



Ontario Provincial Report on Achievement, 2002–2003

English-Language Schools

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Chair's Message

EQAO is pleased to present its seventh annual *Ontario Provincial Report on Achievement*. This report provides an overview of student achievement in the province, bringing together results and recommendations from the provincial, national and international assessments administered during 2002–2003.

Province-wide assessments yield reliable, high-quality information on how well elementary and secondary students are meeting curriculum expectations in key subject areas. The assessments also provide a focus for discussion on improvement. EQAO achievement information promotes dialogue among educators, school councils, parents and students as they work together to set achievement goals and identify strategies that will help Ontario students find success in the classroom and in life.

Those involved in improvement planning use EQAO achievement information, along with other data, to identify trends and best practices. Each year, every school board in the province submits to EQAO an improvement plan with achievement targets and the strategies that will be implemented to reach these targets. EQAO in turn provides the boards with feedback and recommendations. This report includes EQAO's review of the improvement plans for 2003–2004. School and school board efforts are proving successful, and we are pleased to see that there are schools across the province showing steady and marked improvement.

EQAO continues to be committed to providing information that assists schools, school councils and school boards in their improvement efforts, with the goal of allowing all Ontario students to benefit from a high-quality education. We trust that you will find this report informative and useful.

Jerry G. Ponikvar

EQAO's Board of Directors

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The Education Quality and Accountability Office

Working together to improve student learning

“Good assessment is a key ingredient in improved student performance; students, parents and teachers need informative, reliable feedback to measure learning outcomes. High-quality assessment is integral to improving student performance.”

Donna Wishart, Literacy Coordinator and Head of the English Department, John L. Forster Secondary School, Greater Essex County District School Board

Mandate

EQAO is dedicated to working with the education community and to enhancing the quality and accountability of the education system in Ontario. This will be achieved through student assessments that produce objective, reliable and relevant information, and through the timely public release of this information, along with recommendations for system improvement.

About EQAO

EQAO is an arm's-length agency of the Ontario government. The agency's objective is to evaluate and report on the quality and effectiveness of elementary and secondary education in Ontario and to make recommendations for improvement to Ontario school boards.

Values

- EQAO values student learning above all other interests.
- EQAO values information that has the potential to bring about constructive change and improvement.
- EQAO values the dedication and expertise of Ontario's educators and works in partnership with them in all of its activities.
- EQAO values the delivery of its programs and services with equivalent quality in both English and French.

Activities

- EQAO designs and implements a comprehensive program of student assessment within government-established parameters.
- EQAO reports to the Minister, the public and the education community on assessment and education issues and makes recommendations for improvement.
- EQAO promotes research in best practices in assessment and accountability.
- EQAO leads Ontario's participation in national and international assessments.

Programs

- The Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics are based on the expectations in *The Ontario Curriculum, Grades 1–8*.
- The Grade 9 Assessment of Mathematics assesses the knowledge and skills of students in Grade 9 applied and academic programs, based on the corresponding expectations in *The Ontario Curriculum, Grades 9 and 10: Mathematics*.
- The Ontario Secondary School Literacy Test ensures that students have acquired the essential reading and writing skills that apply to all subject areas in *The Ontario Curriculum* up to the end of Grade 9.
- Improvement planning is a strategy that enhances student outcomes by increasing district school boards' and schools' capacity to design and manage change.
- The School Achievement Indicators Program is a national testing program that tests random samples of 13- and 16-year-old students.
- The Trends in International Mathematics and Science Study involves students in Grades 4 and 8 in a random sample of schools.
- The Programme for International Student Assessment evaluates the performance of 15-year-old students in a random sample of schools, in mathematics, science and reading.
- The Education Quality Indicators Program is a framework of key contextual measures that educators and administrators use to interpret their student achievement data. These measures, collected at the local level, help educators and administrators understand the unique features of the school and community.

“Assessment is important in education because it provides students, families, educators and policy-makers with information about students’ strengths and weaknesses. Everyone should use this information to acknowledge students’ strengths, while developing strategies to improve students’ learning.”

*Linda Henshaw, Grade 10 Teacher
John Fraser Secondary School, Peel District School Board*



Education
Quality and
Accountability
Office

Executive Summary

**The Grade 3 and Grade 6 Assessments of Reading, Writing
and Mathematics, 2002–2003**



November 2003

Introduction

An independent, arm's-length agency of the provincial government, EQAO provides parents, teachers and the public with accurate and reliable information about student achievement. EQAO conducts a range of province-wide assessments. The Grade 3 assessment has been in place for six years and the Grade 6 assessment for five years under the current curriculum. These annual assessments involve all students and are a source of information on what the students have learned in reading, writing and mathematics.

This document contains information from the *Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics, 2002–2003: Report of Provincial Results*.



What We Learned About Students and Schools

Grade 3

- 48% of the participants in the assessment were girls; 51% were boys.
- 81% of students indicated that the language they spoke at home was mostly or only English; 8%, mostly or only another language; 10%, English as often as another language.
- 5% of the students were identified by their teachers as having been in an English as a second language or English literacy development (ESL/ELD) program.
- 6% of the students had been formally identified as exceptional and were receiving special education support (excluding gifted).
- 10% of the students had *not* been formally identified as exceptional but were receiving special education remedial support.
- 17% of the students received special education support (excluding gifted and enrichment).
- 6% of the students who participated in the assessment were enrolled in French Immersion.

Grade 6

- 49% of participants in the assessment were girls; 51% were boys.
- 85% of students indicated that the language they spoke at home was mostly or only English; 6%, mostly or only another language; 9%, English as often as another language.
- 3% of the students were identified by their teachers as having been in an ESL/ELD program.
- 4% of the students had been formally identified as exceptional and were receiving special education support (excluding gifted).
- 6% of the students had *not* been formally identified as exceptional but were receiving remedial special education support.
- 16% of the students received special education support (excluding gifted and enrichment).

Exemptions from the 2002–2003 Assessments

	Grade 3	Grade 6
Students exempted from all three subjects	4%	3%
Students exempted from reading	6%	4%
Students exempted from writing	5%	4%
Students exempted from mathematics	4%	4%



Results of the Grade 3 and Grade 6 Assessments, 2002–2003

Grade 3 Overall Achievement in Reading¹

Levels 3 and 4

50% of students achieved Level 3 or 4 in reading, with 45% at Level 3 and 5% at Level 4. This is up 5% from the 1998–1999 overall results. These students demonstrated a high or very high level of achievement, meeting or exceeding the provincial standard.

Levels 1 and 2

36% of students achieved Level 1 or 2, with 8% at Level 1 and 28% at Level 2. This is down 9% from the 1998–1999² overall results, with all of the improvement at Level 1. These students demonstrated a moderate or passable level of achievement, below or approaching the provincial standard.

Grade 6 Overall Achievement in Reading

Levels 3 and 4

56% of students achieved Level 3 or 4 in reading, with 47% at Level 3 and 9% at Level 4. This is up 8% from the 1998–1999 overall results. These students demonstrated a high or very high level of achievement, meeting or exceeding the provincial standard.

Levels 1 and 2

34% of students achieved Level 1 or 2, with 7% at Level 1 and 27% at Level 2. This is down 10% from the 1998–1999³ overall results. These students demonstrated a moderate or passable level of achievement, below or approaching the provincial standard.

Grade 3 Overall Achievement in Writing

Levels 3 and 4

55%⁴ of students achieved Level 3 or 4 in writing, with 48% at Level 3 and 8% at Level 4. This is up 3% from the 1998–1999 overall results. These students demonstrated a high or very high level of achievement, meeting or exceeding the provincial standard.

Levels 1 and 2

35% of students achieved Level 1 or 2, with 2% at Level 1 and 33% at Level 2. This is down 5% from the 1998–1999 overall results. These students demonstrated a moderate or passable level of achievement, below or approaching the provincial standard.

¹ All results are reported using Method 1, which reports data for all students in the grade. Method 1 expresses the number of students in each reporting category as a percentage of all students in the grade (i.e., students at the four levels of achievement and those in the exempt, no data, not enough information to score and not enough evidence for Level 1 categories).

² Note that in 1998–1999, the category not enough evidence for Level 1 did not exist.

³ See note 2.

⁴ The difference between this percentage and that obtained by combining the percentages at Levels 3 and 4 is attributable to rounding.

Grade 6 Overall Achievement in Writing

Levels 3 and 4

54%⁵ of students achieved Level 3 or 4 in writing, with 43% at Level 3 and 10% at Level 4. This is up 6% from the 1998–1999 overall results. These students demonstrated a high or very high level of achievement, meeting or exceeding the provincial standard.

Levels 1 and 2

38% of students achieved Level 1 or 2, with 5% at Level 1 and 33% at Level 2. This is down 6% from the 1998–1999 overall results. These students demonstrated a moderate or passable level of achievement, below or approaching the provincial standard.

Grade 3 Overall Achievement in Mathematics

Levels 3 and 4

57% of students achieved Level 3 or 4 in mathematics, with 47% at Level 3 and 10% at Level 4. This is up 1% from the 1998–1999 overall results. These students demonstrated a high or very high level of achievement, meeting or exceeding the provincial standard.

Levels 1 and 2

31% of students achieved Level 1 or 2, with 4% at Level 1 and 27% at Level 2. This is down 6% from the 1998–1999 overall results, with all of the improvement at Level 1. These students demonstrated a moderate or passable level of achievement, below or approaching the provincial standard.

Grade 6 Overall Achievement in Mathematics

Levels 3 and 4

53% of students achieved Level 3 or 4 in mathematics, with 41% at Level 3 and 12% at Level 4. This is up 7% from the 1998–1999 overall results. These students demonstrated a high or very high level of achievement, meeting or exceeding the provincial standard.

Levels 1 and 2

36% of students achieved Level 1 or 2, with 8% at Level 1 and 28% at Level 2. This is down 11% from the 1998–1999 overall results. These students demonstrated a moderate or passable level of achievement, below or approaching the provincial standard.

⁵ The difference between this percentage and that obtained by combining the percentages at Levels 3 and 4 is attributable to rounding.

Grade 3 and Grade 6 Overall Achievement at Levels 3 and 4

	Grade 3						Grade 6					
Gender	Female			Male			Female			Male		
	R	W	M	R	W	M	R	W	M	R	W	M
	55%	64%	58%	44%	47%	55%	63%	64%	55%	48%	43%	52%
Language	Non-ESL/ELD			ESL/ELD			Non-ESL/ELD			ESL/ELD		
	R	W	M	R	W	M	R	W	M	R	W	M
	51%	57%	58%	25%	34%	40%	57%	54%	53%	25%	24%	35%
Special Education	Not receiving support			Receiving Support			Not receiving support			Receiving Support		
	R	W	M	R	W	M	R	W	M	R	W	M
	57%	64%	63%	16%	16%	27%	63%	62%	60%	17%	13%	18%

Overall Level of Achievement in Reading—Grade 3

	Exempt	No Data	NEIS ⁶	NE1 ⁷	Level 1	Level 2	Level 3	Level 4
Method 1	6%	1%	8%	<1%	8%	28%	45%	5%
Method 2	n/a	n/a	8%	<1%	9%	30%	48%	5%

Overall Level of Achievement in Reading—Grade 6

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	4%	1%	5%	<1%	7%	27%	47%	9%
Method 2	n/a	n/a	6%	<1%	7%	29%	49%	9%

Overall Level of Achievement in Writing—Grade 3

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	5%	1%	4%	<1%	2%	33%	48%	8%
Method 2	n/a	n/a	4%	<1%	2%	36%	51%	8%

Overall Level of Achievement in Writing—Grade 6

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	4%	1%	3%	<1%	5%	33%	43%	10%
Method 2	n/a	n/a	3%	<1%	5%	35%	46%	11%

⁶ NEIS: Not enough information to score.

⁷ NE1: Not enough evidence to assign a Level 1.

Overall Level of Achievement in Mathematics—Grade 3

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	4%	1%	7%	<1%	4%	27%	47%	10%
Method 2	n/a	n/a	7%	<1%	5%	28%	50%	10%

Overall Level of Achievement in Mathematics—Grade 6

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	4%	1%	6%	<1%	8%	28%	41%	12%
Method 2	n/a	n/a	7%	<1%	8%	29%	43%	13%

Findings from the Student Questionnaire

Grade 3

- 59% of boys and 76% of girls indicated that they like to read. This is a small decline from 1998–1999.
- 51% of boys and 66% of girls indicated that they like to write.
- 59% of boys and 66% of girls indicated that they read at home.
- 65% of boys and 57% of girls indicated that they like mathematics.

Grade 6

- 46% of boys and 63% of girls indicated that they like to read. This is a small decline from 1998–1999.
- 36% of boys and 52% of girls indicated that they like to write.
- 47% of boys and 63% of girls indicated that they read at home.
- 55% of boys and 40% of girls indicated that they like mathematics.



Instructional Suggestions

Principals, schools and school boards as well as faculties of education, the Ontario College of Teachers and the Ministry of Education all play important roles in changing conditions to ensure that learners' achievement improves. EQAO works together with its colleagues to achieve this goal and makes recommendations for system improvement based on the student achievement data provided by the province-wide assessments.

The following suggestions are based on feedback from markers and the education community and on the 2002–2003 results.

Reading

EQAO suggests that teachers

- provide students with reasoning activities. These should require students to demonstrate understanding by selecting, describing, interpreting and analyzing relevant ideas from both fiction and non-fiction and restating them in their own words. For example, as they read or are read to, have students
 - select supporting information;
 - identify the main idea and
 - describe story elements such as plot, setting, characters and conflict.
- provide students with opportunities to communicate about what they have read. For example, have students ask themselves the following questions:
 - “Have I ever been in this situation?”
 - “What does this remind me of?”
 - “How can I use this information?”
 - “Would I want the main character as my friend?”
- provide students with activities that require them to identify and describe how different types of texts are organized to aid understanding. For example, as they read or are being read to, have students
 - identify and explain characteristics of the text and
 - identify organizers and explain why the author has chosen to use them.
- provide students with activities that require them to identify and explain the use of language conventions in text. For example, as they are reading or being read to, have students
 - recognize punctuation and
 - explain how it helps them understand the text.
- ensure their reading programs
 - attend to all the components of the reading curriculum as outlined in *Early Reading Strategy: The Report of the Expert Panel on Early Reading in Ontario*;
 - offer different types of reading materials;
 - offer both fiction and non-fiction and
 - offer a variety of genres.
- work together within each school to ensure that reading skills are reinforced in all subject areas.

Writing

EQAO suggests that teachers

- provide students with opportunities to demonstrate reasoning in their writing by ensuring that they understand the purpose of the task and develop ideas that relate to the purpose. For example, to encourage students to recognize the purpose they are writing for, have them
 - write in a variety of forms and
 - respond to a variety of tasks.
 - provide students with opportunities to communicate clearly, ensuring that the students are developing the ability to use appropriate techniques in their writing. For example, have students
 - use an appropriate voice;
 - use descriptive vocabulary, aided by a dictionary and thesaurus; and
 - recognize and address the audience.
 - provide students with opportunities to organize their ideas for writing. For example, have students
 - plan an introduction, a sequence of ideas and a logical conclusion;
 - use paragraphs to connect ideas and
 - develop skills in using organizers, both visual and written, for different kinds of writing.
 - provide students with opportunities to write and apply language conventions. For example, have students
 - recognize that punctuation and grammar affect a writer's message;
 - proofread work carefully and
 - edit to ensure their message is accurate.
 - ensure that their writing programs provide students with opportunities to write
 - for a variety of authentic purposes and audiences and
 - within a time limit.
 - model writing forms and processes for their students.
 - teach the writing process. For example,
 - planning, focusing on the characteristics of the form being used;
 - writing an introduction, a body and an ending;
 - revising the draft;
 - proofreading—attending to punctuation, grammar and spelling;
 - editing for correctness and
 - publishing for an audience.
 - use reading to teach writing. For example,
 - when students read narratives aloud, have them identify specific story elements;
 - when students read poetry, have them discuss imagery and descriptive language and
 - when students read non-fiction, have them identify organizers and explain how they clarify the author's message.
 - work together within each school to ensure writing skills are reinforced in all subject areas.
-

Mathematics

EQAO suggests that teachers

- provide students with problem-solving opportunities within and across the mathematics strands by requiring them to analyze problems and to select and apply strategies that lead to accurate solutions. For example, have students
 - brainstorm and discuss strategies for solving problems;
 - construct solutions, using mathematical knowledge and experience; and
 - recognize that they can use several strategies to solve a problem.
- provide students with opportunities to demonstrate their understanding of mathematical concepts across strands by requiring them to incorporate mathematical ideas and relationships in their explanations. For example, have students
 - explain their thinking about a mathematical idea or relationship through math journals and problem-of-the-week activities and
 - demonstrate their understanding through projects, peer tutoring and co-operative tasks.
- provide students with opportunities to apply procedures within and across mathematics strands by requiring them to select and complete procedures and operations accurately. For example, have students
 - focus on identifying the problem;
 - select appropriate procedures and operations;
 - apply appropriate operations and
 - select and apply appropriate tools and methods for solving the problem.
- provide students with opportunities to communicate their mathematical understanding within and across strands by requiring them to justify their solutions using correct mathematical terminology and symbols. For example, have students
 - explain and justify their solutions, both orally and in writing, and
 - maintain a math journal.
- organize the mathematics program to
 - allow the acquisition of knowledge and skills between and among strands;
 - regularly address the knowledge and skills required across the strands throughout the year and
 - integrate and transfer knowledge and skills between and among strands.
- model
 - responses that use numbers, pictures, symbols and/or words;
 - the use of manipulatives and technology to understand and solve problems and
 - the solution of real-life problems through mathematics.
- work together within each school to ensure that mathematical skills are reinforced in all subject areas.

Key Recommendations

EQAO recommends that

- each **school**, with the involvement of teachers, students and parents, design and implement school-wide initiatives to ensure student achievement of the provincial curriculum expectations in literacy and numeracy.
- **school councils** closely monitor student achievement and take an active role in school improvement.
- **school boards** establish school board improvement teams that review historical student achievement and contextual data to develop action plans for meeting school targets for achievement of the *Ontario Curriculum* standards in literacy and numeracy and to develop strategies that target areas and groups in need of additional support and improvement.
- **faculties of education** assist pre-service teachers in developing an awareness and understanding of the links among curriculum, teaching practices and assessment. Pre-service teachers must have exposure to a wide variety of assessment formats, including large-scale performance-based assessment.
- the **Ontario College of Teachers** ensure a balance of courses on core competencies through Professional Learning Program providers, to allow teachers across the province ample opportunities for professional development that focuses on the relationships among curriculum, teaching practices and assessment, which are essential to teaching and learning.
- the **Ministry of Education** use the Grade 3 and Grade 6 provincial assessment data accumulated over the past six years to further support literacy and numeracy, especially through the Early Reading and Early Math strategies, at the board, school and classroom levels.

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Education
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The Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics, 2002–2003

Report of Provincial Results



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Results at a Glance

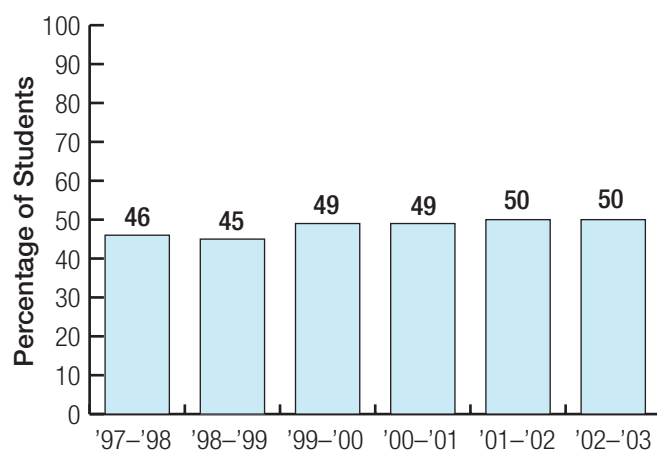
Achievement Highlights

Data Comparison over Time: Grade 3

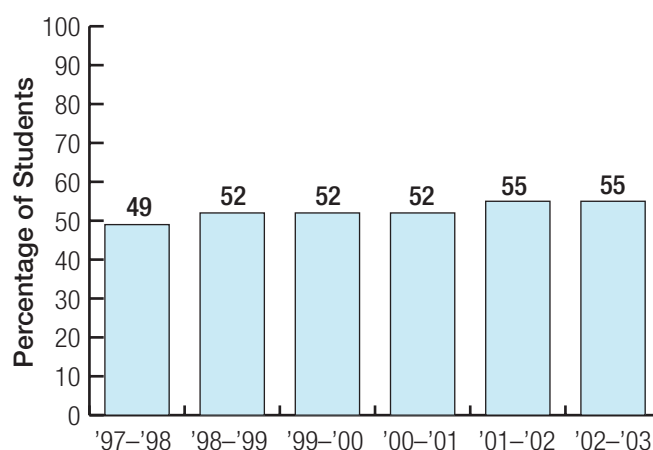
Overall Achievement: Level 3 and Above¹ (Method 1)²

	Reading	Writing	Mathematics
1997–1998 (# = 131 000)	46%	49%	43%
1998–1999 (# = 138 187)	45%	52%	56%
1999–2000 (# = 139 904)	49%	52%	57%
2000–2001 (# = 138 422)	49%	52%	61%
2001–2002 (# = 139 727)	50%	55%	58%
2002–2003 (# = 140 860)	50%	55%	57%

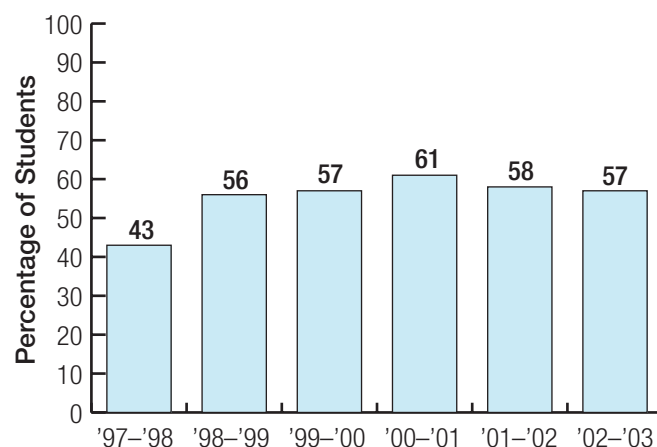
Reading



Writing



Mathematics



Observations:

- In Grade 3, half the students achieved the provincial standard in reading (50%) and more than half achieved the provincial standard in writing (55%) and mathematics (57%).
- There were improvements in Grade 3 reading, writing and mathematics achievement in the early years of the assessment; results have remained stable over the past two years.

¹ Percentages achieving Level 3 and above are reported here because *The Ontario Curriculum* sets Level 3 as the provincial standard.

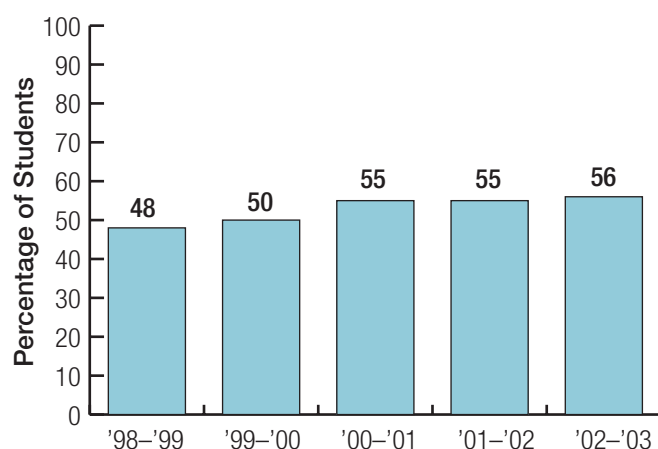
² Refer to page 11 for a description of Method 1 and Method 2.

Data Comparison over Time: Grade 6

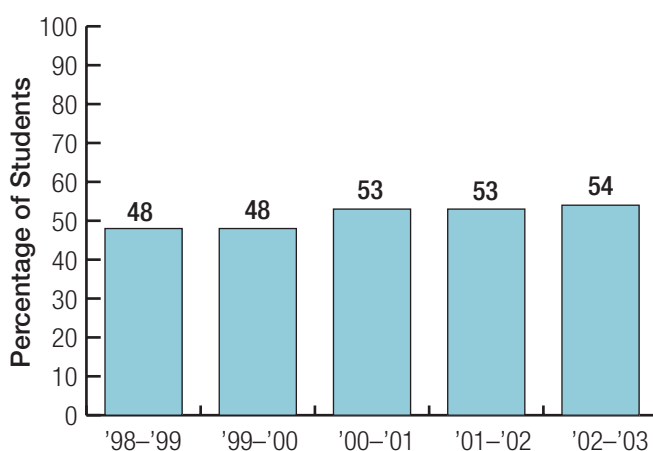
Overall Achievement: Level 3³ and Above (Method 1)⁴

	Reading	Writing	Mathematics
1998–1999 (# = 131 439)	48%	48%	46%
1999–2000 (# = 135 578)	50%	48%	51%
2000–2001 (# = 138 191)	55%	53%	54%
2001–2002 (# = 145 351)	55%	53%	54%
2002–2003 (# = 144 676)	56%	54%	53%

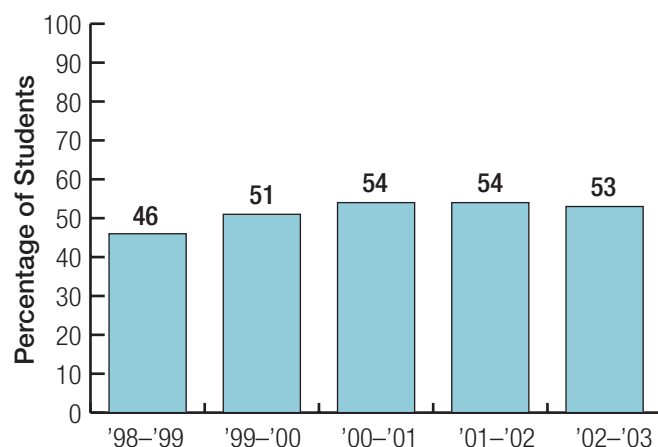
Reading



Writing



Mathematics



Observations:

- More than half the students achieved the provincial standard in reading (56%), writing (54%) and mathematics (53%).
- The results in reading and writing continue to show slow but steady improvement; results in mathematics have remained stable over the past three years.

