well, OSN cannot identify specific students, teachers, or principals. The school is the unit of analysis.

How Does LNS Use Ontario Statistical Neighbours?

LNS has used OSN to assist in informing, developing and supporting the implementation of many initiatives and programs. For example, OSN was used to help identify the schools selected to participate in the Ontario Focused Intervention Partnership (OFIP) and the Schools on the Move: Lighthouse Program. The data analysed included statistics on EQAO assessments and the demographic characteristics of the school community.

On a daily basis, the OSN tool supports LNS student achievement officers (SAOs) in their work with schools and school boards. For example, a principal at a school may ask an SAO for examples of schools that are similar to his or her school in order to exchange ideas and find out about practices that would enhance student achievement. OSN can be used to identify “like” schools within a board, across several boards or from across the province that are similar based on criteria agreed upon by the principal and the SAO working together to meet the school’s needs.

Analysis of data on OSN can also assist in identifying possible barriers to improving student achievement and in planning strategies to overcome these challenges.

Over 900 schools had at least 75% or more of their students achieving at or above the provincial standard on the 2005–06 Grade 6 EQAO reading assessment.

Almost 1,300 schools participating in the Grade 6 EQAO assessments had 75% or more of their students at the provincial standard in at least one of the three Grade 6 assessment areas in 2005–06.

In almost 1,100 schools, at least 65% of students were at the provincial standard in **all three** Grade 6 assessment areas (reading, writing, mathematics) in 2005–06.

Almost 500 schools participating in the Grade 6 EQAO assessments had at least 75% of their students achieving the provincial standard in **all three** assessment areas in 2005–06.

The above information is based on 2005–06 EQAO and ministry data and on 2001 Census data from Statistics Canada.

From Ontario Statistical Neighbours

There are about 600 elementary schools in Ontario with both Grades 3 and 6 that are in very challenging socio-economic environments. These are schools with a high occurrence of students living in low income households combined with lower levels of parent education. Almost half of these schools improved by at least 10 percentage points in Grade 3 reading over the past three years. Over 40% improved substantially in Grade 6 reading over the past three years.

In over 600 schools with both Grades 3 and 6, the percentage of students achieving the provincial standard in both Grades 3 and 6 reading has increased by at least 10 percentage points in 2005–06 compared with results in 2003–04.

In 2005–06, over 18% of all elementary schools with both Grades 3 and 6 had 65% or more of their Grade 3 **and** Grade 6 students at the provincial standard in **all six** assessment areas.

For example, OSN analysis of OFIP 1 and 2 schools (these are schools receiving focused support to overcome a previous trend of lower performance) reveal that these schools face many contextual challenges. These schools are more likely to have a higher proportion of students who are living in lower socio-economic circumstances and/or whose first language learned at home is different from the language of instruction. The educational attainment of parents in these schools overall is not as high as the majority of schools in the province. These schools also have a higher proportion of students that have special education needs and/or English or French language learner needs. This information can help with planning and implementing strategies to ensure equity for the students in these schools by addressing the combinations of educational and social disadvantages. By doing this, we recognize that context matters. However, context is not an excuse as schools can and do make a vital difference and can overcome barriers through the teaching and learning they provide to help every student succeed.

What Kinds of Questions Can Be Answered by OSN?

The purpose of developing OSN was to enable a fuller understanding of data relating to elementary schools across the province in order to support effective strategies for student achievement. OSN consists of four modules:

- **Information Centre Module** – Enables analysis using any combination of the school demographics, socio-economic characteristics, school program information, and school performance indicators by province, region, or individual board.
- **Schools Like Ours Module** – Finds similar schools to any selected school using any combination of the school demographics, program information, and performance indicators by province, region, or board.
- **Geographic Module** – Finds schools from specified geographic locations such as cities or towns and allows for analysis of their performance.
- **Performance Module** – Allows for analysis of school performance for individual assessment areas or across assessment areas at the provincial level.

OSN can help answer questions that are school-, board-, or province-focused.

- ▶ An example of a school-focused question is:
Are there schools with demographic challenges like my school that are improving on the Grade 3 EQAO reading assessments and have a high proportion of students whose first language at home is different than the language of instruction?
- ▶ An example of a board-focused question is:
How many schools in my district school board have more than 500 students? Of those, how many have improved by 10 percentage points or more over the past three years on the Grade 3 EQAO reading assessments?

- ▶ An example of a province-focused question is:

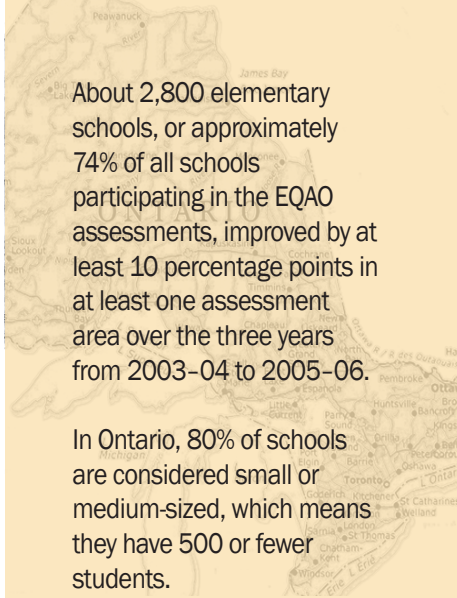
Of all the schools in Ontario with Grade 6, how many are in a predominantly rural area and in the highest categories of students living in low income households, that is, where 16% or more families with children aged 5 to 13 are spending 20% more than the average family on food, shelter, and clothing? Of these schools, what percentage show a trend of improvement in both

Grade 6 reading and writing as measured by performance on the EQAO assessments?

OSN: Next Steps

LNS is currently piloting an OSN Information Service Desk that provides information to, and answers questions submitted by, 23 school boards from across Ontario.

It is intended that the information supplied by the Information Service Desk assist the boards in planning and developing initiatives to support their schools. The information includes school and board profiles and analyses of a range of school data that could be used to identify needs and develop strategies to address those needs. Through the Information Service Desk, LNS will continue its collaboration with schools and school boards to improve student achievement. The results of this pilot will inform our plans to expand this service to other school boards across Ontario.



About 2,800 elementary schools, or approximately 74% of all schools participating in the EQAO assessments, improved by at least 10 percentage points in at least one assessment area over the three years from 2003-04 to 2005-06.

In Ontario, 80% of schools are considered small or medium-sized, which means they have 500 or fewer students.

About 43% of French elementary schools in the province have students who reside in predominantly rural areas.

The above information is based on 2005-06 EQAO and ministry data and on 2001 Census data from Statistics Canada.

This publication is available on the Ministry of Education's website at www.edu.gov.on.ca.

Une publication équivalente est disponible en français sous le titre suivant : *Évaluation du rendement du personnel enseignant chevronné : Guide des exigences et des modalités.*


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