³ Percentages achieving Level 3 and above are reported here because *The Ontario Curriculum* sets Level 3 as the provincial standard.

⁴ Refer to page 11 for a description of Method 1 and Method 2.

Key Observations

Achievement Results

- There were improvements in Grade 3 reading, writing and mathematics achievement in the early years of the assessment; results have remained stable over the past two years.
- The results in Grade 6 reading and writing continue to show slow but steady improvement; results in mathematics have remained stable over the past three years.
- In both Grades 3 and 6, females outperformed males in reading, writing and mathematics; in mathematics, the differences were less pronounced.
- Gender differences in the reading and writing results were larger in Grade 6 than in Grade 3.
- In Grades 3 and 6, over the past four years, there has been a slow but steady increase in the percentage of English as a second language and English literacy development (ESL/ELD) students meeting the provincial standard for reading and writing achievement; the percentage meeting the mathematics standard has remained relatively stable over the past three years.
- In Grades 3 and 6, over the past four years, there has been a slow but steady increase in the percentage of special needs students meeting the provincial standard for reading, writing and mathematics achievement.

Use of Results

- Principals reported they use the Grades 3 and 6 assessment results to determine where instructional and professional resources are needed and to revise school improvement or school action plans.
- Teachers reported they use the Grades 3 and 6 assessment results to identify areas of weakness in order to plan instructional improvements, to show their students what good work looks like, to develop their own assessments and to prepare students for provincial assessments.

Key Messages

- In the first few years of Grades 3 and 6 assessments, there were increases in the percentage of students reaching the provincial standard, Level 3.
- In the past two years there have been no significant increases in the percentage of students meeting the provincial standard, Level 3.
- Many factors and organizations contribute to improved student achievement: curriculum, resources, teachers, students, principals, parents, school councils, school boards, the Ministry of Education, faculties of education and the Ontario College of Teachers.
- School staff and school board staff must continue to implement school improvement plans, with the goal of increasing the number of students who reach the provincial standard. Staff in the other organizations should reaffirm their commitment to the contribution they make to supporting teachers in their work.
- School councils should work with school staff to reaffirm commitments to school improvement and to assist with implementing action plans.
- Partner organizations will be invited to conduct research to describe the approaches and conditions that have contributed to high levels of achievement and improvement. To support this research, EQAO will identify schools and school boards in which a high percentage of students have consistently performed at the provincial standard or in which there has been significant improvement in student achievement.

Key Recommendations

EQAO recommends that

- each **school**, with the involvement of teachers, students and parents, design and implement school-wide initiatives to ensure student achievement of the provincial curriculum expectations in literacy and numeracy.
- **school councils** closely monitor student achievement and take an active role in school improvement.
- **school boards** establish school board improvement teams that review historical student achievement and contextual data to develop action plans for meeting school targets for achievement of the *Ontario Curriculum* standards in literacy and numeracy and to develop strategies that target areas and groups in need of additional support and improvement.
- **faculties of education** assist pre-service teachers in developing an awareness and understanding of the links among curriculum, teaching practices and assessment. Pre-service teachers must have exposure to a wide variety of assessment formats, including large-scale performance-based assessment.
- the **Ontario College of Teachers** ensure a balance of courses on core competencies through Professional Learning Program providers, to allow teachers across the province ample opportunities for professional development that focuses on the relationships among curriculum, teaching practices and assessment, which are essential to teaching and learning.
- the **Ministry of Education** use the Grade 3 and Grade 6 provincial assessment data accumulated over the past six years to further support literacy and numeracy, especially through the Early Reading and Early Math strategies, at the board, school and classroom levels.

The Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics, 2002–2003

Introduction

EQAO's purpose is to ensure greater accountability in the publicly funded education system and to improve the quality of education in Ontario. In order to fulfill its mandate, EQAO conducts several province-wide assessments, among them the Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics. Both of these assessments are conducted annually and involve all Grade 3 and Grade 6 students in publicly funded schools in Ontario. The results of these assessments provide individual, school and school board data on student achievement at two key stages of elementary education. Parents receive an Individual Student Report that provides information on their child's achievement on the assessment. Schools and school boards create their own reports, based on EQAO data, for distribution to parents and other stakeholders in the community. EQAO posts board and school results on its Web site for public access. As well, EQAO publishes an annual *Provincial Report on Achievement* for education stakeholders and the general public. Data from the assessments provide valuable information to support improvement planning at the school and school board levels.

Assessment Content

The Grade 3 and Grade 6 assessments measure how well students have met the provincial expectations in *The Ontario Curriculum, Grades 1–8*. Each assessment covers the knowledge and skills in reading, writing and mathematics that students are expected to have acquired by the end of the grade being assessed. The assessments contain performance-based activities requiring written responses, and multiple-choice questions. This combination of question types allows students to demonstrate both the depth and the scope of their learning and provides a variety of ways for students to demonstrate what they know and what they can do.

Reading

In the reading component of the assessment, students demonstrate their knowledge and skills by reading a variety of materials, both fiction and non-fiction. This part of the assessment measures how effectively students use various reading strategies and conventions and how well they understand concepts, make inferences and connect ideas.

Writing

In the writing component of the assessment, students demonstrate their knowledge and skills by writing in different forms and for different purposes. This part of the assessment measures how effectively students use writing strategies and language conventions and how well they understand assigned tasks, organize ideas and communicate with the reader. During the assessment, students produce two pieces of written work. One piece uses the writing process, while the other is an on-demand piece.

Mathematics

In the mathematics component of the assessment, students demonstrate their knowledge and skills by solving problems, applying procedures and explaining how they have arrived at their answers. This part of the assessment also tests students' knowledge and skills in the five strands of mathematics: number sense and numeration, geometry and spatial sense, measurement, patterning and algebra, and data management and probability.

Student Participation

All Grade 3 and Grade 6 Ontario students in publicly funded schools are required to participate in the assessments. Teachers and principals are therefore expected to make every effort to enable all students to participate in all aspects of the assessment. This may involve providing one or more permitted accommodations during the assessment. These accommodations must follow the policies of the Ministry of Education and EQAO to ensure the integrity of the assessments. The only students eligible for accommodations are students with special needs, or ESL/ELD students in the early stages of English-language acquisition. It is assumed that these students require accommodations for classroom assessment tasks throughout the school year.

ESL students are those who arrive in Canada from another country with a first language other than English and little or no previous experience with English. Most commonly, ELD students are those who arrive in Canada from countries where English is the first language, but varieties of English other than standard Canadian English are in common use.

Students with special needs are those who have an Individual Education Plan (IEP), who may or may not have been identified as “exceptional pupils” by an Identification, Placement and Review Committee (IPRC) and who are receiving special education programs and services (see Ministry of Education Policy/Program Memorandum No. 127).

Schools are required to document accommodations on the Student Information Form prior to the administration of the assessment, and the accommodations are noted on the Individual Student Report sent to schools.

In rare instances, a student needs to be exempted from participating in all or part of an assessment because the full range of permitted accommodations has been considered and it is determined that the student would still not be able to provide evidence of learning under these assessment conditions. Before granting an exemption, the principal must consult with the student’s parents and teacher and obtain written parental consent.

Administration and Marking

The Grades 3 and 6 assessments are conducted annually in May. The assessments take place over five days for up to two and a half hours each day. In both grades, students take part in introductory activities with their classmates and then work independently to solve problems, write their responses and answer multiple-choice questions.

All teachers responsible for administering the assessments receive detailed guidelines in the Teacher’s Daily Plans.

The Grades 3 and 6 Assessments of Reading, Writing and Mathematics, like all of EQAO’s provincial initiatives, involve educators at every stage. Teachers and administrators from across the province participate in developing, field testing and validating the assessment materials. In addition, the assessments are marked by educators representing all elementary grades. Marking provides teachers with valuable professional development in assessing student achievement. During the 2002–2003 marking session, about 90% of the nearly 2000 English- and French-language teachers involved reported that the experience would have a positive impact on their classroom practice and was useful professional development. The comment of one marker summarized the opinion of many: “Great professional development! A great help and builder of confidence in my teaching.”

For each assessment, the constructed-response sections (those requiring a written response) comprise approximately 80% of the assessment, while the multiple-choice sections comprise approximately 20%. The constructed-response sections in reading and writing are organized and marked according to the following four curriculum categories: reasoning, communication, organization and application of language conventions. In mathematics, the constructed responses are marked according to the five mathematics strands (see page 9) and the four categories (problem solving, understanding of concepts, application of mathematical procedures and communication of required knowledge). The multiple-choice components are scored mechanically.

EQAO uses a four-level scale to report on student achievement in reading, writing and mathematics. This scale is based on *The Ontario Curriculum, Grades 1–8* and sets Level 3 as the provincial standard. Markers are trained to assess student written work according to the four levels of achievement. Students may also be assigned “NEIS” (the student’s work provides insufficient information to score or to be assigned a level of achievement), “NE1” (the student did not produce enough evidence to receive a Level 1), “exempt” (the student was formally exempted from participating in the assessment) and “no data” (EQAO received no completed assessment booklets).

In the Achievement Results section of this report, data are provided according to the achievement levels and the designations described above. Calculations are made in two ways, which EQAO terms Method 1 and Method 2.

Method 1

Data for all students in the grade are reported. Method 1 expresses the number of students in each reporting category as a percentage of all students in the grade (i.e., students at the four levels of achievement and those in the exempt, no data, NEIS and NE1 categories described above).

Method 2

An alternative way of presenting the data, Method 2 expresses the distribution of results as a percentage of those students who took part in the assessment (i.e., students at the four levels of achievement and those in the NEIS and NE1 categories described above). Students in the exempt and no data categories are excluded.

Generating Achievement Results

EQAO reports overall levels of achievement for each subject (reading, writing and mathematics) as well as more detailed results according to the categories and strands described earlier.

The overall results for each subject are derived by combining the results from the constructed-response section with those from the multiple-choice section. For reading and writing, the overall result is generated from five sources of data (the four categories applied to the written work and one multiple-choice section). For mathematics, it is derived from ten sources (the four categories and five strands applied to the written work and one multiple-choice section).

Quality Assurance

Quality assurance procedures help to ensure that EQAO’s assessments produce valid and reliable data. These procedures are embedded in each stage of the assessment cycle: design and development, field testing, administration, marking and data management. EQAO uses quality assurance information collected during and at the end of each assessment cycle to review and improve assessment materials, policies and procedures. The following is a brief summary of the main quality assurance measures for the Grades 3 and 6 assessments.

Design and Development

The Grades 3 and 6 assessments are based entirely on the provincial expectations in *The Ontario Curriculum*. In the design and development phase, a committee of assessment experts provides advice to ensure the assessments are consistent with EQAO values and conform to sound assessment practices. EQAO personnel train teams of educators from schools and school boards across the province and monitor and support their work. A validation team composed of practising teachers examines test materials for bias and appropriateness.

Field Testing

The Grade 3 and Grade 6 assessment materials are field tested prior to their administration in May. Each fall, the Grade 3 materials are field tested in 25 Grade 4 classrooms across the province, and the Grade 6 materials are field tested in 25 Grade 7 classrooms. Altogether, approximately 500 Grade 4 and 500 Grade 7 students and their teachers are involved. During the field test, teachers are asked to complete a questionnaire regarding the appropriateness of all of the assessment materials, as well as the reaction of the students to them. Following field-test marking, EQAO analyzes all the information generated by the field test and compiles the final assessment materials.

Administration

EQAO quality assurance monitors visit approximately 10% of the participating classrooms to observe and collect data on how accurately and consistently teachers and principals follow the procedures outlined in the *Administration Guide for Teachers and Principals*. EQAO staff and data analysts are trained to detect irregularities during the administration of the assessments. EQAO staff, together with school board and school officials, investigate all reported or suspected irregularities. EQAO also makes follow-up visits to schools where irregularities were identified during the administration of the previous year's assessments.

Marking

During marking, various types of reliability checks are conducted. Questionnaires are administered to markers to gather feedback on the training process. Each morning, before marking begins, markers score orientation booklets to ensure marking procedures and standards are applied consistently from day to day. Each afternoon, all markers score a reliability booklet, and the results are analyzed to evaluate the degree of consistency and reliability of the marking. In addition, calibration booklets (random selections of students' booklets) are re-marked each day, and the results of the markings are then compared to generate statistics on marking reliability.

Data Management

EQAO has data management procedures in place to ensure that data are correctly recorded and attributed to students, schools and school boards. EQAO has also developed a formal process for reviewing individual students' results when requests or appeals are received.

Year-to-Year Comparisons

With the publication of this report, educators, parents, policy-makers and the public have six years of Grade 3 achievement data and five years of Grade 6 achievement data based on the current curriculum expectations. They also have six years of contextual data from the questionnaires that students, teachers and principals complete during administration. The data also form part of the Education Quality Indicators Program that was designed to measure and describe a range of important features of the Ontario education system that affect student learning, at the school, school board and provincial levels.

Through an examination of these data, it is possible to identify some important trends over time. However, it is important to emphasize that some comparisons are valid and meaningful, while others should be avoided. For instance, the overall levels of achievement are comparable from year to year; the method EQAO uses to calculate the overall levels of achievement in reading, writing and mathematics allows these scores to be reported on the same scale from one year to the next.

On the other hand, modifications and refinements in the design and marking of the performance-based components of the assessments create potential sources of variation in results from year to year for the category and strand scores. Although the category and strand scores are not directly comparable from year to year, parents and teachers are encouraged to examine students' category and strand scores, using test booklets and the samples of student work provided by EQAO. This will help them to determine students' strengths and weaknesses in the categories and strands in comparison to all students who wrote the test. It is useful for school

boards to analyze their category and strand results in terms of the provincial results, and schools are encouraged to analyze their results in terms of both the provincial and school board results to gain an understanding of strengths and weaknesses in their students' achievement relative to the larger population.

The multiple-choice component of the assessment includes some questions that are used from year to year. These questions are not subject to change. The analysis of student responses to these questions from the previous year indicates whether there are any changes in student performance. This information, along with the distribution of scores from the previous years, provides a mechanism for measuring year-to-year consistency and a basis for adjusting results where necessary to ensure this consistency.

For further information about the various aspects of the Grades 3 and 6 assessments, please refer to the EQAO Web site (www.eqao.com).

Profile of Students in Grades 3 and 6

This section of the report provides information about the students who were in Grade 3 and Grade 6 in 2002–2003.⁵

Grade 3

Number of Students (# = 140 860)

Gender	Percentage ⁶
Female	48%
Male	51%
No Response	1%

Student Status	Percentage
ESL/ELD	5%
Special Needs	17%

Preschool Experience Students who had attended nursery school or kindergarten	Percentage
Yes	91%
No	3%
Don't Know	5%
No Response	1%

First Language	Percentage
English	79%
Other	19%
No Response	1%

Student Mobility Number of schools attended since Grade 1	Percentage
1 School	64%
2 Schools	24%
3 Schools	6%
4 or More Schools	2%
Don't Know	2%
No Response	2%

Observations:

- A very high percentage of Grade 3 students had preschool experience.
- Approximately one-fifth of Grade 3 students who wrote the assessment have a first language other than English.

⁵ Data in the following tables derive from the 2002–2003 EQAO Student Information Form.

⁶ Percentages may not add to 100, due to rounding.

Grade 6

Number of Students (# = 144 676)

Gender	Percentage ⁷
Female	49%
Male	51%
No Response	1%

Student Status	Percentage
ESL/ELD	3%
Special Needs	16%

Preschool Experience Students who had attended nursery school or kindergarten	Percentage
Yes	90%
No	3%
Don't Know	5%
No Response	2%

First Language	Percentage
English	81%
Other	18%
No Response	2%

Student Mobility Number of schools attended since Grade 1	Percentage
1 School	40%
2 Schools	30%
3 Schools	14%
4 or More Schools	10%
Don't Know	3%
No Response	2%

Observations:

- A very high percentage of Grade 6 students had preschool experience.
- Approximately one-fifth of Grade 6 students who wrote the assessment have a first language other than English.
- Almost one-quarter (24%) of Grade 6 students have attended three or more schools.

⁷ Percentages may not add to 100, due to rounding.

Participation

This section of the report provides information about the students who participated in the Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics, 2002–2003.

Reading

	Eligible Population ⁸	Percentage No Data	Percentage Exempted ⁹	Percentage Participating
All Students				
Grade 3	138 198	1%	6%	93%
Grade 6	144 676	1%	4%	95%
Grade 3				
Gender				
Female	66 564	1%	4%	95%
Male	70 888	1%	7%	92%
Student Status				
ESL/ELD	7479	1%	21%	77%
Special Needs	23 926	2%	26%	72%
Grade 6				
Gender				
Female	70 297	1%	3%	96%
Male	73 155	1%	5%	94%
Student Status				
ESL/ELD	4930	1%	27%	72%
Special Needs	23 646	1%	20%	79%

Observations:

- In both grades, nearly twice as many males as females were exempted from reading.
- In Grade 3, the percentage of ESL/ELD students exempted from reading has decreased from 25% last year to 21% this year.
- The percentage of Grade 3 special needs students exempted from reading has remained about the same.
- In Grade 6, the percentage of ESL/ELD and special needs students exempted from reading has remained about the same.

⁸ These data derive from the EQAO Class Tracking Sheet. Eligible population numbers can vary from table to table because different numbers of students participated in reading, writing and mathematics. The numbers of males and females do not add up to the eligible population, because gender was not reported for some students.

⁹ These data derive from the 2002–2003 Student Information Form.

Writing

	Eligible Population	Percentage No Data	Percentage Exempted	Percentage Participating
All Students				
Grade 3	138 198	1%	5%	94%
Grade 6	144 676	1%	4%	95%
Grade 3				
Gender				
Female	66 564	1%	4%	95%
Male	70 888	1%	7%	92%
Student Status				
ESL/ELD	7479	1%	20%	79%
Special Needs	23 926	2%	24%	75%
Grade 6				
Gender				
Female	70 297	1%	3%	96%
Male	73 155	1%	5%	94%
Student Status				
ESL/ELD	4930	2%	26%	72%
Special Needs	23 646	1%	20%	79%

Observations:

- In both grades, nearly twice as many males as females were exempted from writing.
- In Grade 3, the percentage of ESL/ELD students exempted from writing has decreased from 23% last year to 20% this year.
- In Grade 6, the percentage of ESL/ELD students exempted from writing has decreased from 28% last year to 26% this year.
- The percentage of Grades 3 and 6 special needs students exempted from writing has remained about the same.

Mathematics

	Eligible Population	Percentage No Data	Percentage Exempted	Percentage Participating
All Students				
Grade 3	140 860	1%	4%	95%
Grade 6	144 676	1%	4%	95%
Grade 3				
Gender				
Female	68 142	1%	3%	96%
Male	71 956	1%	5%	94%
Student Status				
ESL/ELD	7491	1%	17%	82%
Special Needs	24 148	1%	21%	78%
Grade 6				
Gender				
Female	70 297	1%	3%	96%
Male	73 155	1%	5%	94%
Student Status				
ESL/ELD	4930	1%	22%	77%
Special Needs	23 646	1%	20%	79%

Observations:

- In both grades, nearly twice as many males as females were exempted from mathematics.
- In Grade 3, the percentage of ESL/ELD students exempted from mathematics has decreased from 20% last year to 17% this year.
- The percentage of Grade 3 special needs students exempted from mathematics has remained about the same.
- In Grade 6, the percentage of ESL/ELD and special needs students exempted from mathematics has remained about the same.

Students Receiving Accommodations

Students Who Received One or More Accommodations in Reading¹⁰

	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Grade 3	22%	24%	25%	18%	11%	12%
Grade 6	n/a	24%	17%	12%	10%	9%

Students Who Received One or More Accommodations in Writing

	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Grade 3	22%	29%	29%	19%	10%	11%
Grade 6	n/a	34%	17%	15%	10%	10%

Students Who Received One or More Accommodations in Mathematics

	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Grade 3	27%	38%	31%	22%	12%	13%
Grade 6	n/a	28%	21%	17%	10%	10%

Observation:

- The percentage of students who received accommodations has decreased over time, though it has remained stable over the past two years.

¹⁰ These data derive from the 2002–2003 EQAO Student Information Form.

Achievement Results

This section of the report summarizes provincial results from the 2002–2003 Grades 3 and 6 assessments. The reading, writing and mathematics results for both grades are presented to illustrate patterns in each subject and between grades. Taken together with the questionnaire data, these results present a comprehensive picture of student achievement on the Grades 3 and 6 assessments.

Overall Level of Achievement in Reading — Grade 3

	# =	Exempt	No Data	NEIS ¹¹	NE1 ¹²	Level 1	Level 2	Level 3	Level 4
Method 1	138 198	6%	1%	8%	<1%	8%	28%	45%	5%
Method 2	129 008	n/a	n/a	8%	<1%	9%	30%	48%	5%

Overall Level of Achievement in Reading — Grade 6

	# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	144 676	4%	1%	5%	<1%	7%	27%	47%	9%
Method 2	137 483	n/a	n/a	6%	<1%	7%	29%	49%	9%

Observation

- In reading, half the Grade 3 students achieved the provincial standard (50%), and more than half the Grade 6 students achieved the provincial standard (56%) (Method 1).

Overall Level of Achievement in Writing — Grade 3

	# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	138 198	5%	1%	4%	<1%	2%	33%	48%	8%
Method 2	129 661	n/a	n/a	4%	<1%	2%	36%	51%	8%

Overall Level of Achievement in Writing — Grade 6

	# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	144 676	4%	1%	3%	<1%	5%	33%	43%	10%
Method 2	137 451	n/a	n/a	3%	<1%	5%	35%	46%	11%

Observation

- In writing, more than half the students in both grades achieved the provincial standard (55% in Grade 3 and 54% in Grade 6)¹³ (Method 1).

¹¹ Not enough information to score.

¹² Not enough evidence for Level 1.

¹³ The differences between these percentages and those obtained by combining the percentages at Levels 3 and 4 in the table above are attributable to rounding.

Overall Level of Achievement in Mathematics — Grade 3

	# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	140 860	4%	1%	7%	<1%	4%	27%	47%	10%
Method 2	133 214	n/a	n/a	7%	<1%	5%	28%	50%	10%

Overall Level of Achievement in Mathematics — Grade 6

	# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Method 1	144 676	4%	1%	6%	<1%	8%	28%	41%	12%
Method 2	137 759	n/a	n/a	7%	<1%	8%	29%	43%	13%

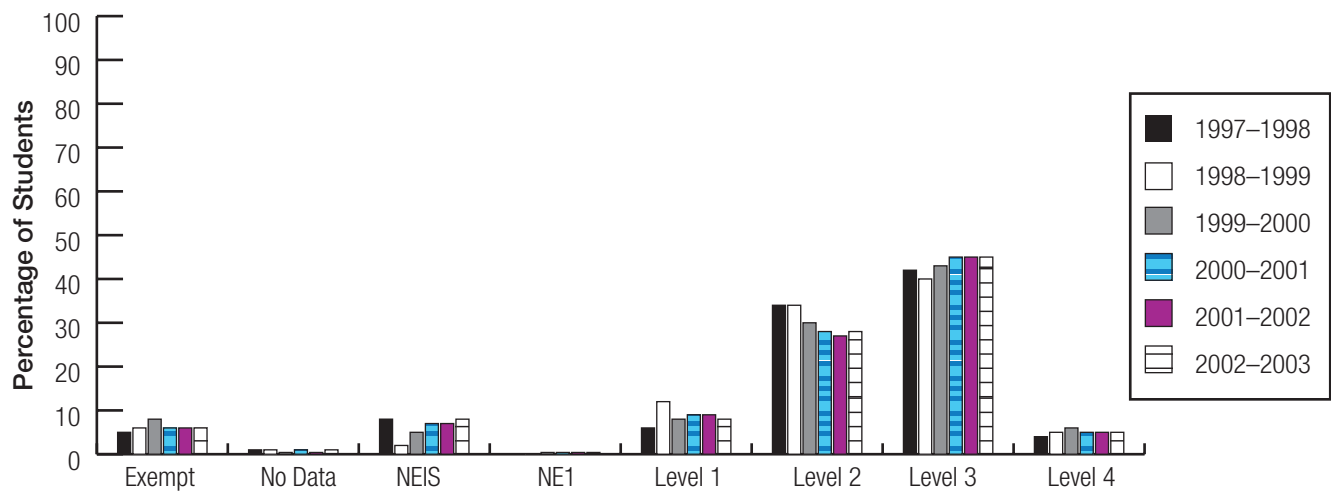
Observation

- In mathematics, more than half the students in both grades achieved the provincial standard (57% in Grade 3 and 53% in Grade 6) (Method 1).

Year-to-Year Comparisons

Six-Year Trend in Grade 3 Reading

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
1997–1998	5%	1%	8%	n/a	6%	34%	42%	4%
1998–1999	6%	1%	2%	n/a	12%	34%	40%	5%
1999–2000	8%	<1%	5%	<1%	8%	30%	43%	6%
2000–2001	6%	1%	7%	<1%	9%	28%	45%	5%
2001–2002	6%	<1%	7%	<1%	9%	27%	45%	5%
2002–2003	6%	1%	8%	<1%	8%	28%	45%	5%

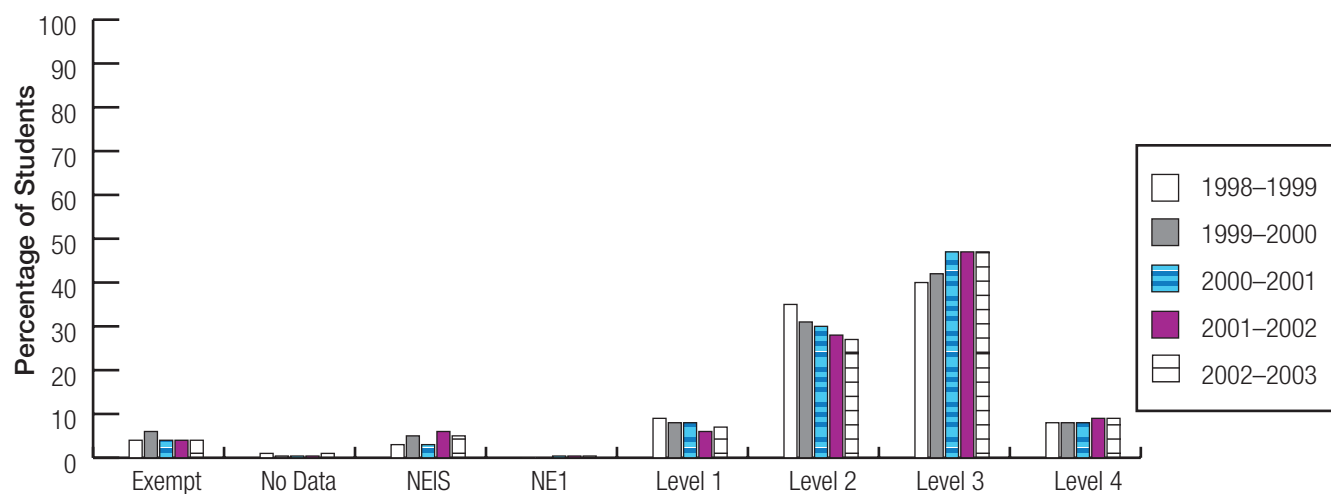


Observation:

- The percentage of Grade 3 students attaining each level of achievement in reading has remained stable over the past three years.

Five-Year Trend in Grade 6 Reading

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
1998–1999	4%	1%	3%	n/a	9%	35%	40%	8%
1999–2000	6%	<1%	5%	0%	8%	31%	42%	8%
2000–2001	4%	<1%	3%	<1%	8%	30%	47%	8%
2001–2002	4%	<1%	6%	<1%	6%	28%	47%	9%
2002–2003	4%	1%	5%	<1%	7%	27%	47%	9%

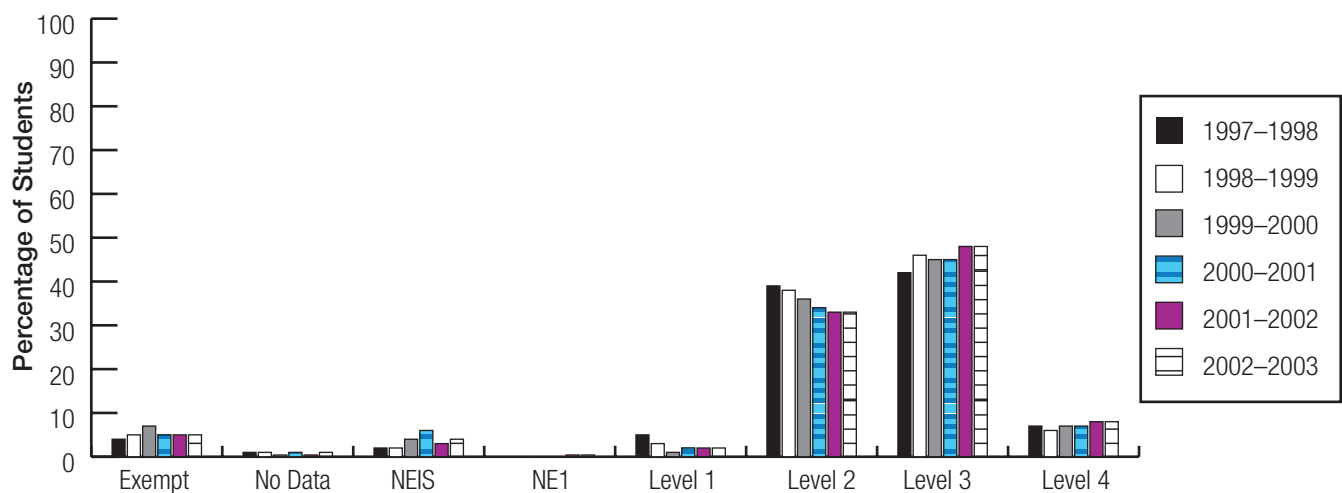


Observation:

- The percentage of Grade 6 students attaining each level of achievement in reading has remained relatively stable over the past three years, with the exception of students at Level 2, where the percentage of students continues to decrease.

Six-Year Trend in Grade 3 Writing

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
1997–1998	4%	1%	2%	n/a	5%	39%	42%	7%
1998–1999	5%	1%	2%	n/a	3%	38%	46%	6%
1999–2000	7%	<1%	4%	0%	1%	36%	45%	7%
2000–2001	5%	1%	6%	0%	2%	34%	45%	7%
2001–2002	5%	<1%	3%	<1%	2%	33%	48%	8%
2002–2003	5%	1%	4%	<1%	2%	33%	48%	8%

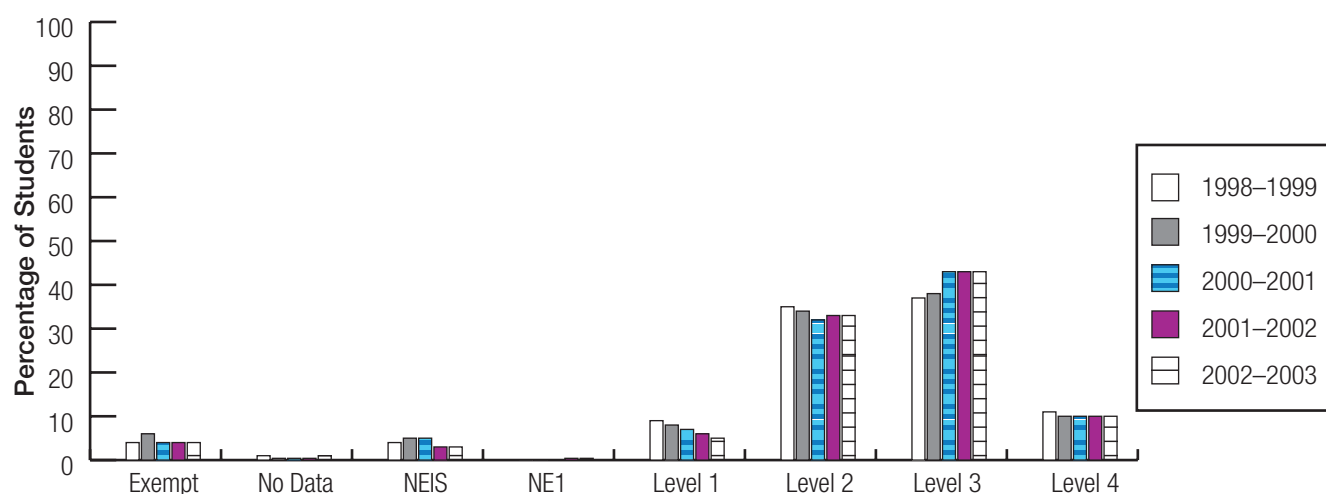


Observation:

- The percentage of Grade 3 students attaining each level of achievement in writing has remained relatively stable over the past three years.

Five-Year Trend in Grade 6 Writing

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
1998–1999	4%	1%	4%	n/a	9%	35%	37%	11%
1999–2000	6%	<1%	5%	0%	8%	34%	38%	10%
2000–2001	4%	<1%	5%	0%	7%	32%	43%	10%
2001–2002	4%	<1%	3%	<1%	6%	33%	43%	10%
2002–2003	4%	1%	3%	<1%	5%	33%	43%	10%

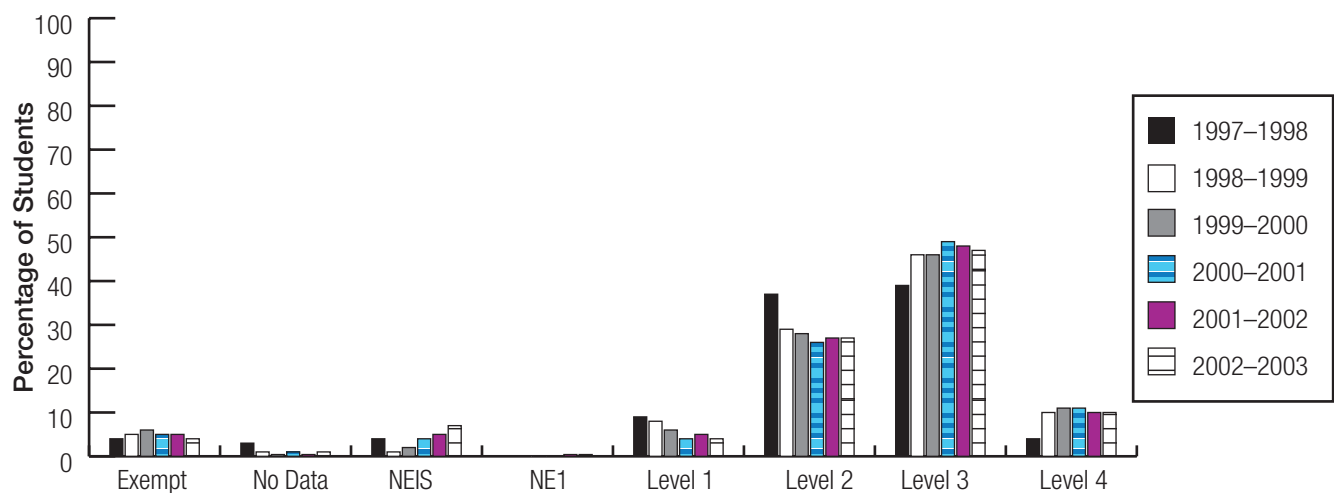


Observation:

- The percentage of Grade 6 students attaining each level of achievement in writing has remained relatively stable over the past three years.

Six-Year Trend in Grade 3 Mathematics

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
1997–1998	4%	3%	4%	n/a	9%	37%	39%	4%
1998–1999	5%	1%	1%	n/a	8%	29%	46%	10%
1999–2000	6%	<1%	2%	0%	6%	28%	46%	11%
2000–2001	5%	1%	4%	0%	4%	26%	49%	11%
2001–2002	5%	<1%	5%	<1%	5%	27%	48%	10%
2002–2003	4%	1%	7%	<1%	4%	27%	47%	10%

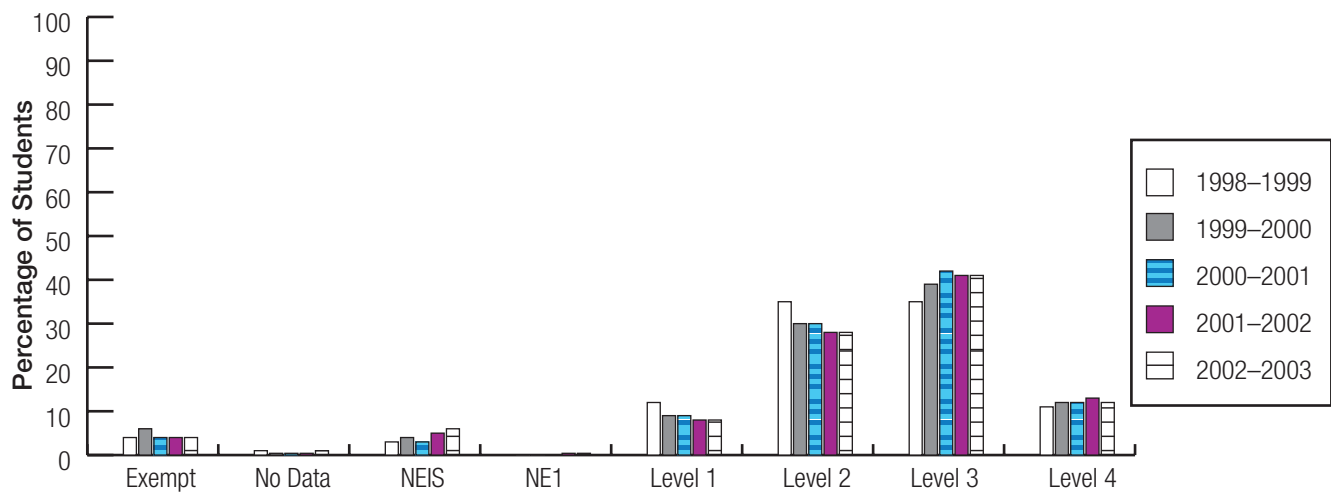


Observation:

- The percentage of Grade 3 students attaining each level of achievement in mathematics has remained relatively stable over the past three years.

Five-Year Trend in Grade 6 Mathematics

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
1998–1999	4%	1%	3%	n/a	12%	35%	35%	11%
1999–2000	6%	<1%	4%	0%	9%	30%	39%	12%
2000–2001	4%	<1%	3%	0%	9%	30%	42%	12%
2001–2002	4%	<1%	5%	<1%	8%	28%	41%	13%
2002–2003	4%	1%	6%	<1%	8%	28%	41%	12%



Observation:

- The percentage of Grade 6 students attaining each level of achievement in mathematics has remained relatively stable over the past three years.

Reading: Detailed Achievement by Category

School principals and school board officials can use the following data on reading, writing and mathematics to compare school, school board and provincial results to identify areas of relative strength and weakness for improvement planning.

Grade 3

Category	# =	Average Score	Maximum
Reasoning	127 762	11.6	20
Communication	124 150	10.2	20
Organization of Ideas	124 267	9.5	20
Application of Language Conventions	127 132	12.5	20

Grade 6

Category	# =	Average Score	Maximum
Reasoning	136 420	9.7	20
Communication	134 459	9.4	20
Organization of Ideas	137 149	9.3	20
Application of Language Conventions	137 276	9.1	20

Writing: Detailed Achievement by Category

Grade 3

Category	# =	Average Score	Maximum
Reasoning	128 941	5.1	8
Communication	128 977	5.1	8
Organization of Ideas	128 971	4.9	8
Application of Language Conventions	128 983	5.1	8

Grade 6

Category	# =	Average Score	Maximum
Reasoning	136 724	5.1	8
Communication	136 734	5.3	8
Organization of Ideas	136 736	5.2	8
Application of Language Conventions	136 740	5.5	8

Mathematics: Detailed Achievement by Category and Strand

Grade 3

Category	# =	Average Score	Maximum
Problem Solving	129 163	8.5	20
Understanding of Concepts	132 971	10.0	20
Application of Mathematical Procedures	129 145	9.3	20
Communication of Required Knowledge	131 362	10.0	20
Strand			
Number Sense and Numeration	131 578	13.6	24
Measurement	131 422	12.0	24
Geometry and Spatial Sense	132 465	13.0	24
Patterning and Algebra	132 000	13.0	24
Data Management and Probability	129 811	11.8	24

Grade 6

Category	# =	Average Score	Maximum
Problem Solving	136 448	10.1	20
Understanding of Concepts	135 595	10.2	20
Application of Mathematical Procedures	136 749	11.7	20
Communication of Required Knowledge	135 522	9.3	20
Strand			
Number Sense and Numeration	136 572	13.1	24
Measurement	137 130	13.8	24
Geometry and Spatial Sense	135 275	12.5	24
Patterning and Algebra	136 158	14.2	24
Data Management and Probability	135 468	12.9	24

Reading: Overall Achievement by Subgroup¹⁴

Grade 3

		# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Gender	Female	66 564	4%	1%	6%	<1%	7%	26%	49%	6%
	Male	70 888	7%	1%	9%	<1%	9%	30%	41%	3%

Language	In ESL/ELD	7479	21%	1%	7%	–	14%	31%	24%	1%
	All Other Students	130 719	5%	1%	8%	<1%	8%	28%	46%	5%

Special Needs	Special Needs	23 926	26%	2%	12%	<1%	17%	28%	15%	1%
	All Other Students	114 272	1%	1%	7%	<1%	6%	28%	51%	6%

Grade 6

		# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Gender	Female	70 297	3%	1%	4%	<1%	5%	24%	51%	12%
	Male	73 155	5%	1%	7%	<1%	8%	31%	42%	6%

Language	In ESL/ELD	4930	27%	1%	7%	<1%	13%	27%	22%	3%
	All Other Students	139 746	3%	1%	5%	<1%	6%	27%	48%	9%

Special Needs	Special Needs	23 646	20%	1%	10%	<1%	19%	34%	16%	1%
	All Other Students	121 030	1%	1%	5%	<1%	4%	26%	53%	10%

Observations:

- In both Grade 3 and Grade 6, females outperformed males in reading.
- In Grade 6, the gender difference for achievement in reading is greater than in Grade 3.
- One-quarter of ESL/ELD Grades 3 and 6 students achieved the provincial standard for reading.
- Among special needs students, 16% in Grade 3 and 17% in Grade 6 achieved the provincial standard for reading.

¹⁴ Since, in certain reporting categories, the number of students is insufficient to avoid potentially divulging individual student results, some percentages in these tables are not presented and are replaced by a dash.

- In Grades 3 and 6, over the past four years, there has been a slow but steady increase in the percentage of ESL/ELD students meeting the provincial standard for reading achievement (from 21% in 1999–2000 to 25% in 2002–2003 in Grade 3, and from 18% in 1999–2000 to 25% in 2002–2003 in Grade 6).
- In Grades 3 and 6, over the past four years, there has been a slow but steady increase in the percentage of special needs students meeting the provincial standard for reading achievement (from 11% in 1999–2000 to 16% in 2002–2003 in Grade 3, and from 12% in 1999–2000 to 17% in 2002–2003 in Grade 6).

Writing: Overall Achievement by Subgroup¹⁵

Grade 3

		# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Gender	Female	66 564	4%	1%	3%	<1%	1%	27%	53%	11%
	Male	70 888	7%	1%	4%	<1%	2%	39%	42%	5%

Language	In ESL/ELD	7479	20%	1%	4%	<1%	2%	39%	31%	3%
	All Other Students	130 719	4%	1%	4%	<1%	2%	33%	49%	8%

Special Needs	Special Needs	23 926	24%	2%	7%	<1%	5%	47%	15%	1%
	All Other Students	114 272	1%	1%	3%	<1%	1%	30%	55%	9%

Grade 6

		# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Gender	Female	70 297	3%	1%	2%	–	3%	27%	50%	14%
	Male	73 155	5%	1%	4%	<1%	7%	39%	37%	6%

Language	In ESL/ELD	4930	26%	2%	4%	–	10%	35%	21%	3%
	All Other Students	139 746	3%	1%	3%	<1%	5%	33%	44%	10%

Special Needs	Special Needs	23 646	20%	1%	6%	<1%	17%	43%	12%	1%
	All Other Students	121 030	1%	1%	3%	–	3%	31%	50%	12%

¹⁵ Since, in certain reporting categories, the number of students is insufficient to avoid potentially divulging individual student results, some percentages in these tables are not presented and are replaced by a dash.

Observations:

- In both Grade 3 and Grade 6, females outperformed males in writing.
- In Grade 6, the gender difference for achievement in writing is greater than in Grade 3.
- Among ESL students, 34% in Grade 3 and 24% in Grade 6 achieved the provincial standard for writing.
- Among special needs students, 16% in Grade 3 and 13% in Grade 6 achieved the provincial standard for writing.
- In Grades 3 and 6, over the past four years, there has been a steady increase in the percentage of ESL/ELD students meeting the provincial standard for writing achievement (from 24% in 1999–2000 to 34% in 2002–2003 in Grade 3, and from 15% in 1999–2000 to 24% in 2002–2003 in Grade 6).
- In Grades 3 and 6, over the past four years, there has been a slow but steady increase in the percentage of special needs students meeting the provincial standard for writing achievement (from 12% in 1999–2000 to 16% in 2002–2003 in Grade 3, and from 10% in 1999–2000 to 13% in 2002–2003 in Grade 6).

Mathematics: Overall Achievement by Subgroup¹⁶

Grade 3

		# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Gender	Female	68 142	3%	1%	6%	<1%	4%	27%	48%	10%
	Male	71 956	5%	1%	7%	<1%	4%	27%	46%	9%

Language	In ESL/ELD	7491	17%	1%	5%	–	7%	29%	34%	6%
	All Other Students	133 369	4%	1%	7%	<1%	4%	27%	48%	10%

Special Needs	Special Needs	24 148	21%	1%	8%	<1%	10%	33%	25%	2%
	All Other Students	116 712	1%	1%	6%	<1%	3%	26%	52%	11%

¹⁶ Since, in certain reporting categories, the number of students is insufficient to avoid potentially divulging individual student results, some percentages in these tables are not presented and are replaced by a dash.

Grade 6

		# =	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Gender	Female	70 297	3%	1%	5%	<1%	8%	29%	42%	13%
	Male	73 155	5%	1%	7%	<1%	8%	27%	40%	12%

Language	In ESL/ELD	4930	22%	1%	7%	0%	11%	23%	26%	9%
	All Other Students	139 746	3%	1%	6%	<1%	8%	28%	41%	12%

Special Needs	Special Needs	23 646	20%	1%	11%	<1%	21%	30%	16%	2%
	All Other Students	121 030	1%	1%	5%	<1%	5%	27%	46%	14%

Observations:

- In both Grade 3 and Grade 6, females outperformed males in mathematics, but the differences are much less pronounced than in reading and writing.
- Among ESL students, 40% in Grade 3 and 35% in Grade 6 achieved the provincial standard in mathematics.
- Among special needs students, 27% in Grade 3 and 18% in Grade 6 achieved the provincial standard in mathematics.
- In Grades 3 and 6, the percentage of ESL/ELD students meeting the provincial standard for mathematics has remained relatively stable over the past three years (around 40% in Grade 3 and around 35% in Grade 6).
- In Grades 3 and 6, over the past four years, there has been a slow but steady increase in the percentage of special needs students meeting the provincial standard for mathematics achievement (from 23% in 1999–2000 to 27% in 2002–2003 in Grade 3, and from 14% in 1999–2000 to 18% in 2002–2003 in Grade 6).

Overall Achievement in Grade 3 French Immersion

For Grade 3 students in French Immersion classes, school boards must choose one of the following three options:

- Option A:** Students complete all components of the assessment (reading, writing and mathematics) in English;
- Option B:** Students complete the reading and writing components in English and the mathematics components in a French translation or
- Option C:** Students complete only the mathematics component, in a French translation. (These students do not complete the reading and writing components and receive results only for mathematics.)

Option A: Reading, Writing and Mathematics in English (# = 2811)

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Reading	3%	1%	8%	0%	7%	26%	50%	5%
Writing	3%	1%	3%	0%	1%	29%	53%	11%
Mathematics	2%	1%	8%	0%	4%	26%	52%	8%

Option B: Reading and Writing in English; Mathematics in French (# = 3113)

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Reading	1%	1%	8%	<1%	6%	27%	51%	5%
Writing	1%	1%	4%	<1%	1%	31%	53%	9%
Mathematics	1%	1%	11%	0%	2%	26%	51%	9%

Option C: Mathematics in French Only (# = 2662)

	Exempt	No Data	NEIS	NE1	Level 1	Level 2	Level 3	Level 4
Mathematics	<1%	1%	5%	0%	2%	18%	59%	16%

Observation:

- More than half the French Immersion students achieved the provincial standard in reading (55% for Option A and 56% for Option B), writing (64% for Option A and 62% for Option B) and mathematics (60% for Options A and B and 75% for Option C).

Grade 3 Students' Learning Environment¹⁷

Response Rate

All Students	Completed Questionnaires	Response Rate
140 860	134 796	96%

Student Computer Use and Language Spoken at Home

Percentage of students indicating that,	All (# = 134 796)	Female (# = 65 683)	Male (# = 68 375)
at home, they speak mostly or only English.	81%	80%	81%
at home, other people speak mostly or only English to them.	79%	78%	79%
at home, there is a computer for them to use for school work.	53%	55%	52%

Observations:

- Approximately one-fifth of Grade 3 students speak mostly or only a language other than English at home.
- A little more than half of Grade 3 students said there was a computer at home for them to use for school work.

Reading

Student Attitudes Toward Reading

Percentage of students indicating that	All (# = 134 796)	Female (# = 65 683)	Male (# = 68 375)
they think they are good readers.	66%	68%	63%
they like to read.	67%	76%	59%

Observations:

- More Grade 3 females than males thought they were good readers.
- Fewer Grade 3 males than females indicated that they like to read.

¹⁷ Data in the following tables derive from the 2002–2003 Grade 3 Student Questionnaire.

“I am a good reader.”						
	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Yes	55%	62%	63%	62%	66%	66%

Observation:

- In Grade 3, there has been a modest improvement in student self-regard with respect to reading over the past six years; however, the percentage has remained stable over the past two years.

“I like to read.”						
	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Yes	70%	76%	76%	75%	72%	67%

Observation:

- In Grade 3, there has been a slight overall decline in students’ attitudes toward reading.

Student Reading Habits

Percentage of students indicating that	All (# = 134 796)	Female (# = 65 683)	Male (# = 68 375)
they read by themselves at home.	62%	66%	59%
they use a computer for reading activities at school.	26%	26%	26%

Observation:

- In Grade 3, a substantially larger percentage of females than males indicated that they read by themselves at home.

Writing

Student Attitudes Toward Writing

Percentage of students indicating that	All (# = 134 796)	Female (# = 65 683)	Male (# = 68 375)
they think they are good writers.	50%	55%	45%
they like to write.	58%	66%	51%

Observation:

- A substantially larger percentage of Grade 3 females than males indicated each of the following: that they think they are good writers and that they like to write. This has remained consistent through the years.

Student Writing Habits

Percentage of students indicating that	All (# = 134 796)	Female (# = 65 683)	Male (# = 68 375)
they use a computer for writing at school.	22%	22%	22%

Observation:

- There were no gender differences in Grade 3 students' use of a school computer for writing.

Mathematics

Student Attitudes Toward Mathematics

Percentage of students indicating that	All (# = 134 796)	Female (# = 65 683)	Male (# = 68 375)
they think they are good at mathematics.	51%	42%	60%
they think mathematics is easy.	34%	26%	41%
they like mathematics.	61%	57%	65%

Observations:

- A substantially larger percentage of Grade 3 males than females reported each of the following: they think they are good at mathematics, they think mathematics is easy, and they like mathematics.
- Although the majority (61%) of Grade 6 students say they like mathematics, only a little over one-third say they think mathematics is easy.

Application of Mathematics

Percentage of students indicating that	All (# = 134 796)	Female (# = 65 683)	Male (# = 68 375)
they use a computer to learn mathematics at school.	26%	26%	27%
they use mathematics to solve problems outside school.	38%	38%	38%

Observation:

- In Grade 3, there is no significant gender difference in the use of school computers as learning tools for mathematics.

Grade 3 Teachers' Professional Learning Environment

Teaching Practices¹⁸

Language

Teaching and Assessment Resources for Reading and Writing

Percentage of teachers indicating that	Reading (# = 6779)	Writing (# = 6779)
the following resources are “accessible” or “very accessible” to them:		
classroom materials or resources	94%	80%
library or resource-centre language materials	85%	70%
computers	73%	69%
language-related computer software	60%	57%
board resource personnel	59%	56%
board language-assessment materials	73%	65%
school or library language-assessment materials	66%	59%
classroom resources for assessing language	81%	74%
the following resources are “very useful” or “indispensable” to them:		
the Ontario Curriculum Unit Planner	15%	14%
the four-level achievement chart in the curriculum	44%	42%
EQAO assessment materials	43%	40%
Ministry exemplars and rationales	43%	42%
assessment tools they have developed	69%	66%
assessment tools developed by teachers in their school	40%	38%
assessment tools developed by their boards	28%	26%
assessment tools developed by other boards	14%	14%
commercially published language-assessment tools	31%	27%

Observations:

- Grade 3 teachers generally reported that instructional and assessment resources for reading were more accessible than those for writing.
- Grade 3 teachers generally reported that the reading and writing assessment tools that they had developed themselves were the most useful to them.

¹⁸ Data in the following tables derive from the 2002–2003 Teacher Questionnaire.

Mathematics

Teaching and Assessment Resources for Mathematics

Percentage of teachers indicating that	All (# = 6779)
the following resources are “accessible” or “very accessible” to them:	
mathematics textbooks and/or workbooks	88%
manipulatives	86%
library or resource-centre mathematics materials	57%
calculators	77%
computers	73%
mathematics computer software	64%
board resource personnel	50%
teacher mathematics manuals	83%
board mathematics-assessment materials	57%
school or library mathematics-assessment materials	45%
classroom resources for assessing mathematics	78%
the following resources are “very useful” or “indispensable” to them:	
the Ontario Curriculum Unit Planner	17%
the four-level achievement chart in the mathematics curriculum	42%
EQAO mathematics-assessment materials	44%
Ministry exemplars and rationales	40%
assessment tools they have developed	65%
assessment tools developed by teachers in their school	37%
assessment tools developed by their boards	22%
assessment tools developed by other boards	13%
commercially published mathematics-assessment tools	33%

Observations:

- Just over half the Grade 3 teachers indicated that mathematics resources are accessible in the school library.
- Grade 3 teachers generally reported that the mathematics assessment tools that they had developed themselves were the most useful to them.

Teachers' Experience and Professional Development

Percentage of teachers indicating that they	All (# = 6779)
have been teaching for more than two years .	85%
have taught in the primary grades for more than two years .	77%
have taught Grade 3 for more than two years .	57%

Observation:

- 85% of the Grade 3 teachers had been teaching for more than two years; only 57% had been teaching Grade 3 for more than two years.

Percentage of teachers indicating that they have had the following professional development:	Reading (# = 6779)	Writing (# = 6779)	Mathematics (# = 6779)
school-related activities	82%	76%	67%
board-related activities	87%	79%	70%
Ministry-related activities	27%	23%	20%
EQAO-related activities	55%	52%	51%
self-instruction or professional reading	79%	76%	71%
seminars, workshops or conferences	79%	71%	65%
graduate studies	13%	9%	6%

Observations:

- Professional development through school-related activities, board-related activities, self-instruction or seminars, workshops or conferences was most common among Grade 3 teachers.
- Grade 3 teachers reported more professional development in reading than in writing, and more in writing than in mathematics.
- An encouraging percentage of Grade 3 teachers indicated that EQAO-related activities supported their professional development.

Additional Qualifications (AQ)

Percentage of teachers indicating that they have completed or are presently working toward the following:	AQ Courses in Reading (# = 6779)	AQ Courses in Mathematics (# = 6779)
Part 1	15%	4%
Part 2	5%	1%
Specialist	6%	1%
	All (# = 6779)	
other AQ courses with a focus on reading and writing	36%	
other AQ courses with a focus on mathematics	17%	
other specialized training courses in reading, writing or mathematics	52%	

Observation:

- Grade 3 teachers reported more participation in AQ reading courses than in AQ mathematics courses.

Grade 6 Students' Learning Environment¹⁹

Response Rate

All Students	Completed Questionnaires	Response Rate
144 676	139 082	96%

Student Computer Use and Language Spoken at Home

Percentage of students indicating that,	All (# = 139 082)	Female (# = 68 036)	Male (# = 69 821)
at home, they speak mostly or only English.	85%	84%	84%
at home, other people speak mostly or only English to them.	82%	81%	82%
at home, there is a computer for them to use for school work.	79%	80%	77%

Observations:

- A majority of Grade 6 students reported each of the following: that they speak English at home and that they have access to a computer for school work.
- Approximately 15% of Grade 6 students reported that they speak mostly or only a language other than English at home.

¹⁹ Data in the following tables derive from the 2002–2003 Grade 6 Student Questionnaire.

Reading

Student Attitudes Toward Reading

Percentage of students indicating that	All (# = 139 082)	Female (# = 68 036)	Male (# = 69 821)
they think they are good readers.	62%	66%	59%
they like to read.	54%	63%	46%

Observation:

- A larger percentage of Grade 6 females than males indicated each of the following: that they like to read and that they think they are good readers. This has remained consistent through the years.

"I like to read."					
	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Yes	63%	64%	64%	60%	54%

Observation:

- In Grade 6, there has been a decline in students' attitudes toward reading over the past two years.

Student Reading Habits

Percentage of students indicating that	All (# = 139 082)	Female (# = 68 036)	Male (# = 69 821)
they read at home.	55%	63%	47%
they use a computer for reading activities at school.	17%	16%	17%

Observation:

- More Grade 6 females than males indicated they read at home.

"I read at home."					
	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Yes	64%	67%	65%	65%	55%

Observation:

- The percentage of Grade 6 students indicating that they read at home decreased substantially this year.

Writing

Student Attitudes Toward Writing

Percentage of students indicating that	All (# = 139 082)	Female (# = 68 036)	Male (# = 69 821)
they think they are good writers.	43%	47%	39%
they like to write.	44%	52%	36%

Observation:

- A substantially larger percentage of Grade 6 females than males said each of the following: that they are good writers and that they like to write. This has remained constant over the years.

Student Writing Habits

Percentage of students indicating that	All (# = 139 082)	Female (# = 68 036)	Male (# = 69 821)
they use a computer for writing at school.	30%	31%	30%

Observations:

- Nearly one in three Grade 6 students use computers for writing at school.
- There are no gender differences in Grade 6 students' use of computers for writing at school.

Mathematics

Student Attitudes Toward Mathematics

Percentage of students indicating that	All (# = 139 082)	Female (# = 68 036)	Male (# = 69 821)
they think they are good at mathematics.	48%	38%	58%
they think mathematics is easy.	26%	18%	34%
they like mathematics.	48%	40%	55%

Observations:

- Almost half the Grade 6 students said each of the following: that they are good at mathematics and that they like mathematics.
- A substantially larger percentage of Grade 6 males than females reported each of the following: that they are good at mathematics, that they think mathematics is easy and that they like mathematics. This gender difference has been consistent over the years.
- Although almost half the Grade 6 students said they like mathematics, just over one-quarter said they think mathematics is easy.

Applications of Mathematics

Percentage of students indicating that	All (# = 139 082)	Female (# = 68 036)	Male (# = 69 821)
they use a computer to do mathematics at school.	13%	13%	13%
they use mathematics to solve problems outside school.	40%	37%	43%

Observations:

- A larger percentage of Grade 6 males than females reported using mathematics to solve problems outside school.
- The percentage of Grade 6 students who indicated that they use a computer to do mathematics at school has increased from 6% last year to 13% this year.
- There are no Grade 6 gender differences in reported use of computers to do mathematics at school.

Grade 6 Teachers' Professional Learning Environment

Teaching Practices²⁰

Language

Teaching and Assessment Resources for Reading and Writing

Percentage of teachers indicating that	Reading (# = 6574)	Writing (# = 6574)
the following resources are “accessible” or “very accessible” to them:		
classroom materials or resources	93%	82%
library or resource-centre language materials	82%	70%
computers	70%	67%
language-related computer software	48%	49%
board resource personnel	55%	52%
board language-assessment materials	68%	65%
school or library language-assessment materials	61%	57%
classroom resources for assessing language	77%	71%
the following resources are “very useful” or “indispensable” to them:		
the Ontario Curriculum Unit Planner	15%	14%
the four-level achievement chart in the curriculum	44%	43%
EQAO assessment materials	39%	37%
Ministry exemplars and rationales	41%	40%
assessment tools they have developed	73%	69%
assessment tools developed by teachers in their school	43%	41%
assessment tools developed by their boards	29%	28%
assessment tools developed by other boards	16%	16%
commercially published language-assessment tools	31%	30%

Observations:

- Grade 6 teachers generally reported that instructional and assessment resources for reading were more accessible than those for writing.
- Grade 6 teachers generally reported that the reading and writing assessment tools that they had developed themselves were the most useful to them.

²⁰ Data in the following tables derive from the 2002–2003 Teacher Questionnaire.

Mathematics

Teaching and Assessment Resources for Mathematics

Percentage of teachers indicating that	All (# = 6455)
the following resources are “accessible” or “very accessible” to them:	
mathematics textbooks and/or workbooks	87%
manipulatives	79%
library or resource-centre mathematics materials	53%
calculators	78%
computers	71%
mathematics computer software	58%
board resource personnel	53%
teacher mathematics manuals	82%
board mathematics-assessment materials	62%
school or library mathematics-assessment materials	48%
classroom resources for assessing mathematics	80%
the following resources are “very useful” or “indispensable” to them:	
the Ontario Curriculum Unit Planner	16%
the four-level achievement chart in the mathematics curriculum	43%
EQAO mathematics-assessment materials	43%
Ministry exemplars and rationales	40%
assessment tools they have developed	69%
assessment tools developed by teachers in their school	40%
assessment tools developed by their boards	27%
assessment tools developed by other boards	17%
commercially published mathematics-assessment tools	37%

Observations:

- Just over half the Grade 6 teachers indicated that mathematics resources are accessible in the school library.
- Grade 6 teachers generally reported that the mathematics assessment tools that they had developed themselves were the most useful to them.

Teachers' Experience and Professional Development

Percentage of teachers indicating that they	All (# = 6921)
have been teaching for more than two years .	84%
have taught in the junior grades for more than two years .	71%
have taught Grade 6 for more than two years .	56%

Observation:

- 84% of the Grade 6 teachers had been teaching for more than two years; only 56% had been teaching Grade 6 for more than two years.

Percentage of teachers indicating that they have had the following professional development:	Reading (# = 6921)	Writing (# = 6921)	Mathematics (# = 6921)
school-related activities	77%	73%	64%
board-related activities	80%	75%	70%
Ministry-related activities	24%	21%	21%
EQAO-related activities	52%	50%	49%
self-instruction or professional reading	74%	72%	67%
seminars, workshops or conferences	71%	66%	62%
graduate studies	13%	10%	7%

Observations:

- Grade 6 teachers reported participating in more school- and board-related activities than other types of professional development.
- Grade 6 teachers reported more professional development in reading than in writing, and more in writing than in mathematics.
- An encouraging percentage of Grade 6 teachers indicated that EQAO-related activities supported their professional development.

Additional Qualifications (AQ)

Percentage of teachers indicating that they have completed or are presently working toward the following:	AQ Courses in Reading (# = 6921)	AQ Courses in Mathematics (# = 6921)
Part 1	11%	4%
Part 2	3%	1%
Specialist	4%	1%
	All (# = 6921)	
other AQ courses with a focus on reading and writing	29%	
other AQ courses with a focus on mathematics	17%	
other specialized training courses in reading, writing or mathematics	43%	

Observation:

- Grade 6 teachers reported more participation in AQ reading courses than in AQ mathematics courses.

Administrative Learning Environment

Principals' Experience and Professional Development²¹

Percentage of principals indicating that	All (# = 3383)
they have been a principal for more than five years .	37%
in the past two years, they have had the following professional development in reading and/or writing instruction:	
graduate studies	3%
seminars, workshops or conferences	89%
self-instruction or professional reading	70%
reading and/or writing assessment and evaluation:	
graduate studies	3%
seminars, workshops or conferences	89%
self-instruction or professional reading	67%
mathematics instruction:	
graduate studies	1%
seminars, workshops or conferences	62%
self-instruction or professional reading	59%
mathematics assessment and evaluation:	
graduate studies	1%
seminars, workshops or conferences	63%
self-instruction or professional reading	58%

Observations:

- Among principals, professional development occurred most frequently through seminars, workshops and conferences.
- Professional development was more common in reading and writing than in mathematics.

²¹ Data for the following table derives from the 2002–2003 Principal Questionnaire.

Recommendations

The following recommendations and instructional suggestions are based on

- the 2002–2003 Grade 3 and Grade 6 achievement results;
- the patterns and trends emerging from the overall results from year to year;
- the data collected from the various questionnaires and
- suggestions from the teacher markers at the EQAO marking centres.

EQAO recommends that

- each **school**, with the involvement of teachers, students and parents, design and implement school-wide initiatives to ensure student achievement of the provincial curriculum expectations in literacy and numeracy. Such initiatives could include the following:
 - **all staff** give attention to students who are performing at Level 2 and determine what strategies or interventions would be needed to have them achieve Level 3.
 - **principals** establish school improvement teams, in which school councils participate, to review student achievement and contextual data, to develop action plans for meeting school targets for achievement of the *Ontario Curriculum* standards in literacy and numeracy and to develop strategies that target areas and groups in need of additional support and improvement. Valuable planning resources for this activity include
 - *EQAO Guide to School and Board Improvement Planning*
 - *Early Reading Strategy: The Report of the Expert Panel on Early Reading in Ontario*
 - *Early Math Strategy: The Report of the Expert Panel on Early Math in Ontario*
 - *The Ontario Curriculum, Grades 1–8: Language*
 - *The Ontario Curriculum, Grades 1–8: Mathematics*
 - *The Ontario Curriculum exemplars for Grades 1–8*
 - **principals**, with support from school boards and the Ministry of Education, provide opportunities for all teachers to be involved in the analysis of student achievement information and the development and implementation of improvement strategies.
 - **principals**, with support from school boards and the Ministry of Education, provide teachers with opportunities for professional development in assessment literacy and in using assessment data in conjunction with best practices to develop strategies for improvement.
 - **principals**, with support from school boards and the Ministry of Education, provide teachers with opportunities for professional development in literacy and mathematics competencies and in using assessment data in conjunction with best practices to develop strategies for improvement.
 - **principals** encourage their staffs to become involved in important EQAO activities (such as assessment development, pilot testing, field testing and marking) that have been viewed by educators as excellent professional development.
- **school councils** closely monitor student achievement and take an active role in school improvement.
- **school boards** establish school board improvement teams to review historical student achievement and contextual data to develop action plans for meeting school targets for achievement of the *Ontario Curriculum* standards in literacy and numeracy and to develop strategies that target areas and groups in need of additional support and improvement.
- the **faculties of education** assist pre-service teachers in developing an awareness and understanding of the links among curriculum, teaching practices and assessment. Pre-service teachers must have exposure to a wide variety of assessment formats, including large-scale performance-based assessment.
- the **Ontario College of Teachers** ensure a balance of courses on core competencies through Professional Learning Program providers, to allow teachers across the province ample opportunities for professional

development that focuses on the relationships among curriculum, teaching practices and assessment, which are essential to teaching and learning.

- the **Ministry of Education** use the Grade 3 and Grade 6 provincial assessment data accumulated over the past six years, to further support literacy and numeracy, especially through the Early Reading and Early Math strategies, at the board, school and classroom levels.

Instructional Suggestions

EQAO's assessments are based entirely on expectations in *The Ontario Curriculum*. It is important, therefore, that teachers in all grades focus their reading, writing and mathematics instruction and assessment on the expectations in *The Ontario Curriculum, Grades 1–8*.

Reading

EQAO suggests that

- teachers provide students with reasoning activities. These should require students to demonstrate understanding by selecting, describing, interpreting and analyzing relevant ideas from both fiction and non-fiction and restating them in their own words. For example, as they read or are read to, have students
 - select supporting information;
 - identify the main idea and
 - describe story elements such as plot, setting, characters and conflict.
- teachers provide students with opportunities to communicate about what they have read. For example, have students ask themselves the following questions:
 - “Have I ever been in this situation?”
 - “What does this remind me of?”
 - “How can I use this information?”
 - “Would I want the main character as my friend?”
- teachers provide students with activities that require them to identify and describe how different types of texts are organized to aid understanding. For example, as they read or are being read to, have students
 - identify and explain characteristics of the text and
 - identify organizers and explain why the author has chosen to use them.
- teachers provide students with activities that require them to identify and explain the use of language conventions in text. For example, as they are reading or being read to, have students
 - recognize punctuation and
 - explain how it helps them understand the text.
- teachers ensure their reading programs
 - attend to all the components of the reading curriculum as outlined in *Early Reading Strategy: The Report of the Expert Panel on Early Reading in Ontario*;
 - offer different types of reading materials;
 - offer both fiction and non-fiction and
 - offer a variety of genres.
- teachers work together within each school to ensure that reading skills are reinforced in all subject areas.

Writing

EQAO suggests that

- teachers provide students with opportunities to demonstrate reasoning in their writing by ensuring that they understand the purpose of the task and develop ideas that relate to the purpose. For example, to encourage students to recognize the purpose they are writing for, have them
 - write in a variety of forms and
 - respond to a variety of tasks.
- teachers provide students with opportunities to communicate clearly, ensuring that the students are developing the ability to use appropriate techniques in their writing. For example, have students
 - use an appropriate voice;
 - use descriptive vocabulary, aided by a dictionary and thesaurus; and
 - recognize and address the audience.
- teachers provide students with opportunities to organize their ideas for writing. For example, have students
 - plan an introduction, a sequence of ideas and a logical conclusion;
 - use paragraphs to connect ideas and
 - develop skills in using organizers, both visual and written, for different kinds of writing.
- teachers provide students with opportunities to write and apply language conventions. For example, have students
 - recognize that punctuation and grammar affect a writer's message;
 - proofread work carefully and
 - edit to ensure their message is accurate.
- teachers ensure that their writing programs provide students with opportunities to write
 - for a variety of authentic purposes and audiences and
 - within a time limit.
- teachers model writing forms and processes for their students.
- teachers teach the writing process. For example,
 - planning, focusing on the characteristics of the form being used;
 - writing an introduction, a body and an ending;
 - revising the draft;
 - proofreading—attending to punctuation, grammar and spelling;
 - editing for correctness and
 - publishing for an audience.

- teachers use reading to teach writing. For example,
 - when students read narratives aloud, have them identify specific story elements;
 - when students read poetry, have them discuss imagery and descriptive language and
 - when students read non-fiction, have them identify organizers and explain how they clarify the author's message.
- teachers work together within each school to ensure writing skills are reinforced in all subject areas.

Mathematics

EQAO suggests that

- teachers provide students with problem-solving opportunities within and across the mathematics strands by requiring them to analyze problems and to select and apply strategies that lead to accurate solutions. For example, have students
 - brainstorm and discuss strategies for solving problems;
 - construct solutions, using mathematical knowledge and experience; and
 - recognize that they can use several strategies to solve a problem.
- teachers provide students with opportunities to demonstrate their understanding of mathematical concepts across strands by requiring them to incorporate mathematical ideas and relationships in their explanations. For example, have students
 - explain their thinking about a mathematical idea or relationship through math journals and problem-of-the-week activities and
 - demonstrate their understanding through projects, peer tutoring and co-operative tasks.
- teachers provide students with opportunities to apply procedures within and across mathematics strands by requiring them to select and complete procedures and operations accurately. For example, have students
 - focus on identifying the problem;
 - select appropriate procedures and operations;
 - apply appropriate operations and
 - select and apply appropriate tools and methods for solving the problem.
- teachers provide students with opportunities to communicate their mathematical understanding within and across strands by requiring them to justify their solutions using correct mathematical terminology and symbols. For example, have students
 - explain and justify their solutions, both orally and in writing, and
 - maintain a math journal.
- teachers organize the mathematics program to
 - allow the acquisition of knowledge and skills between and among strands;
 - regularly address the knowledge and skills required across the strands throughout the year and

- integrate and transfer knowledge and skills between and among strands.
- teachers model
 - responses that use numbers, pictures, symbols and/or words;
 - the use of manipulatives and technology to understand and solve problems and
 - the solution of real-life problems through mathematics.
- teachers work together within each school to ensure that mathematical skills are reinforced in all subject areas.



Education
Quality and
Accountability
Office

Highlights of Provincial Results

The Grade 9 Assessment of Mathematics, 2002–2003



November 2003



EQAO—INFORMATION FOR LEARNING: WORKING TOGETHER TO IMPROVE STUDENT ACHIEVEMENT

The goal of assessing and reporting is to ensure greater accountability in Ontario's public education system by giving parents, educators and students information that will help them improve student achievement and the quality of education. Ontario's large-scale assessment program is one important element of a culture of capacity building and learning improvement. EQAO measures student performance and contributes to positive educational change by

- providing objective and high-quality information on the academic achievement of students as measured against established standards;
- encouraging an external and system-wide dialogue about the results, which leads to strategies for improvement;
- providing contextual information that allows educators, parents and the public to interpret results in a responsible and constructive manner and
- augmenting the information that educators gather in order to identify the areas in which resources are needed most.

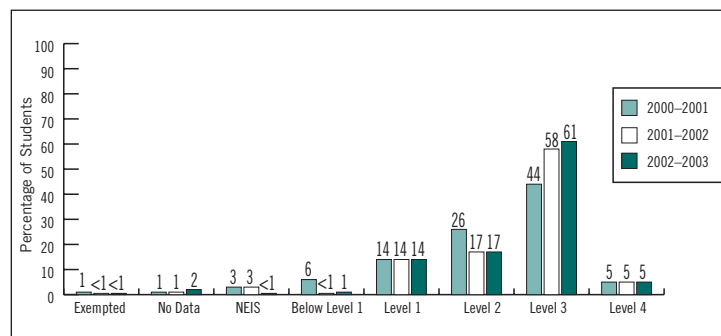
EQAO conducts a range of province-wide assessments. The Grade 9 Assessment of Mathematics has been in place for three years. It involves all students in Grade 9 academic and applied mathematics courses and is a valuable source of information on what these students have learned in mathematics.

RESULTS OF THE GRADE 9 ASSESSMENT, 2002–2003 (ENGLISH-LANGUAGE STUDENTS) (METHOD 1)¹

EQAO reports achievement results using a four-level scale based on the one in *The Ontario Curriculum, Grades 9 and 10: Mathematics*, which sets Level 3 as the provincial standard. *The Ontario Curriculum, Grades 9 and 10: Mathematics* describes Level 1 as equivalent to a score of

50–59%, Level 2 as equivalent to a score of 60–69%, Level 3 as equivalent to a score of 70–79%, and Level 4 as equivalent to a score of 80% or higher.

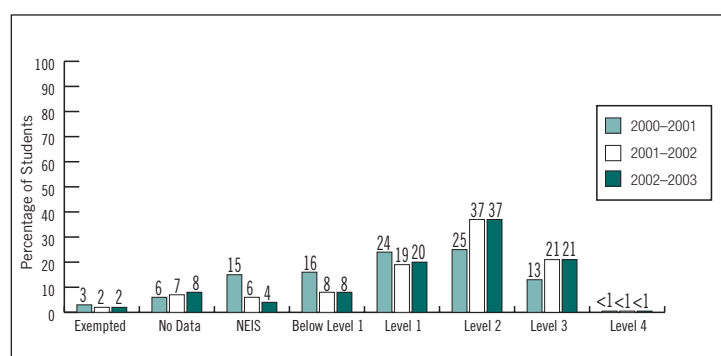
Year-to-Year Comparisons—Academic



Academic Overall Achievement

The percentage of Grade 9 students in the academic program meeting the provincial standards for mathematics has increased again this year. Over the past three years, there has been a 17% increase, from 49% in 2000–2001 to 64% in 2001–2002 to 66% in 2002–2003.²

Year-to-Year Comparisons—Applied



Applied Overall Achievement

Students' achievement in the applied program has stabilized over the past two years, with 21% of students achieving the provincial standard. Thirty-seven per cent of students in the applied program achieved Level 2, which is approaching the provincial standard.

¹ **Method 1** expresses the number of students in each reporting category as a percentage of all students in the grade (i.e., students at the four levels of achievement and those in the exempt, no data, not enough information to score [NEIS] and below Level 1 categories).

² Any differences between these percentages and those obtained by combining the percentages at Levels 3 and 4 in the bar graph are attributable to rounding.

CONTEXT FOR INTERPRETING THE RESULTS

Sustainable improvement in student achievement is a gradual process that requires focused and persistent attention over time. It is important to emphasize that these results should be used to improve student learning.

Data must be considered in context in order to serve as a springboard for improvement. Parents, educators and the community should examine the contextual information and particular circumstances that affect achievement in their community in order to gain a more in-depth picture of factors that influence achievement.

KEY OBSERVATIONS

- Over the past three years, there has been a 17% increase in the percentage of students in the academic program achieving the provincial standard.
- From the first to the second year of the assessment, there was an increase of 8% in the percentage of students in the applied program reaching the provincial standard; students' achievement in the applied program has stabilized over the past two years.
- In general, male students' attitudes are more positive toward mathematics; however, males and females in both the applied and the academic programs performed equally well on the assessment.
- The percentage of English as a second language and English literacy development (ESL/ELD) students at the provincial standard or above, in both the applied and the academic programs, has been the same for two years, with 9% of applied students and 45% of academic students achieving the provincial standard.
- The percentage of students with special needs reaching the provincial standard, in both the applied and the academic programs, is increasing. Since the first year of the assessment, the percentage of applied students with special needs reaching the provincial standard has increased by 6%; the percentage of academic students with special needs reaching the provincial standard has increased by 8%.

FACTS ABOUT THE GRADE 9 ASSESSMENT OF MATHEMATICS

- This year's Grade 9 assessment took place between January 8 and 21, 2003, and between May 26 and June 13, 2003. The principal and teachers in each school chose the exact dates. Students participated in the assessments over three to five days.
- Approximately 101 000 English-language students in academic programs participated in the winter and spring assessments.
- Approximately 48 500 English-language students in applied programs participated in the winter and spring assessments.
- The Grade 9 assessments are based on *The Ontario Curriculum, Grades 9 and 10: Mathematics*.
- The assessment covers the knowledge and skills in mathematics that students are expected to have acquired by the end of Grade 9.
- The assessment contains performance-based activities requiring written responses, and multiple-choice questions. This combination of question types allows students to demonstrate both the depth and the scope of their learning and provides a variety of ways for students to demonstrate what they know and what they can do.
- The marking is done by certified educators.
- All Ontario Grade 9 students enrolled in applied or academic mathematics courses in publicly funded schools are expected to participate in the assessment.
- Each year, school boards are required to develop and submit improvement plans to EQAO. The plans outline how teachers, principals and senior board staff will change conditions for students, to promote improved achievement.

WHAT WE LEARNED ABOUT STUDENTS AND SCHOOLS FROM THE 2002–2003 ASSESSMENT

Overall

- 49% of the participants in the Grade 9 assessments were female; 51% were male.
- 4% of students were identified as having been in an ESL/ELD program.
- 11% of students (excluding gifted) were identified as having an Individual Education Plan (IEP). 7% of these students had also been identified through the Individual Placement and Review Committee (IPRC) process.
- 42% were in a first-semester program; 41% were in a second-semester program; 16% were in a full-year program.

Academic

- 80% of students in the academic program indicated that the language they spoke at home was mostly or only English; 10%, mostly or only another language; 11%, English as often as another language.
- 19% of students in the academic program were born outside Canada.
- 5% of students in the academic program were born in 1987 or before.
- 51% of students in the academic program were females and 48% were males.
- 3% of students in the academic program were identified as having been in an ESL/ELD program.
- 4% of students in the academic program (excluding gifted) were identified as having an IEP. Half of these students had also been identified through the IPRC process.
- Less than 1% of students in the academic program were exempted from the assessment.
- 42% were in a first-semester program; 40% were in a second-semester program; 18% were in a full-year program.

Applied

- 84% of students in the applied program indicated that the language they speak at home was mostly or only English; 7%, mostly or only another language; 9%, English as often as another language.
- 16% of students in the applied program were born outside Canada
- 31% of students in the applied program were born in 1987 or before.
- 44% of students in the applied program were females and 55% were males.
- 5% of students in the applied program were identified as having been in an ESL/ELD program.
- 25% of students in the applied program (excluding gifted) were identified as having an IEP. 18% of these students had also been identified through the IPRC process.
- 2% of students in the applied program were exempted from the assessment.
- 43% were in a first-semester program; 43% were in a second-semester program; 13% were in a full-year program.

Academic: Overall Achievement at Levels 3 and 4 by Contextual Factor

Contextual Factor	Subgroup	Levels 3 and 4
Gender	Female	66%
	Male	66%
Language	ESL/ELD	45%
	All other students	66%
Special Education	Special needs	50%
	All other students	66%
Semester	First semester	66%
	Second semester	65%
	Full year	65%

Applied: Overall Achievement at Levels 3 and 4 by Contextual Factor

Contextual Factor	Subgroup	Levels 3 and 4
Gender	Female	21%
	Male	21%
Language	ESL/ELD	9%
	All other students	21%
Special Education	Special needs	15%
	All other students	23%
Semester	First semester	21%
	Second semester	21%
	Full year	19%

Overall Level of Achievement—Academic

	Exempt	No Data	NEIS ³	Below Level 1	Level 1	Level 2	Level 3	Level 4
Method 1	<1%	2%	<1%	1%	14%	17%	61%	5%
Method 2⁴	n/a	n/a	<1%	1%	15%	17%	62%	5%

Overall Level of Achievement—Applied

	Exempt	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Method 1	2%	8%	4%	8%	20%	37%	21%	<1%
Method 2	n/a	n/a	4%	9%	22%	41%	23%	<1%

³NEIS: Not Enough Information to Score

⁴Method 2 is an alternative way of presenting the data; Method 2 expresses the distribution of results as a percentage of those students who took part in the assessment (i.e., students at the four levels of achievement and those in the NEIS and below Level 1 categories). Students in the exempt and no data categories are excluded.

FINDINGS FROM THE QUESTIONNAIRES

STUDENT QUESTIONNAIRE

Academic

- 9% of students in the academic program indicated that they had been absent five or more times in the month prior to the assessment.
- 3% of students in the academic program indicated that they usually didn't have any homework; 10% of students in the academic program indicated that they usually spent no time doing homework.
- A substantially larger percentage of male than female students in the academic program reported each of the following:
 - that they like mathematics (46% males, 36% females);
 - that they are good at mathematics (51% males, 38% females);
 - that they understand most of the mathematics they are taught (63% males, 53% females) and
 - that they think mathematics is an easy subject (32% males, 21% females).



Applied

- 19% of students in the applied program indicated that they had been absent five or more times in the month prior to the assessment.
- 17% of students in the applied program indicated that they usually didn't have any homework; almost 20% of students in the applied program indicated that they usually spent no time doing homework.
- A larger percentage of male than female students in the applied program reported each of the following:
 - that they like mathematics (26% males, 18% females);
 - that they are good at mathematics (30% of males, 20% of females);
 - that they understand most of the mathematics they are taught (43% of males, 34% of females);
 - that they need to keep taking mathematics for the kind of job they want after they leave school (42% of males, 35% of females) and
 - that they think mathematics is an easy subject (23% of males, 14% of females).

TEACHER QUESTIONNAIRE

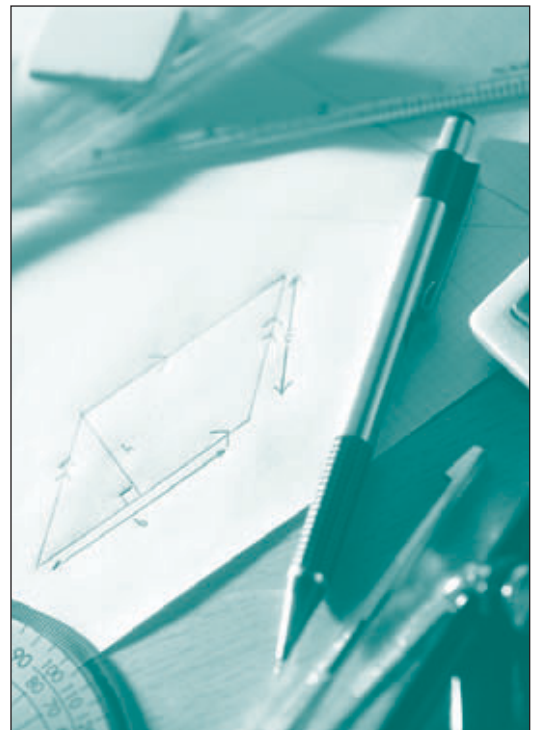
Teachers answered the questionnaire in relation either to their Grade 9 applied mathematics classes or their Grade 9 academic mathematics classes.

Academic

- 86% of the teachers indicated that their students used concrete materials to investigate and gain an understanding of new concepts.
- 87% of the teachers indicated that their students used graphing calculators to explore and investigate mathematical ideas and relationships.
- 40% of the teachers indicated that their students had access to graphing calculators only a few times during the course, or never or hardly ever.
- Although the curriculum requires students to demonstrate achievement of certain expectations using dynamic geometry software, 45% of the teachers indicated that they never or hardly ever used the software.
- 60% of the teachers indicated that their students had access to computers at school only a few times during the course, or never or hardly ever.
- 42% of the teachers indicated that mathematics was their major area of study while working toward their bachelor's degree (or equivalent).

Applied

- 88% of the teachers indicated that their students used concrete materials to investigate and gain an understanding of new concepts.
- 73% of the teachers indicated that their students used graphing calculators to explore and investigate mathematical ideas and relationships.
- 51% of the teachers indicated that their students had access to graphing calculators only a few times during the course, or never or hardly ever.
- Although the curriculum requires students to demonstrate achievement of certain expectations using dynamic geometry software, 56% of teachers indicated that they never or hardly ever used the software.
- 63% of the teachers indicated that their students had access to computers at school only a few times during the course, or never or hardly ever.
- 32% of the teachers indicated that mathematics was their major area of study while working toward their bachelor's degree (or equivalent).



Recommendations

The following recommendations and instructional suggestions are based on

- the 2002–2003 overall achievement results;
- the patterns and trends emerging from the overall results from year to year;
- the data collected from the various questionnaires and
- suggestions from the teacher markers at the EQAO marking centres.

EQAO recommends that

- each **school** study the assessment data and develop an initiative for its school improvement plan geared toward improving student performance, particularly at the applied level. *(21% of applied students achieved the provincial standard.)*
- **principals and teachers** continue to ensure that the instruction in mathematics classes, particularly in the applied program, is aligned with the philosophy, methodology and content of the curriculum. Principals should continue to
 - provide **teachers** with professional development opportunities in best practices for teaching and assessing mathematics (e.g., leading or participating in workshops and conferences, reading professional journals). *(63% of teachers who chose to report on applied and 60% of teachers who chose to report on academic reported that they had experience teaching Grade 9 mathematics of five years or less; 48% of teachers who chose to report on applied and 43% of teachers who chose to report on academic mathematics reported that they had experience teaching mathematics at the secondary level of five years or less.)*
 - provide **teachers** with opportunities to engage in professional discourse with colleagues as they analyze assessment data and plan adaptations to instruction that will improve student learning. *(See passage in italics above.)*
 - include **teachers** of students in Grades 7 and 8 in the initiatives outlined above to ensure that mathematics classes in these intermediate grades are aligned with the philosophy, methodology and content of the curriculum and to reinforce the understanding that there must be shared responsibility for mathematics learning across the intermediate division.
 - encourage **teachers** to
 - identify and clearly communicate the characteristics of successful performance and have students discuss and evaluate their performances against these characteristics.
 - present students with practical and purposeful contexts for using the mathematics in the curriculum and linking it to daily life.
 - integrate hands-on materials into classroom activities to engage students in investigating mathematics so that they deepen their understanding of concepts and procedures.
- **school councils** continue to monitor student achievement and take an active role in school improvement.
- **school board** improvement teams, which include administrators, curriculum leaders, parents and teachers, as part of their ongoing improvement efforts, review historical student achievement and contextual data and identify areas for the continuous improvement of achievement in relation to the *Ontario Curriculum* standards for mathematics. The teams could focus on
 - targeting all categories and strands as well as students in Grade 9 applied mathematics programs. *(21% of applied students achieved the provincial standard.)*

- targeting areas and students in Grade 9 academic mathematics programs in need of additional support. *(34% of academic students did not achieve the provincial standard.)*
- analyzing data, identifying areas of need, setting goals and developing action plans for changes in instruction and assessment, implementing these plans, setting measures for accountability, and monitoring student improvement.
- that **school boards** continue to
 - provide opportunities for students, especially in the applied program, to have access to technology, including graphing calculators and software such as The Geometer's Sketchpad and Fathom during class time. *(63% of teachers who chose to report on applied indicated that their students had access to computers at school only a few times during the course, or never or hardly ever; 51% of teachers who chose to report on applied indicated that their students had access to graphing calculators at school only a few times during the course, or never or hardly ever.)*
 - provide opportunities for teachers to implement technology effectively as a tool for investigating mathematical concepts in the classroom.
 - encourage teachers to meet for conversations about mathematics, teaching, learning and assessment (e.g., in grade or course teams). *(63% of teachers who chose to report on applied and 60% of teachers who chose to report on academic reported that they had experience teaching Grade 9 mathematics of five years or less; 48% of teachers who chose to report on applied and 43% of teachers who chose to report on academic reported that they had experience teaching mathematics at the secondary level of five years or less.)*
 - encourage opportunities for mathematics teachers to meet with colleagues in Grades 7, 8 and 9 who are able to provide leadership in mathematics within the school. *(See notes in italics above.)*
 - provide mentoring by experienced teachers and administrators for teachers new to the teaching profession, or new to teaching Grade 9 mathematics. *(See notes in italics above.)*
- **faculties of education** assist pre-service teachers to gain a thorough understanding of the mathematics curriculum's philosophy, methodology and content, as well as current assessment practices, including large-scale performance-based assessment, and the ways in which assessment assists instruction.
- the **Ontario College of Teachers**, through the Professional Learning Program providers, offer opportunities for professional development that focuses on the relationships among mathematics curriculum, teaching practices and assessment.
- the **Ministry of Education** work with EQAO to use the Grade 9 provincial assessment data accumulated over the past three years to inform the Expert Panel on Students at Risk (Numeracy) and curriculum review activities.



INSTRUCTIONAL SUGGESTIONS

EQAO's Grade 9 Assessment of Mathematics is based on the expectations in *The Ontario Curriculum, Grades 9 and 10: Mathematics*. It is important that teachers focus their mathematics instruction and assessment on the expectations in *The Ontario Curriculum*.

EQAO suggests that

- *because the smallest percentages of students reached or exceeded the provincial standards for thinking, inquiry and problem solving, and communication (53% and 55% in academic and 19% and 12% in applied), teachers focus their instruction as much on understanding the process of learning and thinking mathematically as on answering specific questions. It is important that teachers and students share the strategies they use to solve problems. The communication of reasoning, the ability to listen to the reasoning of others and the adaptation of thinking to encompass the strategies of others are skills necessary for success in mathematics. For example, when students are answering mathematics questions, have them ask themselves,*
 - “How do I know I am right?”
 - “How do I know I am done?”
 - “What do I understand now that I didn't before?”
 - “What do I need to remember next time I try a question like this?”
 - “Have I written enough here to allow me to remember the reasoning I used to answer this question?”
 - “How can I explain this to another person?”
- *because only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships, teachers make connections between the expectations of the strands and provide learning opportunities that cross strands, in order to make efficient use of instructional time. For example,*
 - after students collect, organize and record their data, have them make other representations of their data, such as graphs and equations, and discuss how changes in the conditions cause changes in the other representations of the data.
 - after students collect and organize data to optimize surface area for a given volume, have them graph the data and use this representation to make choices of further data to collect.
- *because*
 - *only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships and*
 - *63% of the teachers who chose to report on applied indicated that their students had access to computers at school only a few times during the course, or never or hardly ever, and 51% of the teachers who chose to report on applied indicated that their students had access to graphing calculators at school only a few times during the course, or never or hardly ever,*
 - teachers provide students with activities that require them to graph a variety of linear and non-linear relationships. These activities should require students to use graphing calculators and/or graphing software to graph the relationships, change the conditions of the relationships and describe the changes that occur in the notations and in the graphs. For example, as students create tables of values or graphs, have them
 - > change the parameters and describe the changes they see.
 - > change the graphs and explain how the equations change.
- *because*
 - *only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships and*

- 63% of the teachers who chose to report on applied indicated that their students had access to computers at school only a few times during the course, or never or hardly ever, and 51% of the teachers who chose to report on applied indicated that their students had access to graphing calculators at school only a few times during the course, or never or hardly ever,
- teachers provide students with relationships activities that engage them in collecting, representing, analyzing and interpreting data. Students need to use manipulatives and data collection technology to collect original data. Analyzing real-world data connects students to the data in ways that arbitrary equations in texts do not. Students need to see a connection between themselves and the data. For example, students could
 - > use a motion detector to match the walk of another student, then describe differences and similarities.
 - > use a temperature probe to collect data about a cup of coffee cooling on a table, then describe what happens when conditions change.
 - > use manipulatives to investigate the relationship between the height of a square-based prism and its surface area, given a fixed volume.
- *because 12% of students in the applied program and 55% of students in the academic program achieved or exceeded the provincial standard for communication*, teachers have students regularly discuss and describe their thinking about mathematics and interpret and evaluate what other students say. A great deal of discussion in a common language is required for students to construct links between their informal ideas and the language and symbols of mathematics. For example, teachers could
 - implement a class rule that requires students to ask three other students before approaching the teacher with a question.
 - have students work in small groups and share their thinking with one another before the class reflects as a group.
 - have pairs of students review and edit each other's solutions.
- *because the research, resources and workshops developed and supported by the Ministry of Education focus on strategies that are especially good for students in Grade 9 applied mathematics, and their scores are quite low overall, with only 21% performing at or above the provincial standard*, teachers regularly arrange students in groups to engage in the activities in the Ministry of Education TIPS resource: <http://www.curriculum.org/occ/tips/index.shtml>. Examples include
 - Think, Pair, Share;
 - Placemat;
 - Jigsaw;
 - Numbered Heads and
 - Inside Outside Circle.

Group activities facilitate mathematical discussion and the testing of ideas. In groups, learners are able to interact and perform actions that are beyond their individual level of performance.
- *because only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships*, teachers focus their instruction on student-centred investigations. Students gain a deeper understanding when they investigate concepts, discuss mathematics and synthesize their findings among their peers.
 - Use Think, Pair, Share to have students discover the effect of changing the y -intercept or slope of a line.
 - Use group work to have students investigate the relationship between the perimeter and area of a figure when one of the measures is fixed.

- teachers provide opportunities for students to reflect on, synthesize and practise the skills that have been taught. Students need to practise their skills to ensure that they have learned the concepts. Without overburdening students with repetitive busywork, have them
 - write reflections on their learning in mathematics journals.
 - practise the skills and knowledge they have learned through interaction with peers and the teacher by doing pertinent questions individually before being assessed.
- teachers of students in the academic program focus on enabling students to generalize mathematical ideas by teaching them to represent their ideas in multiple formats, such as graphs, tables, mathematical language and algebraic expressions. Teachers of students in the applied program should focus on enabling students to develop mathematical ideas with hands-on activities and to represent the ideas in multiple formats, such as graphs and tables, and in common language.
- teachers provide regular opportunities for students to read and discuss materials that deal with everyday mathematics use. It is important that students not only read, but interpret, discuss and write about everyday mathematical ideas. For examples, students could read
 - newspaper articles containing graphs, statistics and ratios;
 - store flyers;
 - instructions for games or “how to” manuals and
 - schedules.

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EQAO

Information for Learning: Working Together to Improve Student Achievement

The goal of assessing and reporting is to ensure greater accountability in Ontario's public education system by giving parents, educators and students information that will help them improve student achievement and the quality of education. Ontario's large-scale assessment program is one important element of a culture of capacity building and learning improvement. EQAO measures student performance and contributes to positive educational change by

- providing objective and high-quality information on the academic achievement of students as measured against established standards;
- encouraging an external and system-wide dialogue about the results, which leads to strategies for improvement;
- providing contextual information that allows educators, parents and the public to interpret results in a responsible and constructive manner and
- augmenting the information that educators gather in order to identify the areas in which resources are needed most.

EQAO conducts a range of province-wide assessments. The Grade 9 Assessment of Mathematics has been in place for three years. It involves all students in Grade 9 academic and applied mathematics courses and is a valuable source of information on what these students have learned in mathematics.

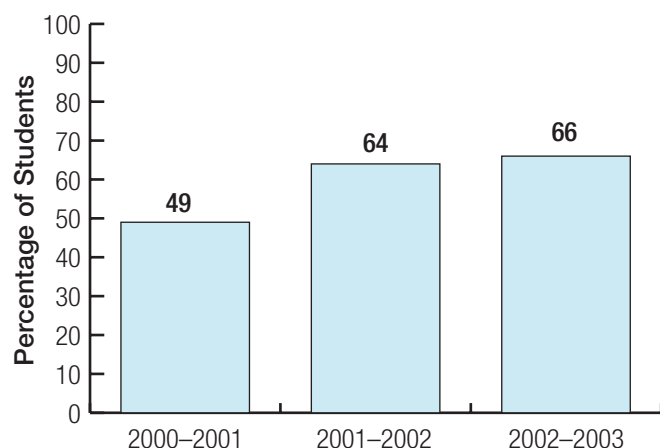
Results at a Glance

Data Comparison over Time

Overall Achievement: Level 3 and Above¹ (Method 1²)

Academic

2000–2001 (# = 95 312)	2001–2002 (# = 99 094)	2002–2003 (# = 100 717)
49%	64%	66%

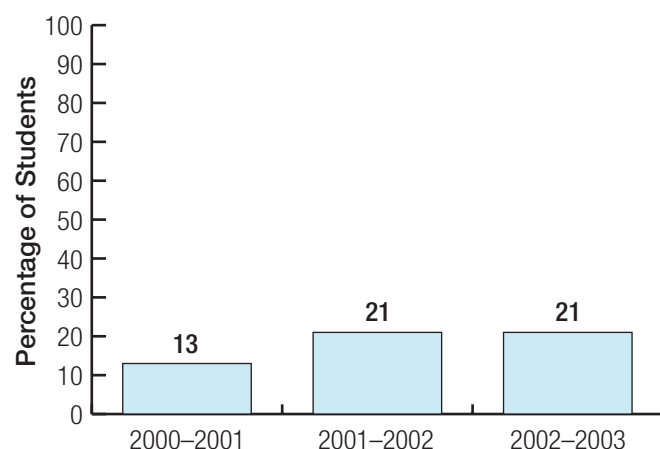


Observations

- 66% of students in the academic program achieved the provincial standard.
- Over the past three years, there has been a significant increase in the percentage of students in the academic program achieving the provincial standard.

Applied

2000–2001 (# = 41 708)	2001–2002 (# = 47 220)	2002–2003 (# = 48 426)
13%	21%	21%



Observations

- 21% of students in the applied program achieved the provincial standard.
- The achievement of students in the applied program has remained the same as last year.

Note: Throughout this report, whenever data do not add up to 100%, the difference is due to rounding.

¹ Percentages achieving Level 3 and above are reported here because *The Ontario Curriculum* sets Level 3 as the provincial standard.

² See page 10 for a description of Method 1.

Key Observations

Achievement Results

- Over the past three years, there has been a significant increase in the percentage of students in the academic program achieving the provincial standard.
- From the first to the second year of the assessment, there was an increase in the percentage of students in the applied program reaching the provincial standard; students' achievement in the applied program has remained the same over the past two years.
- In general, male students' attitudes are more positive toward mathematics; however, males and females in both the applied and the academic programs performed equally well on the assessment.
- The percentage of English as a second language and English literacy development (ESL/ELD) students at the provincial standard or above, in both the applied and the academic programs, has been the same for the past two years.
- The percentage of students with special needs reaching the provincial standard, in both the applied and the academic programs, is increasing.

Other Observations

- More students in the applied than in the academic program indicated they received no homework; more students in the applied program indicated that when they received homework, they usually spent no time on it.
- Students in the applied program indicated higher rates of absenteeism than students in the academic program.

Key Recommendations

EQAO recommends that

- each **school** study the assessment data and develop an initiative for its school improvement plan geared toward improving student performance, particularly at the applied level.
- **principals and teachers** continue to ensure that the instruction in mathematics classes, particularly in the applied program, is aligned with the philosophy, methodology and content of the curriculum.
- **school councils** continue to monitor student achievement and take an active role in school improvement.
- **school board** improvement teams, which include administrators, curriculum leaders, parents and teachers, as part of their ongoing improvement efforts, review historical student achievement and contextual data and identify areas for the continuous improvement of achievement in relation to the *Ontario Curriculum* standards for mathematics.
- **faculties of education** assist pre-service teachers to gain a thorough understanding of the mathematics curriculum's philosophy, methodology and content, as well as current assessment practices, including large-scale performance-based assessment, and the ways in which assessment assists instruction.
- the **Ontario College of Teachers**, through the Professional Learning Program providers, offer opportunities for professional development that focuses on the relationships among mathematics curriculum, teaching practices and assessment.
- the **Ministry of Education** work with EQAO to use the Grade 9 provincial assessment data accumulated over the past three years to inform the Expert Panel on Students at Risk (Numeracy) and curriculum review activities.

The Grade 9 Assessment of Mathematics, 2002–2003

Introduction

The purpose of EQAO is to promote greater accountability in the publicly funded education system in Ontario and to improve the quality of education in the province. In order to fulfill its mandate, EQAO conducts several province-wide assessments, among them the Grade 9 Assessment of Mathematics.

The Grade 9 Assessment of Mathematics measures how well students have met the expectations in *The Ontario Curriculum, Grades 9 and 10: Mathematics*. The assessment is based on the expectations in the Grade 9 curriculum for applied and academic mathematics courses.

Students in locally developed courses do not take part in this assessment. Locally developed courses are developed within school boards to meet educational needs that are not met by courses outlined in the provincial curriculum documents.

The results of these assessments provide individual, school, school board and provincial data on student achievement. Parents receive an Individual Student Report that gives information on their child's achievement on the assessment. Schools and school boards create their own reports, based on EQAO data, for distribution to parents and other stakeholders in the community. EQAO posts school board and school results on its Web site for access by the general public.

Applied and Academic Courses

In Grades 9 and 10, students choose between two types of courses: applied and academic. EQAO develops separate versions of the assessment for students in applied and academic courses. Since some of the expectations for applied and academic courses overlap, approximately 40% of the assessment items are common to both the applied and the academic versions.

Semestered and Full-Year Schools

Schools have the option of offering semestered courses or courses over the full year. EQAO develops separate versions of the assessment for administration in January and May/June.³

Development of the Assessment

The assessment was developed to serve the following purposes:

- to provide valid and reliable information about student achievement;
- to provide a broad window on students' knowledge and skills in mathematics and
- to contribute to student learning.

Teams of classroom teachers from across the province developed items for the assessment and, as part of the development process, tried out items in their classes.

Items for future assessments were pilot tested and field tested during the January and May/June administrations. At various stages, teachers provide feedback on the assessment items. EQAO used such feedback to revise the assessment materials for the administrations in January and May/June 2003.

³ Some schools did not indicate whether students were enrolled in a semestered or a full-year course. As a result, there are students included in the total who are not counted as part of the first-semester, second-semester or full-year statistics.

The assessment was validated by educators with expertise in mathematics, in-depth knowledge of the mathematics expectations for Grade 9 (as outlined in *The Ontario Curriculum, Grades 9–10: Mathematics*), experience with equity issues, knowledge of the special needs of some students and technical expertise in the areas of assessment validity and reliability.

Content of the Assessment

The assessment comprised a multiple-choice component, a short-answer component and performance-based tasks.

Multiple-Choice Component

Students were asked to answer 24 questions during a 30-minute period. Each multiple-choice question was related to a single strand and a single category (see the strand and category definitions in Appendix A). The multiple-choice component allowed students to demonstrate their understanding of mathematical concepts without having to show their work or write responses.

Short-Answer Component

Students were asked to complete 10 items during a 30-minute period. Each short-answer item was related to a single strand and a single category. These items required students to think mathematically but required minimal written response.

Performance-Based Tasks

Students were asked to complete a total of six tasks. Each task was a collection of related questions based on one or two strands from the curriculum. Each task was scored for achievement across all four categories and the strands related to the task.

Additional Component

A sample of students completed an additional 30-minute component that was scored but did not count toward their results. This component included items that were used to establish comparability between the assessments administered in January and May/June and among the 2000–2001, 2001–2002 and 2002–2003 assessments. It also included items that were being pilot tested or field tested for future use.

Participation in the Assessment

All Grade 9 students who are enrolled in an applied or academic mathematics course are expected to participate in this annual assessment. An accommodation policy is in place to support students with special needs. Special provisions are permitted for students who lack proficiency in English.

Principals and teachers are responsible for accommodating students with special needs identified in an Individual Education Plan so that these students can take part in the assessment. The list of permitted accommodations appears on the CD-ROM used for training to administer the assessment; the list also appears on EQAO's Web site, www.eqao.com.

Principals and teachers are able to make special provisions for students enrolled in ESL/ELD programs. The list of permitted special provisions appears on the CD-ROM.

The principal may consider exempting any student who, despite the permitted accommodations and special provisions, would not be able to provide evidence of learning.

Decisions about accommodations, special provisions and exemptions must be made by the principal on an individual basis and in consultation with the student, his or her parents or guardians and appropriate staff. Parental consent is required for an exemption.

Administration of the Assessment

The assessment was administered January 8–21, 2003, to students in first-semester mathematics courses and May 26–June 13, 2003, to students in second-semester and full-year courses.

Principals had the option of administering the assessment over two or four days. An additional day was required in school boards selected to complete the additional component.

Marking the Assessment

Teachers trained in marking scored the short-answer and performance-based items, using a scoring scale that had three to six possible codes for each item. The multiple-choice items were machine-scored. The multiple-choice scores were combined with the short-answer and performance-based scores to produce category, strand and overall scores. With the aid of a statistical procedure that takes into account the degree of difficulty of each test item and the input of the markers, the category, strand and overall scores were then mapped onto EQAO's reporting scale.

This scoring procedure results in precise scoring and allows for the comparability of the category, strand and overall results from administration to administration and from year to year. For further information, visit the EQAO Web site, www.eqao.com.

Reporting Results

Achievement results are reported in two ways: Method 1 and Method 2.

Method 1

Data for all students in the grade are reported. Method 1 expresses the number of students in each reporting category as a percentage of all students in the grade (i.e., students at the four levels of achievement and those in the exempted, no data, NEIS and Below Level 1 categories described on page 11).

Method 2

An alternative way of presenting the data, Method 2 expresses the distribution of results as a percentage of those students who took part in the assessment (i.e., students at the four levels of achievement and those in the NEIS and Below Level 1 categories described on page 11). Students in the exempted and no data categories are excluded.

Achievement Levels

EQAO reports on student achievement in Grade 9 mathematics using a four-level scale. This four-level scale is aligned with the scale used in *The Ontario Curriculum, Grades 9 and 10: Mathematics* and the Provincial Report Card, Grades 9–12.

Overall Achievement

The overall achievement level provides a general picture of the student's achievement of the curriculum expectations in mathematics. The overall level reflects achievement across all of the categories and strands.

Note: Due to rounding, percentages in the achievement tables may not total 100.

Strand and Category Achievement

The strand and category achievement levels provide more detailed information about the student's knowledge and skills in specific areas of the mathematics curriculum. The strands and categories are based on those in *The Ontario Curriculum*. The four strands provide information on the student's strengths and weaknesses in the major content areas of mathematics (number sense and algebra, relationships, measurement and geometry, analytic geometry). The four categories (knowledge and understanding; thinking, inquiry and problem solving; application; and communication) provide information on strengths and weaknesses in specific knowledge and skill areas that apply to all four strands.

Provincial Standard

The Ontario Curriculum establishes Level 3 as the provincial standard. As stated in the curriculum, this is a high level of achievement, and students who are achieving this level or above can be confident that they are "well prepared for work in the next grade or the next course."

The Ontario Curriculum identifies Level 1 as a "passable level of achievement."

Exempted or No Data

These designations include students who were formally exempted from participation in the assessment and students from whom EQAO did not receive completed assessment booklets.

Not Enough Information to Score (NEIS)

This designation represents student work that could not be scored, because large sections were missing or illegible.

Below Level 1

Below Level 1 identifies insufficient achievement of the curriculum expectations.

Level 1

Level 1 identifies a passable level of achievement. Achievement is below the provincial standard.

Level 2

Level 2 identifies a moderate level of achievement. Achievement is below but approaching the provincial standard.

Level 3

Level 3 identifies a high level of achievement. Achievement is at the provincial standard.

Level 4

Level 4 identifies a very high to outstanding level of achievement. Achievement is above the provincial standard.

Collection of Questionnaire Data

During both the January 2003 and the May/June 2003 administrations, teachers and students of applied and academic courses were asked to complete detailed, anonymous questionnaires. Their responses were tabulated. Except in cases where a student's or teacher's privacy would be compromised, EQAO tabulates student questionnaire data for the province as a whole and by school and school board, and it tabulates teacher questionnaire data for the province as a whole and by school board. The provincial questionnaire data in this report, together with the wide range of contextual data that schools and school boards collect locally, should be referred to when interpreting the achievement results.

Profile of Students in Grade 9 Mathematics — Academic⁴

Number of Students

Program				
First Semester	Second Semester	Full Year	No Response	Total
42 322	40 310	18 082	3	100 717

Gender	Percentage
Female	51%
Male	48%
No Response	1%

Place of Birth	Percentage
Inside Canada	80%
Outside Canada	19%
No Response	<1%

Year of Birth	Percentage
1986 or Before	1%
1987	4%
1988	94%
1989 or After	1%
No Response	<1%

Language(s) Spoken at Home	Percentage
Only English	63%
Mostly English	17%
English as Often as Another Language	11%
Mostly Another Language	7%
Only Another Language	3%
No Response	<1%

Observations

- 82% of academic students were in a semestered program; 18% were in a full-year program.
- 19% of students in the academic program were born outside Canada.
- 80% of students in the academic program spoke only or mostly English at home.

⁴ These data derive from the Grade 9 Class Tracking Sheet, the Grade 9 Student Information Form and the Grade 9 Student Questionnaire.

Accommodations and Special Provisions — Academic

	Percentage
Students Who Received Accommodations and Special Provisions (# = 105)	<1%
Students Who Received Accommodations (# = 1952)	2%
Students Who Received Special Provisions (# = 1601)	2%
Students Who Received No Accommodations or Special Provisions (# = 96 061)	95%
Students for Whom Information Is Missing (# = 494)	<1%

Note: The above table does not include exempted students.

Participation — Academic

	Eligible Population	Percentage No Data	Percentage Exempted	Percentage Fully Participated
All Academic Students	100 717	2%	<1%	97%
Program				
Semester 1	42 322	1%	1%	98%
Semester 2	40 310	2%	<1%	98%
Full year	18 082	5%	<1%	95%
Gender				
Female	51 352	2%	<1%	98%
Male	48 750	2%	1%	97%
Student Status				
ESL/ELD	3045	2%	11%	87%
Special Needs	4181	2%	2%	96%

Observations

- 3% of all students in the academic program had ESL/ELD designation.
- 4% of all students in the academic program had been identified as having special needs.
- The percentages of ESL/ELD and special needs students exempted were about the same as last year's.

Overall Achievement — Academic

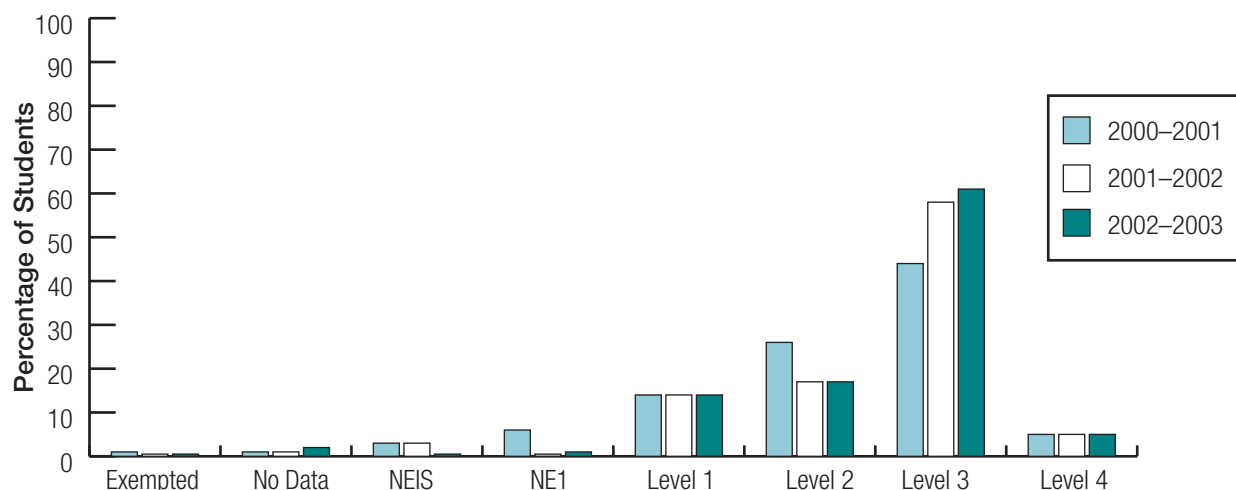
	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Method 1⁵ (# = 100 717)	<1%	2%	<1%	1%	14%	17%	61%	5%
Method 2 (# = 98 147)	n/a	n/a	<1%	1%	15%	17%	62%	5%

Observation

- About two-thirds of students in the academic program achieved the provincial standard.

Year-to-Year Comparisons — Academic

	2000–2001 (# = 95 312)	2001–2002 (# = 99 094)	2002–2003 (# = 100 717)
Exempted	1%	<1%	<1%
No Data	1%	1%	2%
Not Enough Information to Score (NEIS)	3%	3%	<1%
Below Level 1	6%	<1%	1%
Level 1	14%	14%	14%
Level 2	26%	17%	17%
Level 3	44%	58%	61%
Level 4	5%	5%	5%



⁵ See page 10 for descriptions of Methods 1 and 2.

Observations

- 66% of students in the academic program achieved the provincial standard.
- Over the past three years, there has been a significant increase in the percentage of students in the academic program achieving the provincial standard (49% in 2000–2001, 64% in 2001–2002 and 66% in 2002–2003).⁶

By Program — Academic

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Semester 1 (# = 42 322)								
Method 1	1%	1%	<1%	1%	14%	18%	61%	5%
Semester 2 (# = 40 310)								
Method 1	<1%	2%	<1%	<1%	14%	17%	61%	4%
Full Year (# = 18 082)								
Method 1	<1%	5%	<1%	1%	14%	15%	59%	6%

Observation

- The percentage of academic students at or above the provincial standard was about the same for students in semestered and full-year programs.

By Gender — Academic

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Female (# = 51 352)								
Method 1	<1%	2%	<1%	<1%	14%	17%	61%	5%
Male (# = 48 750)								
Method 1	1%	2%	<1%	1%	14%	17%	61%	5%

Observation

- Females and males performed equally well; this has remained consistent over the past three years.

⁶ Any differences between these percentages and those obtained by combining the percentages at Levels 3 and 4 in the preceding table are attributable to rounding.

By Student Status (ESL/ELD) — Academic

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Non-ESL/ELD (# = 97 672)								
Method 1	<1%	2%	<1%	<1%	14%	17%	61%	5%
ESL/ELD (# = 3045)								
Method 1	11%	2%	1%	3%	23%	14%	41%	4%

Observations

- 45% of ESL/ELD students in the academic program achieved the provincial standard.
- The performance of ESL/ELD students in the academic program has been relatively constant over the past two years.

By Special Need (Excluding Gifted) — Academic

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Special Needs (# = 4181)								
Method 1	2%	2%	1%	1%	24%	20%	47%	3%
All Other Students (# = 96 536)								
Method 1	<1%	2%	<1%	<1%	14%	17%	61%	5%

Observations

- 50% of academic students with special needs achieved the provincial standard.
- There was a 7% increase over last year in the percentage of students with special needs at the provincial standard or above.

Overall Achievement by Category — Academic
See Appendix A for definitions of the categories.

Knowledge and Skill Categories	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Knowledge/Understanding								
Method 1 (# = 100 717)	<1%	2%	1%	<1%	14%	13%	67%	3%
Method 2 (# = 98 142)	n/a	n/a	1%	<1%	14%	13%	69%	3%
Application								
Method 1 (# = 100 717)	<1%	2%	1%	3%	13%	11%	60%	9%
Method 2 (# = 98 131)	n/a	n/a	1%	3%	13%	11%	62%	9%
Thinking/Inquiry/Problem Solving								
Method 1 (# = 100 717)	<1%	2%	2%	<1%	28%	14%	45%	8%
Method 2 (# = 98 129)	n/a	n/a	2%	<1%	29%	15%	46%	8%
Communication								
Method 1 (# = 100 717)	<1%	2%	1%	<1%	5%	36%	55%	<1%
Method 2 (# = 98 129)	n/a	n/a	1%	<1%	5%	37%	56%	<1%

Observations

- About 70% of students in the academic program achieved the provincial standard for each of knowledge and understanding, and application.
- A little more than half the students in the academic program achieved the provincial standard for each of thinking, inquiry and problem solving; and communication.

Overall Achievement by Strand — Academic
See Appendix A for definitions of the strands.

Knowledge and Skill Strands	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Number Sense and Algebra								
Method 1 (# = 100 717)	<1%	2%	1%	<1%	12%	19%	63%	3%
Method 2 (# = 98 130)	n/a	n/a	1%	<1%	12%	19%	65%	3%
Relationships								
Method 1 (# = 100 717)	<1%	2%	1%	<1%	9%	21%	53%	13%
Method 2 (# = 98 127)	n/a	n/a	1%	<1%	10%	21%	54%	14%
Analytic Geometry								
Method 1 (# = 100 717)	<1%	2%	1%	<1%	12%	30%	53%	1%
Method 2 (# = 98 132)	n/a	n/a	1%	<1%	12%	31%	55%	1%
Measurement and Geometry								
Method 1 (# = 100 717)	<1%	2%	1%	2%	14%	17%	62%	1%
Method 2 (# = 98 114)	n/a	n/a	1%	2%	14%	18%	64%	1%

Observations

- About two-thirds of academic students achieved the provincial standard for each of number sense and algebra, and relationships.
- 63% of academic students achieved the provincial standard for measurement and geometry.
- A little more than half the academic students achieved the provincial standard for analytic geometry.
- There were more academic students at Level 4 in the relationships strand than in the other strands.

Students' Learning Environment — Academic

All Students	Completed Questionnaires	Response Rate
100 717	97 029	96%

Observation

- In Ontario, there were more than twice as many Grade 9 students in the academic program as there were in the applied program.

Student Attendance — Academic

Percentage of students indicating that in the past month they have been absent from mathematics class	All (# = 97 029)	Females (# = 49 886)	Males (# = 47 071)
never.	30%	26%	35%
1 or 2 times.	45%	46%	43%
3 or 4 times.	16%	18%	14%
5 or more times.	9%	9%	8%

Observation

- Female academic students indicated that they had been absent from class more often than their male counterparts.

Student Mobility — Academic

Percentage of students indicating that they have attended the following number of elementary schools:	All (# = 97 029)	Females (# = 49 886)	Males (# = 47 071)
1 School	34%	33%	35%
2 Schools	36%	37%	36%
3 Schools	17%	17%	17%
4 Schools	7%	7%	7%
5 or More Schools	5%	5%	5%

Observation

- 12% of academic students indicated that they had attended four or more elementary schools; one and a half times as many students in the applied program reported this.

Student Computer and Calculator Use — Academic

Percentage of students indicating that	All (# = 97 029)	Females (# = 49 886)	Males (# = 47 071)
they have a computer at home that they use for school work.	96%	96%	95%
they have a scientific calculator at home that they use for school work.	89%	91%	88%
they have a graphing calculator at home that they use for school work.	6%	5%	7%

Observation

- 96% of students in the academic program indicated that they had computers at home that they used for school work.

Homework — Academic

Percentage of students indicating the following about time spent on mathematics homework on any given day:	All (# = 97 029)	Females (# = 49 886)	Males (# = 47 071)
I usually don't have any mathematics homework.	3%	3%	4%
I have mathematics homework, but I usually spend no time on it.	10%	7%	13%
I usually spend 30 minutes or less on mathematics homework.	38%	35%	41%
I usually spend between 31 and 45 minutes on mathematics homework.	35%	40%	31%
I usually spend more than 45 minutes on mathematics homework.	13%	15%	11%

Observations

- 96% of students in the academic program indicated that they were given mathematics homework.
- One in 10 students indicated that they usually spent no time on mathematics homework.
- In the academic program, a substantially larger percentage of females (55%) than males (42%) indicated that they spent more than 30 minutes on mathematics homework.

Student Attitudes Toward Mathematics — Academic

Percentage of students who strongly agree or agree with the following statements:	All (# = 97 029)	Females (# = 49 886)	Males (# = 47 071)
I like mathematics.	41%	36%	46%
I am good at mathematics.	44%	38%	51%
I understand most of the mathematics I am taught.	58%	53%	63%
The mathematics I learn now is very useful for everyday life.	30%	27%	34%
I need to keep taking mathematics for the kind of job I want after I leave school.	57%	54%	60%
Mathematics is boring.	32%	31%	31%
Mathematics is an easy subject.	27%	21%	32%

Observation

- A substantially higher percentage of males than females in the academic program reported each of the following: that they like mathematics, that they are good at mathematics, that they understand most of the mathematics they are taught, and that they think mathematics is an easy subject.

Teachers' Professional Learning Environment — Academic⁷

Note: Each teacher had to complete only one questionnaire, so teacher responses are based on one class only. Teachers who taught applied and academic classes chose one class and therefore one program.

School Resources

Percentage of teachers indicating that their Grade 9 mathematics students have access to the following items at school:	(# = 2449)				
	Never or Hardly Ever	A Few Times During the Course	A Few Times a Month	A Few Times a Week	Daily
Computers	27%	33%	10%	6%	22%
Graphing Calculators	4%	36%	27%	10%	20%

Observations

- 60% of the teachers who chose to report on academic indicated that their students had access to computers at school only a few times during the course, or never or hardly ever.
- 40% of the teachers who chose to report on academic indicated that their students have access to graphing calculators only a few times during the course, or never or hardly ever.

Teaching Practices

Percentage of teachers indicating that their Grade 9 mathematics students	Never or Hardly Ever	A Few Times During the Course	A Few Times a Month	A Few Times a Week	Daily
use concrete materials to investigate and gain an understanding of new concepts (# = 2449)	12%	44%	29%	10%	3%
use graphing calculators to explore and investigate mathematical ideas and relationships (# = 2449)	10%	56%	24%	6%	1%
use dynamic geometry software (e.g., The Geometer's Sketchpad, Cabri) (# = 2449)	45%	45%	6%	1%	1%

Observations

- 86% of the teachers who chose to report on academic indicated that their students used concrete materials to investigate and gain an understanding of new concepts at least a few times during the course.
- 87% of the teachers who chose to report on academic indicated that their students used graphing calculators to explore and investigate mathematical ideas and relationships at least a few times during the course.
- Although the curriculum requires students to demonstrate achievement of certain expectations using dynamic geometry software, 45% of the teachers who chose to report on academic indicated that they never or hardly ever used the software.

⁷ Data in the following tables derive from the Grade 9 Teacher Questionnaire.

Percentage of teachers indicating percentages of course time they spend teaching the following mathematics strands:	(# = 2449)				
	1–20%	21–40%	41–60%	61–80%	81–100%
Number Sense and Algebra	13%	66%	14%	3%	1%
Relationships	12%	67%	16%	2%	1%
Analytic Geometry	29%	61%	6%	1%	<1%
Measurement and Geometry	56%	39%	2%	1%	<1%

Percentage of teachers indicating that their Grade 9 mathematics students engage in activities related to the following achievement categories:	(# = 2449)				
	Never or Hardly Ever	A Few Times During the Course	A Few Times a Month	A Few Times a Week	Daily
Knowledge/Understanding	<1%	2%	7%	17%	73%
Problem Solving	<1%	5%	22%	40%	31%
Communication	<1%	5%	19%	33%	40%
Application	<1%	3%	13%	37%	44%

Teachers' Experience and Background

Percentage of teachers indicating that they have been teaching	(# = 2449)		
	5 Years or Less	6–10 Years	11 Years or More
mathematics at the secondary level	43%	18%	36%
Grade 9 mathematics	60%	16%	22%

Observation

- Three-fifths of the teachers who chose to report on academic indicated that they had experience teaching Grade 9 mathematics of five years or less.

Percentage of teachers indicating that while studying to obtain their bachelor's degree (or equivalent), their	(# = 2449)
major area of study was	
mathematics.	42%
a mathematics-related subject.	33%
other.	21%
minor area of study was	
mathematics.	23%
a mathematics-related subject.	44%
other.	29%

Observation

- 75% of the teachers who chose to report on academic indicated that their major area of study was mathematics or a mathematics-related subject.

Percentage of teachers indicating that they have completed or are presently working toward the following:	(# = 2449)
Additional Basic Qualifications in Mathematics	35%
Three-Session Qualifications in Mathematics — Intermediate and Senior Education	10%
Honours Specialist Qualifications in Mathematics	28%

Profile of Students in Grade 9 Mathematics — Applied⁸

Number of Students

Program				
First Semester	Second Semester	Full Year	No Response	Total
21 032	20 927	6464	3	48 426

Gender	Percentage
Female	44%
Male	55%
No Response	1%

Place of Birth	Percentage
Inside Canada	83%
Outside Canada	16%
No Response	1%

Year of Birth	Percentage
1986 or Before	8%
1987	23%
1988	68%
1989 or After	1%
No Response	<1%

Language(s) Spoken at Home	Percentage
Only English	70%
Mostly English	14%
English as Often as Another Language	9%
Mostly Another Language	5%
Only Another Language	2%
No Response	<1%

Observations

- 87% of students in the applied program were in a semestered program; 13% were in a full-year program.
- There were more males than females in the applied mathematics program.
- Many students in the applied program were older than the average age of students in their cohort.
- 16% of students in the applied program were born outside Canada.
- 84% of students in the applied program spoke only or mostly English at home.

⁸ These data derive from the EQAO Grade 9 Class Tracking Sheet, the Grade 9 Student Information Form and the Grade 9 Student Questionnaire.

Accommodations and Special Provisions — Applied

	Percentage
Students Who Received Accommodations and Special Provisions (# = 230)	<1%
Students Who Received Accommodations (# = 8121)	17%
Students Who Received Special Provisions (# = 1106)	2%
Students Who Received No Accommodations or Special Provisions (# = 37 591)	78%
Students for Whom Information Is Missing (# = 358)	1%

Note: The above table does not include exempted students.

Participation — Applied

	Eligible Population	Percentage No Data	Percentage Exempted	Percentage Fully Participated
All Applied Students	48 426	8%	2%	90%
Program				
Semester 1	21 032	6%	2%	92%
Semester 2	20 927	8%	2%	90%
Full year	6464	13%	2%	85%
Gender				
Female	21 387	7%	2%	90%
Male	26 625	7%	2%	91%
Student Status				
ESL/ELD	2236	6%	15%	79%
Special Needs	11 959	6%	4%	89%

Observations

- 5% of all students in the applied program had ESL/ELD designation.
- 25% of all students in the applied program had been identified as having special needs.
- The percentage of ESL/ELD students exempted has decreased from 23% last year to 15% this year.
- The percentage of special needs students exempted has remained about the same as last year.
- 13% of students in the full-year applied program provided no data.

Overall Achievement — Applied

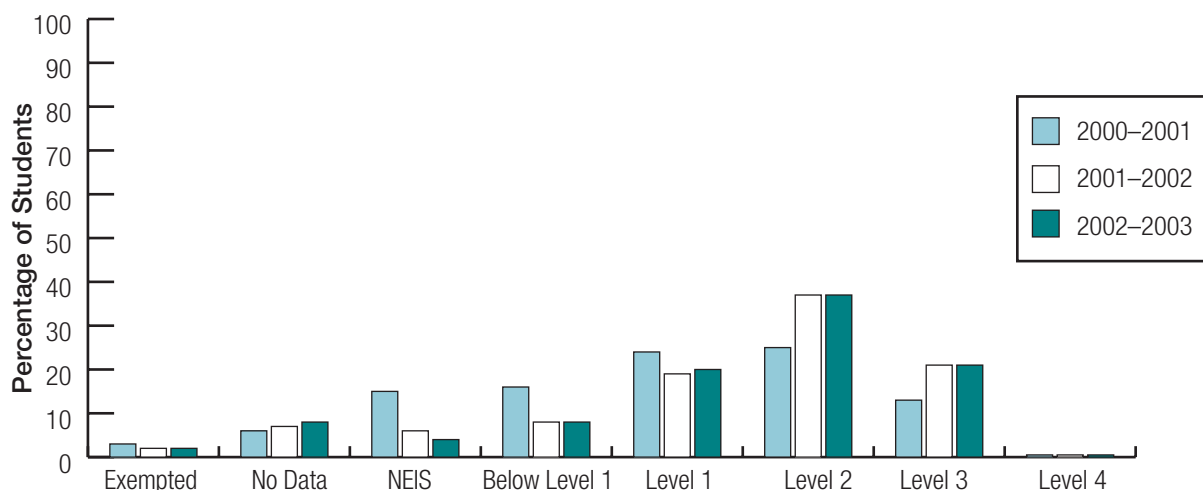
	Exempted	No Data	NEIS ⁹	Below Level 1	Level 1	Level 2	Level 3	Level 4
Method 1 (# = 48 426)	2%	8%	4%	8%	20%	37%	21%	<1%
Method 2 (# = 43 631)	n/a	n/a	4%	9%	22%	41%	23%	<1%

Observation

- 21% of students in the applied program achieved the provincial standard.

Year-to-Year Comparisons — Applied

	2000–2001 (# = 41 708)	2001–2002 (# = 47 220)	2002–2003 (# = 48 426)
Exempted	3%	2%	2%
No Data	6%	7%	8%
Not Enough Information to Score (NEIS)	15%	6%	4%
Below Level 1	16%	8%	8%
Level 1	24%	19%	20%
Level 2	25%	37%	37%
Level 3	13%	21%	21%
Level 4	<1%	<1%	<1%



⁹ Not enough information to score (see description on page 11).

Observations

- 21% of students in the applied program achieved the provincial standard.
- The achievement of students in the applied program has remained the same as last year.

By Program — Applied

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Semester 1 (# = 21 032)								
Method 1	2%	6%	4%	9%	19%	38%	21%	<1%
Semester 2 (# = 20 927)								
Method 1	2%	8%	4%	8%	21%	37%	21%	<1%
Full Year (# = 6464)								
Method 1	2%	13%	4%	9%	20%	33%	19%	<1%

Observation

- The percentage of applied students at or above the provincial standard was about the same for students in semestered and full-year programs.

By Gender — Applied

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Female (# = 21 387)								
Method 1	2%	7%	3%	8%	21%	38%	21%	<1%
Male (# = 26 625)								
Method 1	2%	7%	5%	9%	19%	36%	21%	<1%

Observation

- Females and males performed equally well; this has remained consistent over the past three years.

By Student Status (ESL/ELD) — Applied

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Non-ESL/ELD (# = 46 190)								
Method 1	1%	8%	4%	8%	20%	38%	21%	<1%
ESL/ELD (# = 2236)								
Method 1	15%	6%	6%	21%	20%	22%	9%	<1%

Observations

- 9% of ESL/ELD students in the applied program achieved the provincial standard.
- The percentage of ESL/ELD students exempted dropped from 23% last year to 15% this year; the percentage of ESL/ELD students at the provincial standard or above has remained the same over the past two years.

By Special Need (Excluding Gifted) — Applied

	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Special Needs (# = 11 959)								
Method 1	4%	6%	4%	13%	24%	34%	15%	<1%
All Other Students (# = 36 467)								
Method 1	1%	8%	4%	7%	19%	38%	23%	<1%

Observations

- 15% of applied students with special needs achieved the provincial standard.
- The percentage of students with special needs reaching the provincial standard has increased steadily (9% in 2000–2001, 13% in 2001–2002 and 15% in 2002–2003).

Overall Achievement by Category — Applied
See Appendix A for definitions of the categories.

Knowledge and Skill Categories	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Knowledge/Understanding								
Method 1 (# = 48 426)	2%	8%	6%	8%	19%	33%	24%	<1%
Method 2 (# = 43 617)	n/a	n/a	7%	9%	21%	36%	27%	<1%
Application								
Method 1 (# = 48 426)	2%	8%	7%	21%	19%	27%	14%	1%
Method 2 (# = 43 561)	n/a	n/a	8%	24%	21%	30%	16%	1%
Thinking/Inquiry/Problem Solving								
Method 1 (# = 48 426)	2%	8%	8%	2%	35%	25%	19%	<1%
Method 2 (# = 43 523)	n/a	n/a	9%	2%	39%	28%	21%	<1%
Communication								
Method 1 (# = 48 426)	2%	8%	7%	5%	13%	54%	12%	<1%
Method 2 (# = 43 543)	n/a	n/a	7%	5%	14%	60%	13%	<1%

Observations

- Almost one-quarter of students in the applied program achieved the provincial standard for knowledge and understanding.
- Almost one-fifth of students in the applied program achieved the provincial standard for thinking, inquiry and problem solving.
- 15% of students in the applied program achieved the provincial standard for application, and 12% for communication.

Overall Achievement by Strand — Applied
See Appendix A for definitions of the strands.

Knowledge and Skill Strands	Exempted	No Data	NEIS	Below Level 1	Level 1	Level 2	Level 3	Level 4
Number Sense and Algebra								
Method 1 (# = 48 426)	2%	8%	7%	16%	12%	33%	23%	<1%
Method 2 (# = 43 542)	n/a	n/a	8%	17%	13%	37%	25%	<1%
Relationships								
Method 1 (# = 48 426)	2%	8%	7%	2%	18%	46%	17%	<1%
Method 2 (# = 43 558)	n/a	n/a	8%	2%	20%	52%	19%	<1%
Analytic Geometry								
Method 1 (# = 48 426)	2%	8%	6%	5%	22%	35%	22%	<1%
Method 2 (# = 43 553)	n/a	n/a	6%	5%	25%	39%	24%	<1%
Measurement and Geometry								
Method 1 (# = 48 426)	2%	8%	11%	10%	15%	36%	17%	<1%
Method 2 (# = 43 472)	n/a	n/a	13%	11%	17%	40%	19%	<1%

Observations

- Almost one-quarter of students achieved the provincial standard for each of number sense and algebra, and analytic geometry.
- 17% of students in the applied program achieved the provincial standard for each of relationships, and measurement and geometry.

Students' Learning Environment — Applied

All Students	Completed Questionnaires	Response Rate
48 426	42 682	88%

Observation

- In Ontario, students in the applied program numbered fewer than half those in the academic program.

Student Attendance — Applied

Percentage of students indicating that in the past month they have been absent from mathematics class	All (# = 42 682)	Females (# = 19 113)	Males (# = 23 498)
never.	21%	17%	24%
1 or 2 times.	38%	37%	38%
3 or 4 times.	21%	23%	19%
5 or more times.	19%	21%	17%

Observations

- 19% of students in the applied program indicated that they had been absent five or more times in the past month, compared to 9% of students in the academic program.
- Female applied students indicated that they had been absent from class more often than their male counterparts.

Student Mobility — Applied

Percentage of students indicating that they have attended the following number of elementary schools:	All (# = 42 682)	Females (# = 19 113)	Males (# = 23 498)
1 School	32%	30%	33%
2 Schools	32%	32%	32%
3 Schools	17%	18%	16%
4 Schools	9%	9%	8%
5 or More Schools	9%	9%	8%

Observation

- 18% of applied students indicated that they had attended four or more elementary schools, compared to 12% of students in the academic program.

Student Computer and Calculator Use — Applied

Percentage of students indicating that	All (# = 42 682)	Females (# = 19 113)	Males (# = 23 498)
they have a computer at home that they use for school work.	83%	84%	83%
they have a scientific calculator at home that they use for school work.	75%	77%	73%
they have a graphing calculator at home that they use for school work.	5%	4%	6%

Observation

- 83% of students in the applied program indicated that they had computers at home that they used for school work, an increase of 3% from last year.

Homework — Applied

Percentage of students indicating the following about time spent on mathematics homework on any given day:	All (# = 42 682)	Females (# = 19 113)	Males (# = 23 498)
I usually don't have any mathematics homework.	17%	16%	18%
I have mathematics homework, but I usually spend no time on it.	19%	16%	21%
I usually spend 30 minutes or less on mathematics homework.	40%	41%	39%
I usually spend between 31 and 45 minutes on mathematics homework.	18%	21%	15%
I usually spend more than 45 minutes on mathematics homework.	5%	6%	5%

Observations

- 82% of students in the applied program indicated that they were given homework.
- Almost one in five students indicated that they usually spent no time doing homework, which is nearly double the percentage (10%) reported by academic students.
- In the applied program, more female (27%) than male students (20%) indicated that they spent more than 30 minutes on mathematics homework.
- A larger percentage of students in the applied program (17%) than in the academic program (3%) reported that they received no homework.

Student Attitudes Toward Mathematics — Applied

Percentage of students who strongly agree or agree with the following statements:	All (# = 42 682)	Females (# = 19 113)	Males (# = 23 498)
I like mathematics.	23%	18%	26%
I am good at mathematics.	26%	20%	30%
I understand most of the mathematics I am taught.	39%	34%	43%
The mathematics I learn now is very useful for everyday life.	28%	25%	31%
I need to keep taking mathematics for the kind of job I want after I leave school.	39%	35%	42%
Mathematics is boring.	41%	40%	42%
Mathematics is an easy subject.	18%	14%	23%

Observation

- A higher percentage of males than females in the applied program reported each of the following: that they like mathematics, that they are good at mathematics, that they understand most of the mathematics they are taught, that they need to keep taking mathematics for the kind of job they want after they leave school and that they think mathematics is an easy subject.

Teachers' Professional Learning Environment — Applied¹⁰

Note: Each teacher had to complete only one questionnaire, so teacher responses are based on one class only. Teachers who taught applied and academic classes chose one class and therefore one program.

School Resources

Percentage of teachers indicating that their Grade 9 mathematics students have access to the following items at school:	(# = 1508)				
	Never or Hardly Ever	A Few Times During the Course	A Few Times a Month	A Few Times a Week	Daily
Computers	32%	31%	9%	7%	19%
Graphing Calculators	13%	38%	18%	10%	18%

Observations

- 63% of the teachers who chose to report on applied indicated that their students had access to computers at school only a few times during the course, or never or hardly ever.
- 51% of the teachers who chose to report on applied indicated that their students had access to graphing calculators only a few times during the course, or never or hardly ever.

Teaching Practices

Percentage of teachers indicating that their Grade 9 mathematics students	Never or Hardly Ever	A Few Times During the Course	A Few Times a Month	A Few Times a Week	Daily
use concrete materials to investigate and gain an understanding of new concepts (# = 1508)	11%	37%	31%	15%	5%
use graphing calculators to explore and investigate mathematical ideas and relationships (# = 1508)	25%	50%	17%	4%	2%
use dynamic geometry software (e.g., The Geometer's Sketchpad, Cabri) (# = 1508)	56%	37%	4%	1%	<1%

Observations

- 88% of the teachers who chose to report on applied indicated that their students used concrete materials to investigate and gain an understanding of new concepts at least a few times during the course.
- 73% of the teachers who chose to report on applied indicated that their students used graphing calculators to explore and investigate mathematical ideas and relationships at least a few times during the course.
- Although the curriculum requires students to demonstrate achievement of certain expectations using dynamic geometry software, 56% of the teachers who chose to report on applied indicated that they never or hardly ever used the software.

¹⁰ Data in the following tables derive from the Grade 9 Teacher Questionnaire.

Percentage of teachers indicating percentages of course time they spend teaching the following mathematics strands:	(# = 1508)				
	1–20%	21–40%	41–60%	61–80%	81–100%
Number Sense and Algebra	11%	66%	15%	4%	1%
Relationships	15%	65%	13%	3%	<1%
Analytic Geometry	37%	55%	4%	1%	<1%
Measurement and Geometry	55%	40%	2%	<1%	<1%

Percentage of teachers indicating that their Grade 9 mathematics students engage in activities related to the following achievement categories:	(# = 1508)				
	Never or Hardly Ever	A Few Times During the Course	A Few Times a Month	A Few Times a Week	Daily
Knowledge/Understanding	<1%	2%	8%	19%	70%
Problem Solving	1%	7%	22%	43%	24%
Communication	1%	8%	21%	33%	34%
Application	<1%	4%	16%	39%	39%

Teachers' Experience and Background

Percentage of teachers indicating that they have been teaching	(# = 1508)		
	5 Years or Less	6–10 Years	11 Years or More
mathematics at the secondary level	48%	17%	34%
Grade 9 mathematics	63%	17%	19%

Observation

- A little more than three-fifths of the teachers who chose to report on applied indicated that they had experience teaching Grade 9 mathematics of five years or less.

Percentage of teachers indicating that while studying to obtain their bachelor's degree (or equivalent), their	(# = 1508)
major area of study was	
mathematics.	32%
a mathematics-related subject.	33%
other.	32%
minor area of study was	
mathematics.	20%
a mathematics-related subject.	40%
other.	35%

Observation

- 65% of the teachers who chose to report on applied indicated that their major area of study was mathematics or a mathematics-related subject.

Percentage of teachers indicating that they have completed or are presently working toward the following:	(# = 1508)
Additional Basic Qualifications in Mathematics	30%
Three-Session Qualifications in Mathematics — Intermediate and Senior Education	9%
Honours Specialist Qualifications in Mathematics	24%

Recommendations¹¹

The following recommendations and instructional suggestions are based on

- the 2002–2003 overall achievement results;
- the patterns and trends emerging from the overall results from year to year;
- the data collected from the various questionnaires and
- suggestions from the teacher markers at the EQAO marking centres.

EQAO recommends that

- each **school** study the assessment data and develop an initiative for its school improvement plan geared toward improving student performance, particularly at the applied level. *(21% of applied students achieved the provincial standard.)*
- **principals and teachers** continue to ensure that the instruction in mathematics classes, particularly in the applied program, is aligned with the philosophy, methodology and content of the curriculum. Principals should continue to
 - provide **teachers** with professional development opportunities in best practices for teaching and assessing mathematics (e.g., leading or participating in workshops and conferences, reading professional journals). *(63% of teachers who chose to report on applied and 60% of teachers who chose to report on academic reported that they had experience teaching Grade 9 mathematics of five years or less; 48% of teachers who chose to report on applied and 43% of teachers who chose to report on academic mathematics reported that they had experience teaching mathematics at the secondary level of five years or less.)*
 - provide **teachers** with opportunities to engage in professional discourse with colleagues as they analyze assessment data and plan adaptations to instruction that will improve student learning. *(See passage in italics above.)*
 - include **teachers** of students in Grades 7 and 8 in the initiatives outlined above to ensure that mathematics classes in these intermediate grades are aligned with the philosophy, methodology and content of the curriculum and to reinforce the understanding that there must be shared responsibility for mathematics learning across the intermediate division.
 - encourage **teachers** to
 - identify and clearly communicate the characteristics of successful performance and have students discuss and evaluate their performances against these characteristics. *(See Reference R1.)*
 - present students with practical and purposeful contexts for using the mathematics in the curriculum and linking it to daily life. *(See Reference R2a.)*
 - integrate hands-on materials into classroom activities to engage students in investigating mathematics so that they deepen their understanding of concepts and procedures. *(See Reference R2c.)*
- **school councils** continue to monitor student achievement and take an active role in school improvement.
- **school board** improvement teams, which include administrators, curriculum leaders, parents and teachers, as part of their ongoing improvement efforts, review historical student achievement and contextual data and identify areas for the continuous improvement of achievement in relation to the *Ontario Curriculum* standards for mathematics. The teams could focus on

¹¹ References to R1, R2 and R3 are identified in Appendix B.

- targeting all categories and strands as well as students in Grade 9 applied mathematics programs. *(21% of applied students achieved the provincial standard.)*
- targeting areas and students in Grade 9 academic mathematics programs in need of additional support. *(34% of academic students did not achieve the provincial standard.)*
- analyzing data, identifying areas of need, setting goals and developing action plans for changes in instruction and assessment, implementing these plans, setting measures for accountability, and monitoring student improvement. *(See Reference R1.)*
- **school boards** continue to
 - provide opportunities for students, especially in the applied program, to have access to technology, including graphing calculators and software such as The Geometer's Sketchpad and Fathom during class time. *(63% of teachers who chose to report on applied indicated that their students had access to computers at school only a few times during the course, or never or hardly ever; 51% of teachers who chose to report on applied indicated that their students had access to graphing calculators at school only a few times during the course, or never or hardly ever. (See Reference R3.)*
 - provide opportunities for teachers to implement technology effectively as a tool for investigating mathematical concepts in the classroom.
 - encourage teachers to meet for conversations about mathematics, teaching, learning and assessment (e.g., in grade or course teams). *(63% of teachers who chose to report on applied and 60% of teachers who chose to report on academic reported that they had experience teaching Grade 9 mathematics of five years or less; 48% of teachers who chose to report on applied and 43% of teachers who chose to report on academic reported that they had experience teaching mathematics at the secondary level of five years or less.)*
 - encourage opportunities for mathematics teachers to meet with colleagues in Grades 7, 8 and 9 who are able to provide leadership in mathematics within the school. *(See notes in italics above.)*
 - provide mentoring by experienced teachers and administrators for teachers new to the teaching profession, or new to teaching Grade 9 mathematics. *(See notes in italics above.)*
- **faculties of education** assist pre-service teachers to gain a thorough understanding of the mathematics curriculum's philosophy, methodology and content, as well as current assessment practices, including large-scale performance-based assessment, and the ways in which assessment assists instruction.
- the **Ontario College of Teachers**, through the Professional Learning Program providers, offer opportunities for professional development that focuses on the relationships among mathematics curriculum, teaching practices and assessment.
- the **Ministry of Education** work with EQAO to use the Grade 9 provincial assessment data accumulated over the past three years to inform the Expert Panel on Students at Risk (Numeracy) and curriculum review activities.

Instructional Suggestions

EQAO's Grade 9 Assessment of Mathematics is based on the expectations in *The Ontario Curriculum, Grades 9 and 10: Mathematics*. It is important that teachers focus their mathematics instruction and assessment on the expectations in *The Ontario Curriculum*.

EQAO suggests that,

- *because the smallest percentages of students reached or exceeded the provincial standards for thinking, inquiry and problem solving, and communication (53% and 55% in academic and 19% and 12% in applied),* teachers focus their instruction as much on understanding the process of learning and thinking mathematically as on answering specific questions. It is important that teachers and students share the strategies they use to solve problems. The communication of reasoning, the ability to listen to the reasoning of others and the adaptation of thinking to encompass the strategies of others are skills necessary for success in mathematics. For example, when students are answering mathematics questions, have them ask themselves,
 - “How do I know I am right?”
 - “How do I know I am done?”
 - “What do I understand now that I didn't before?”
 - “What do I need to remember next time I try a question like this?”
 - “Have I written enough here to allow me to remember the reasoning I used to answer this question?”
 - “How can I explain this to another person?”
- *because only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships,* teachers make connections between the expectations of the strands and provide learning opportunities that cross strands, in order to make efficient use of instructional time. For example,
 - after students collect, organize and record their data, have them make other representations of their data, such as graphs and equations, and discuss how changes in the conditions cause changes in the other representations of the data.
 - after students collect and organize data to optimize surface area for a given volume, have them graph the data and use this representation to make choices of further data to collect.
- *because*
 - *only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships and*
 - *63% of the teachers who chose to report on applied indicated that their students had access to computers at school only a few times during the course, or never or hardly ever, and 51% of the teachers who chose to report on applied indicated that their students had access to graphing calculators at school only a few times during the course, or never or hardly ever,*

teachers provide students with activities that require them to graph a variety of linear and non-linear relationships. These activities should require students to use graphing calculators and/or graphing software to graph the relationships, change the conditions of the relationships and describe the changes that occur in the notations and in the graphs. For example, as students create tables of values or graphs, have them

- change the parameters and describe the changes they see.
- change the graphs and explain how the equations change.

- *because*
 - *only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships and*
 - *63% of the teachers who chose to report on applied indicated that their students had access to computers at school only a few times during the course, or never or hardly ever and 51% of the teachers who chose to report on applied indicated that their students had access to graphing calculators at school only a few times during the course, or never or hardly ever,*

teachers provide students with relationships activities that engage them in collecting, representing, analyzing and interpreting data. Students need to use manipulatives and data collection technology to collect original data. Analyzing real-world data connects students to the data in ways that arbitrary equations in texts do not. Students need to see a connection between themselves and the data. For example, students could

- use a motion detector to match the walk of another student, then describe differences and similarities.
- use a temperature probe to collect data about a cup of coffee cooling on a table, then describe what happens when conditions change.
- use manipulatives to investigate the relationship between the height of a square-based prism and its surface area, given a fixed volume.
- *because 12% of students in the applied program and 55% of students in the academic program achieved or exceeded the provincial standard for communication,* teachers have students regularly discuss and describe their thinking about mathematics and interpret and evaluate what other students say. A great deal of discussion in a common language is required for students to construct links between their informal ideas and the language and symbols of mathematics. For example, teachers could
 - implement a class rule that requires students to ask three other students before approaching the teacher with a question.
 - have students work in small groups and share their thinking with one another before the class reflects as a group.
 - have pairs of students review and edit each other's solutions.
- *because the research, resources and workshops developed and supported by the Ministry of Education focus on strategies that are especially good for students in Grade 9 applied mathematics, and their scores are quite low overall, with only 21% performing at or above the provincial standard,* teachers regularly arrange students in groups to engage in the activities in the Ministry of Education TIPS resource: <http://www.curriculum.org/occ/tips/index.shtml>. Examples include
 - Think, Pair, Share;
 - Placemat;
 - Jigsaw;
 - Numbered Heads and
 - Inside Outside Circle.

Group activities facilitate mathematical discussion and the testing of ideas. In groups, learners are able to interact and perform actions that are beyond their individual level of performance.

- *because only 15% of students in the applied program achieved or exceeded the provincial standard for application and only 17% of students in the applied program achieved or exceeded the provincial standard for relationships*, teachers focus their instruction on student-centred investigations. Students gain a deeper understanding when they investigate concepts, discuss mathematics and synthesize their findings among their peers. (See Reference R2c.)
 - use Think , Pair, Share to have students discover the effect of changing the y -intercept or slope of a line.
 - use group work to have students investigate the relationship between the perimeter and area of a figure when one of the measures is fixed.
- teachers provide opportunities for students to reflect on, synthesize and practise the skills that have been taught. Students need to practise their skills to ensure that they have learned the concepts. Without overburdening students with repetitive busywork, have them
 - write reflections on their learning in mathematics journals.
 - practise the skills and knowledge they have learned through interaction with peers and the teacher by doing pertinent questions individually before being assessed. (See Reference R1.)
- teachers of students in the academic program focus on enabling students to generalize mathematical ideas by teaching them to represent their ideas in multiple formats, such as graphs, tables, mathematical language and algebraic expressions. Teachers of students in the applied program should focus on enabling students to develop mathematical ideas with hands-on activities and to represent the ideas in multiple formats, such as graphs and tables, and in common language. (See Reference R2b for academic and R2c for applied.)
- teachers provide regular opportunities for students to read and discuss materials that deal with everyday mathematics use. It is important that students not only read, but interpret, discuss and write about everyday mathematical ideas. For examples, students could read
 - newspaper articles containing graphs, statistics and ratios;
 - store flyers;
 - instructions for games or “how to” manuals and
 - schedules.

Appendix A — Definitions of Categories and Strands

<i>Categories</i>
Knowledge and Understanding – understanding concepts – performing algorithms, operations and procedures
Application – selecting concepts, formulas, algorithms and tools to fit the information given
Thinking, Inquiry and Problem Solving – reasoning – applying the steps of an inquiry or problem-solving process
Communication – explaining reasoning – using mathematical language, symbols, visuals and conventions
<i>Strands</i>
Number Sense and Algebra – applying essential numeric skills in solving new problems within a context (rather than in isolation) – applying algebraic concepts and skills (basic exponent rules, operations with first-degree polynomials and solving first-degree equations) necessary for the study and application of relations (i.e., consolidating numerical skills by using them in a variety of contexts)
Relationships – identifying and understanding the properties of linear relations through the collection and interpretation of data from a variety of real-life situations and the creation of algebraic models for the data (e.g., determining relationships between two variables by collecting and analyzing data)
Analytic Geometry – using various mathematical forms to demonstrate understanding of the geometry of the xy-plane, with a focus on linear relations and properties of slope (e.g., graphing a line and writing the equation of a line using given information)
Measurement and Geometry – understanding and using formulas and applications of three-dimensional figures to explore the relationships between measurement and geometry (e.g., relationship between volume and surface area, varying of one dimension on a measure) – demonstrating an understanding of some properties of triangles and quadrilaterals (e.g., determining the optimal values of various measurements through investigations facilitated by the use of concrete materials, diagrams and calculators or computer software)

Appendix B — References

R1. The Ontario Curriculum, Grades 9 to 12: Program Planning and Assessment

Page 13: Assessment and Evaluation of Student Achievement

In order to ensure that assessment and evaluation are valid and reliable, and that they lead to the improvement of student learning, teachers must use assessment and evaluation strategies that:

- address both what students learn and how well they learn;
- are based both on the categories of knowledge and skills and on the achievement level descriptions given in the achievement chart that appears in the curriculum policy document for each discipline;
- are varied in nature, administered over a period of time, and designed to provide opportunities for students to demonstrate the full range of their learning;
- are appropriate for the learning activities used, the purposes of instruction, and the needs and experiences of the students;
- are fair to all students;
- accommodate the needs of exceptional students, consistent with the strategies outlined in their Individual Education Plan;
- accommodate the needs of students who are learning the language of instruction;
- ensure that each student is given clear directions for improvement;
- promote students' ability to assess their own learning and to set specific goals;
- include the use of samples of students' work that provide evidence of their achievement;
- are communicated clearly to students and parents at the beginning of the course and at other appropriate points throughout the course.

R2. The Ontario Curriculum, Grades 9 and 10: Mathematics

a) Page 6: Teaching Approaches

All learning, especially new learning, should be embedded in a context. Well-chosen contexts for learning are those that are broad enough to allow students to explore and develop initial understandings, to identify and develop relevant supporting skills, and to gain experience with interesting applications of the new knowledge. Such rich environments open the door for students to see the “big ideas” of mathematics — the major underlying principles, such as pattern or relationship. This ability to understand key principles will encourage students to continue using mathematical reasoning throughout their lives.

b) Page 9: Principles of Mathematics, Grade 9, Academic (MPM1D)

This course enables students to develop generalizations of mathematical ideas and methods through the exploration of applications, the effective use of technology, and abstract reasoning. Students will investigate relationships to develop equations of straight lines in analytic geometry, explore relationships between volume and surface area of objects in measurement, and apply extended algebraic skills in problem solving. Students will engage in abstract extensions of core learning that will deepen their mathematical knowledge and enrich their understanding.

c) Page 18: Foundations of Mathematics, Grade 9, Applied (MFM1P)

This course enables students to develop mathematical ideas and methods through the exploration of applications, the effective use of technology, and extended experiences with hands-on activities. Students will investigate relationships of straight lines in analytic geometry, solve problems involving the measurement of 3-dimensional objects and 2-dimensional figures, and apply key numeric and algebraic skills in problem solving. Students will also have opportunities to consolidate core skills and deepen their understanding of key mathematical concepts.

R3. The Ontario Curriculum, Grades 9 to 12: Program Planning and Assessment

Page 9: The Role of Technology in the Curriculum

Increasing reliance on computers, telecommunication networks, and information technologies in society and the workplace makes it essential for students to become computer literate and to develop “information literacy” skills. Information literacy is the ability to access, select, gather, critically evaluate, create, and communicate information, and to use the information obtained to solve problems and make decisions. In preparation for further education, employment, citizenship, and lifelong learning, students must be capable of deriving meaning from information by using a wide variety of information literacy skills.

As part of their training in computer and information literacy, students should become familiar with a range of available software programs. Among the applications that can aid student learning are simulations, multimedia resources, databases, and computer-assisted learning modules, many of which have been developed for use in particular disciplines. Students will also be expected to use software applications that help them develop general skills in such areas as writing, problem solving, research, and communication. Through e-mail, students can communicate with other students and with experts in various fields across Ontario and around the world. It is important that students learn to critically evaluate the accuracy, validity, currency, comprehensiveness, and depth of the information they access using information technology, particularly the Internet. In general, teachers must try to ensure that students acquire the knowledge, skills, and attitudes that will allow them to use computer and information technology safely, effectively, confidently, and ethically.

ONTARIO SECONDARY SCHOOL LITERACY TEST, OCTOBER 2002

OSSLT SUPPORTS QUALITY ASSURANCE AND ACCOUNTABILITY

- The OSSLT is a quality assurance measure that shows the extent to which Ontario students are meeting the basic literacy standard expected by the end of Grade 9 across the province.
- The OSSLT is designed to assess the reading and writing skills students are expected to have learned across all subjects by the end of Grade 9, as outlined in *The Ontario Curriculum*.
- Successful completion of the OSSLT is one of the 32 requirements for an Ontario Secondary School Diploma.

EQAO SETS STANDARDS FOR STUDENT ACHIEVEMENT AND SUCCESS

- A student must pass both the reading component and the writing component to be successful on the OSSLT.
- The standard for passing the OSSLT was established by EQAO through a rigorous standard-setting process, which involved a panel of assessment experts, educators and community representatives.
- Meeting the standard means that the student's work shows that most of the time the student can communicate ideas in writing clearly and without errors in punctuation, spelling, grammar and organization that prevent someone from understanding the student's writing. In reading, the student's work shows that most of the time, the student can read and understand information in various formats.

OSSLT FACTS

- 136 028 first-time eligible and 33 308 previously eligible English-language students fully participated in the October 2002 OSSLT.
- The OSSLT was administered over two blocks of time, two-and-a-half hours each (including breaks and instructions), one on the morning of October 23 and one on the morning of October 24, 2002.
- The OSSLT was divided into two components: reading and writing.

HIGHLIGHTS OF ACHIEVEMENT RESULTS (ENGLISH-LANGUAGE)

FIRST-TIME ELIGIBLE STUDENTS

- ☆ In October 2002, 72% of first-time eligible students who wrote the test passed both the reading and the writing components.
- ☆ A further 4% of first-time eligible students passed the reading component of the test, bringing the total percentage of students who passed reading to 76%.
- ☆ A further 13% of first-time eligible students passed the writing component of the test, bringing the total percentage of students who passed writing to 85%.
- ☆ The pattern of results for October 2002 is similar to the pattern for February 2002.
- ☆ More students were successful in the writing component than in the reading component.

PREVIOUSLY ELIGIBLE STUDENTS

- ☆ 33% of previously eligible students who needed to pass both components of the OSSLT were successful in both.
- ☆ 34% of previously eligible students who needed to pass both components of the OSSLT passed one component.
- ☆ 51% of previously eligible students who needed to pass only reading did pass reading.
- ☆ 87% of previously eligible students who needed to pass only writing did pass writing.

TRACKING THE 2001 COHORT

97 227 (69%)	16 027 (11%)	27 807 (20%)
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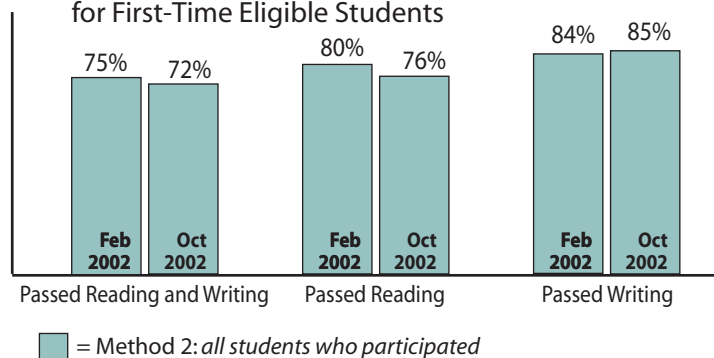
- Successfully completed in February 2002
- Successfully completed in October 2002
- Need to pass one or both components in October 2003

- After two administrations, 80% of the 2001 student cohort have successfully completed the OSSLT.

OSSLT HELPS STUDENTS IMPROVE

- EQAO has published the *Guide for Accommodations, Special Provisions, Deferrals and Exemptions* to assist schools in the consistent implementation of Ministry of Education policy. This ensures that schools are meeting the accommodation needs of exceptional students, so that they can demonstrate their skills on the OSSLT. The guide also outlines special provisions available for ESL/ELD students and provides procedures for deferrals and exemptions.
- Schools and boards are required to provide remediation to students who were not successful on the test.
- Students who are not successful on one component will be required to pass only that component on the retake.
- Students who were not successful will have the opportunity to retake the OSSLT on October 22 and 23, 2003.

February 2002 and October 2002 Results
for First-Time Eligible Students



USING THE RESULTS — It is important to emphasize that the OSSLT results should be used to improve teaching and learning; they should not be used to rank schools. Ranking provides no information about why scores are high or low; it invites simplistic and misleading comparisons that ignore the particular circumstances affecting achievement in each school, and it distracts from addressing the more critical issue of how to improve learning for all students.

OVERALL KEY RECOMMENDATIONS

Based on the results of the October 2002 test, EQAO recommends

- that **school boards**, in consultation with their school communities, using the *EQAO Guide to School and Board Improvement Planning*, incorporate the overall and specific data from the October 2002 OSSLT into their existing board and school improvement plans for developing student literacy. Boards should implement strategies for improving student achievement in reading and writing that extend across the elementary and secondary grades and across all subject areas.
- that **schools**, in consultation with their communities, incorporate the overall and specific data from the October 2002 OSSLT into their existing school literacy improvement plans and develop curriculum-wide strategies for improving student achievement in writing and, especially, in reading.
- that **teachers** be encouraged to use EQAO's resources to assist students in preparing to write the OSSLT successfully.
- that **parents** enhance their own understanding of the reading and writing skills required for successful completion of the OSSLT and assist students in understanding the relevance and importance of literacy skills to future education and career opportunities, and in everyday life outside school.
- that **school boards** and **schools** offer professional development opportunities for teachers in literacy instruction, especially in reading.
- that **school boards** and **schools** offer proven remedial programs or courses, including the Ontario Secondary School Literacy Course (OSSLC), to students who have not successfully completed the OSSLT.
- that **school boards** encourage their schools to identify and share cross-curricular strategies and practices, in both elementary and secondary schools, that effectively prepare students for the OSSLT.

For more detailed information and results, please visit
the EQAO Web site at www.eqao.com

Ontario Secondary School Literacy Test, October 2002

Report of Provincial Results



English-Language Schools

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Results at a Glance — First-Time Eligible Students

Overall Results for English-Language Students Who Wrote the Ontario Secondary School Literacy Test for the First Time, October 2002 (publicly funded schools)

Method 1 — First-Time Eligible Students

	February 2002		October 2002	
	#	%	#	%
Passed Both Reading and Writing	97 227	69%	97 459	67%
Passed Reading Only	6 747	5%	5 797	4%
Passed Writing Only	12 209	9%	17 870	12%
Did Not Pass Reading or Writing	12 849	9%	14 902	10%
Absent One or Both Days	5 889	4%	3 991	3%
Deferred	6 140	4%	6 520	4%
Total Number of First-Time Eligible Students	141 061		146 539	
Number of Students Exempt	1 147		1 637	

Method 2 — First-Time Eligible Students

	February 2002		October 2002	
	#	%	#	%
Passed Both Reading and Writing	97 227	75%	97 459	72%
Passed Reading Only	6 747	5%	5 797	4%
Passed Writing Only	12 209	9%	17 870	13%
Did Not Pass Reading or Writing	12 849	10%	14 902	11%
Number of First-Time Eligible Students Fully Participating	129 032		136 028	

Notes:

First-time eligible students entered Grade 9 during the 2001–2002 school year. These students (and others who were placed in this cohort) were required to write the Ontario Secondary School Literacy Test (OSSLT) for the first time in October 2002.

Percentages may not add up to 100%, due to rounding.

Method 1 provides a percentage breakdown of all students in the cohort who are working toward an Ontario Secondary School Diploma (OSSD). The only students excluded from the Method 1 percentages are those who were not working toward an OSSD and who were therefore exempted.

Method 2 provides a percentage breakdown of those students who fully participated in the OSSLT. Students are considered to have fully participated if they were present on both days of the administration.

Highlights of Achievement Results (Method 2)

- In October 2002, 72% of first-time eligible students who wrote the test passed both the reading and the writing components.
- A further 4% of first-time eligible students passed the reading component of the test, bringing the total percentage of students who passed reading to 76%.
- A further 13% of first-time eligible students passed the writing component of the test, bringing the total percentage of students who passed writing to 85%.
- The pattern of results for October 2002 is similar to the pattern for February 2002.
- More students were successful in the writing component than in the reading component.

Key Messages

- Teachers are making reading and writing a high priority, and their efforts appear to be showing results. A continued focus on reading skill development is necessary.
- The Ministry of Education has given attention to supporting schools and boards to help students meet the clear and specific standards of the curriculum. In addition, the introduction of the Ontario Secondary School Literacy Course will allow unsuccessful students to build and demonstrate their reading and writing skills in alternative ways, so that they meet the literacy requirement for graduation.
- EQAO encourages schools and boards to implement programs and provide teachers with access to tools and strategies that will assist students in achieving literacy success.
- The OSSLT is a quality assurance measure that shows the extent to which Ontario students are meeting the basic literacy standard expected by the end of Grade 9 across the province.
- For those students who did not pass the reading and/or the writing component, the test is an early indication that provides the students, their parents and their teachers with some important diagnostic information to help the students improve.
- The OSSLT results should be used to improve teaching and learning, not to rank schools. Ranking provides no information about why scores are high or low, and it invites simplistic and misleading comparisons that ignore the particular circumstances affecting achievement in each school. Ranking distracts from addressing the more critical issue of how to improve learning for all students.

Key Recommendations

EQAO recommends

- that **school boards**, in consultation with their school communities, using EQAO's *Guide to School and Board Improvement Planning*, incorporate the overall and specific data from the October 2002 OSSLT into their existing board and school improvement plans for developing student literacy. Boards should implement strategies for improving student achievement in reading and writing that extend across the elementary and secondary grades and across all subject areas.
- that **schools**, in consultation with their communities, incorporate the overall and specific data from the October 2002 OSSLT into their existing school literacy improvement plans and develop curriculum-wide strategies for improving student achievement in writing and, especially, in reading.
- that **teachers** be encouraged to use EQAO's resources to assist students in preparing to write the OSSLT successfully.
- that **parents** enhance their own understanding of the reading and writing skills required for successful completion of the OSSLT and assist students in understanding the relevance and importance of literacy skills to future education and career opportunities, and in everyday life outside school.
- that **school boards** and **schools** offer professional development opportunities for teachers in literacy instruction, especially in reading.
- that **school boards** and **schools** offer proven remedial programs or courses, including the Ontario Secondary School Literacy Course (OSSLC), to students who have not successfully completed the OSSLT.
- that **school boards** encourage their schools to identify and share cross-curricular strategies and practices, in both elementary and secondary schools, that effectively prepare students for the OSSLT.

Results at a Glance — Previously Eligible Students

Overall Results for English-Language Students Who Were Previously Eligible to Write the Ontario Secondary School Literacy Test, October 2002 (publicly funded schools)

Previously Eligible Students

		October 2002	
		#	%
Exempted Students		350	
Previously Eligible Students		37 242	
Absent One or Both Days		2203	6%
Deferred		1731	5%
Required to Pass Both Reading and Writing # = 17 075	Passed Both Reading and Writing	5645	33%
	Passed Reading Only	1035	6%
	Passed Writing Only	4714	28%
	Did Not Pass Reading or Writing	5681	33%
Required to Pass Reading Only # = 10 385	Passed Reading	5310	51%
	Did Not Pass Reading	5075	49%
Required to Pass Writing Only # = 5 848	Passed Writing	5072	87%
	Did Not Pass Writing	776	13%

Notes:

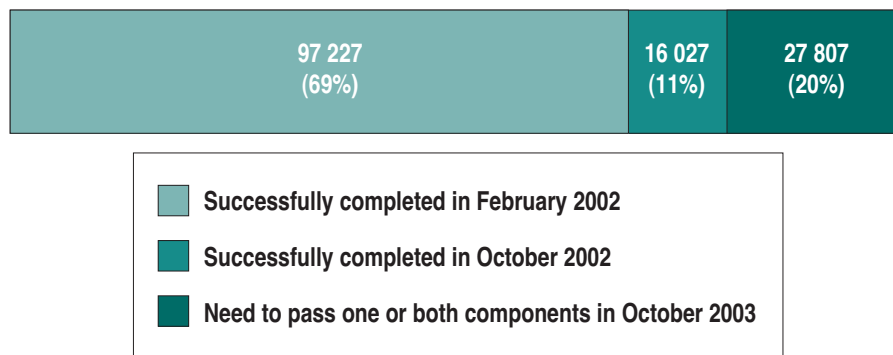
Previously eligible students entered Grade 9 during the 2000–2001 school year. These students (and others who were placed in this cohort) were required to write the OSSLT for the first time in February 2002. Students who were not successful in February 2002 or who were absent or deferred became eligible again to write the OSSLT in October 2002. Students' status is based on information provided by schools.

Percentages may not add up to 100%, due to rounding.

Highlights of Achievement Results for Previously Eligible Students

- 33% of previously eligible students who needed to pass both components of the OSSLT were successful in both.
- 34% of previously eligible students who needed to pass both components of the OSSLT passed one component.
- 51% of previously eligible students who needed to pass only reading did pass reading.
- 87% of previously eligible students who needed to pass only writing did pass writing.

Tracking the 2001 Cohort



- After two administrations, 80% of the 2001 student cohort have successfully completed the OSSLT.

Key Messages for Previously Eligible Students

- The opportunity to retake the OSSLT has had positive results. Of the cohort of students who entered Grade 9 in September 2000 — the first group for whom the OSSLT is a graduation requirement — 80% have now been successful.
- Remediation and attention to specific areas requiring improvement appear to be contributing to positive results, especially in writing.
- Of the previously eligible students who needed to pass one component of the OSSLT, more were successful in passing the writing component than the reading component.
- The OSSLT is a quality assurance measure that shows the extent to which Ontario students, with appropriate support and a second opportunity to write the OSSLT can meet a common, basic literacy standard across the province.

Key Recommendations for Previously Eligible Students

EQAO recommends

- that **school boards** and **schools** offer proven remedial programs or courses, including the new Grade 12 Ontario Secondary School Literacy Course (OSSLC), to students who have not successfully completed the OSSLT.

- that **school boards** and **schools** study the data from the October 2002 OSSLT to review current strategies and programs for remediation.
- that **school boards** gather and share cross-curricular strategies and successful practices in remedial programs, so that students have a greater opportunity to reach the provincial standard.

Background

Introduction

The purpose of EQAO is to provide greater accountability in the publicly funded education system in Ontario and to improve the quality of education in the province. In order to fulfill its mandate, EQAO conducts several province-wide assessments, among them the OSSLT.

In 1999, the Ministry of Education established that successful completion of the OSSLT would become one of the 32 requirements for an OSSD. The OSSLT is designed to assess the reading and writing skills that students are expected to have learned across all subjects by the end of Grade 9, as outlined in *The Ontario Curriculum*.

The results of these assessments provide individual, school and school board data on student achievement. Parents receive an Individual Student Report that provides information on their child's achievement on the assessment. Schools and boards create their own reports, based on EQAO data, for distribution to parents and other stakeholders in the community. EQAO posts board and school results on its Web site (www.eqao.com) for access by the general public.

Test Design and Development

EQAO is responsible for developing and administering the OSSLT. In October 2000, a province-wide trial administration was undertaken. This assessment provided schools with an opportunity to experience first-hand what the test would be like. (The test was not a graduation requirement for this first group of students.) It also provided EQAO with an opportunity to try out administrative, marking and reporting procedures. The first full administration of the OSSLT was completed in February 2002. This report describes the achievement results for the second cohort of students for whom successful completion of the OSSLT is a diploma requirement. This report also presents results for the group of students who were previously unsuccessful on the OSSLT.

Parallel versions of the OSSLT are developed for English- and French-language schools. Although the tests contain different questions, steps are taken to support comparability between the English- and French-language versions. For example, both tests have the same number and kinds of reading selections, writing tasks and questions related to the reading selections. In addition, the French and English markers are trained in the same way, using identical scoring standards and procedures.

All aspects of the assessment, such as designing, developing, field testing, marking and reporting, are conducted by EQAO's education officers in collaboration with educators from across the province.

The test consists of two integrated components:

- A reading component
- A writing component

In the reading component, students were asked to read a total of 12 short selections, divided into three different text types:

- Information (e.g., explanation, opinion)
- Graphic (e.g., graph, schedule, instructions)
- Narrative (e.g., story, dialogue)

There were three types of questions in the reading component:

- Multiple-choice (40 questions)
- Short-answer (35 questions)
- Questions requiring an explanation (25 questions)

In the writing component, students were asked to complete four writing tasks:

- A summary
- A series of paragraphs expressing an opinion
- A news report
- An information paragraph

Setting the Standard

Standards or expectations for student achievement are expressions of acceptable or desirable levels of student performance. In some large-scale assessment programs, standards are expressed as minimum achievement scores; in others, standards are descriptions of the student performance that constitutes a minimum acceptable level of achievement. The standards created for the OSSLT are of the latter type; descriptions of student work in reading and writing were developed to describe performances that meet or exceed the minimum criteria (passed) and those that do not meet the criteria (did not pass). For further details, see the Standard-Setting Process on the EQAO Web site (www.eqao.com). The following descriptions provide an overview of how student performance is evaluated.

General English-Language Descriptors: Reading

Passed

The student reads with reasonable accuracy and proficiency. He or she demonstrates an understanding of directly stated information. He or she

- usually connects relevant ideas and information to understand the meaning.
- has moderate success in integrating personal knowledge and experience to extend meaning.

Did Not Pass

The student reads with limited accuracy and proficiency. He or she

- demonstrates a limited understanding of directly stated information.
- rarely connects relevant ideas and information to understand the meaning.
- has difficulty integrating personal knowledge and experience to extend meaning.

General English-Language Descriptors: Writing

Passed

The student communicates in writing. He or she

- demonstrates an ability to develop, organize and connect main ideas, with some supporting information.
- writes in a variety of forms, such as summary, opinion piece, news report and information paragraph.
- generally uses appropriate words and sentence structure.
- generally does not make errors in spelling, grammar or punctuation that impede meaning.

Did Not Pass

The student has difficulty communicating in writing. He or she

- demonstrates limited skill in developing, organizing and connecting main ideas with supporting information.
- writes in a limited variety of forms and finds it difficult to complete writing a summary, opinion piece, news report or information paragraph.
- uses inappropriate or incorrect words and sentence structure.
- makes errors in spelling, grammar and punctuation that impede meaning.

The standard was determined through a three-stage process. First, the test was field tested, and the student papers were scored by educators, using the same procedures that would be used in scoring the actual test. Second, without knowing these scores, a standard-setting committee composed of educators, experts from three Canadian universities and members of the public (including business representatives) examined the same sample of tests and organized them into acceptable and unacceptable performances. This sorting exercise was based on training provided by EQAO and other assessment experts and involved considering the degree of literacy students would need to participate in society. The training included a review of the curriculum requirements and how they relate to the test. Finally, the scores on the tests were examined to determine the pass scores that best distinguished those papers that passed from those that did not pass the test. These standards are used from one year to the next; therefore, the performance of all students in the future will be evaluated according to the same standards.

Test Administration

Consistent test administration procedures are important for ensuring fairness for all students. Schools were provided with training (principals and teachers from all French- and English-language schools are given identical training in how to administer the test) and resources (detailed written guides and instructions) to ensure that the same administrative and accommodations procedures were followed for all students across the province. These procedures are consistent with the *Principles for Fair Student Assessment Practices for Education in Canada (2000)*, a document created by a collection of nationally renowned education institutions and associations and endorsed widely by education and assessment organizations.

The OSSLT was administered over two blocks of time, two-and-a-half hours each (including breaks and instructions), one on the morning of October 23 and one on the morning of October 24, 2002. Students with special needs were accommodated according to the Ministry's Policy/Program Memorandum

No. 127. Some English as a Second Language (ESL) and English Literacy Development (ELD) students were provided with special provisions described in EQAO's *Guide for Accommodations, Special Provisions, Deferrals and Exemptions*.

Further information about elements of the OSSLT, such as preparation for the test, administration issues and standard setting, are available on the EQAO Web site (www.eqao.com).

Quality Assurance

Administration

Principals were asked to pay particular attention to the handling, security and confidentiality of the assessment materials, so that the conditions for the administration of the OSSLT would be consistent across the province and to ensure that the test items remained secure until the test was given to students.

Quality assurance monitors visited 90 English-language schools during the administration of the OSSLT. The sample schools visited included public, Catholic and private schools selected at random across the province.

In order to determine how consistently the test was administered, monitors were asked to examine procedures used to ensure the security of test materials before, during and after the test. Monitors reported that schools maintained tight security over the period of the test. All test materials were found to have been stored in a secure location such as the school vault or the principal's office. In all schools, individual student test materials were kept unopened in their packaging before the start of the test.

Principals reported using a wide range of approaches to create a positive attitude toward the test in their schools. Included were literacy committees, encouragement of all teachers to assume responsibility for literacy in the school, assemblies, tutors, small group meetings with students, communication with parents and a great deal of practice demonstrating the skills tested by the OSSLT.

Marking

Before the OSSLT was marked, all the student papers were scrambled. This ensured that they were distributed randomly to the markers. In addition, all the student papers went through a blind scoring process. *Blind scoring* means that there is no information on the student work that allows a marker to identify a student, a school or a school board.

Throughout the marking of the October 2002 OSSLT, EQAO took a number of steps to ensure that markers scored student papers in the same way. These steps included the use of training papers, a marker readiness test, a chain-marking method, group marking papers and double marking. Each of these steps is described in the Summary Paper on Quality Assurance Measures and Reliability and Validity Processes available on the EQAO Web site (www.eqao.com).

Participation of First-Time Eligible Students

First-time eligible students who participated in the October 2002 OSSLT were students who entered Grade 9 in September 2001 and were working toward an OSSD. The following table provides the number of first-time eligible students who took part in the test, as well as this number by program of study, gender and student status (e.g., ESL/ELD and special needs).

Participation in the October 2002 OSSLT

	Population	Percentage Absent One or Both Days	Percentage Deferred	Percentage Fully Participating
All First-Time Eligible Students	146 539	3%	4%	93%
Program of Study				
Academic Program	101 270	1%	1%	97%
Applied Program	34 202	5%	7%	88%
Locally Developed Program	6333	9%	23%	68%
Gender				
Female	70 675	2%	4%	94%
Male	73 999	3%	5%	92%
Student Status				
ESL/ELD	5317	1%	54%	45%
– with special provisions	1935	2%	1%	97%
Special Needs (including gifted)*	19 722	3%	9%	87%
Special Needs (excluding gifted)*	18 075	4%	10%	86%
– IEP only (with accommodations)	2825	4%	<1%	96%
– IEP and IPRC (with accommodations)	11 458	4%	<1%	96%

Program of Study

The number of first-time eligible English-language students was 146 539. Of these, 69% were in the academic program, 23% were in the applied program, 4% were in locally developed programs and 3% were unspecified. The program of study was not reported for some students. The participation of many students (23%) in the locally developed program was deferred.

Gender

Of the number of English-language students eligible to write the OSSLT for the first time, 73 999 (50%) were males, 70 675 (48%) were females and 1865 (1%) were unspecified. Gender was not reported for some students.

ESL/ELD Students

ESL students are those who arrive in Canada from another country with a first language other than English and little or no previous experience with English. Most commonly, ELD students are those who arrive in Canada from countries where English is the first language but varieties of English other than standard Canadian English are in common use.

*New information, added June 4, 2003.

Of the total number of first-time eligible students who wrote the OSSLT, the number of students enrolled in either an ESL or an ELD program was 5317 (4%). It is important to note that the participation of more than half the ESL and ELD students was deferred.

Special Provisions

Among the 5317 ESL and ELD students who were eligible to write the OSSLT for the first time, 1935 (36%) received special provisions, which included changes in setting (e.g., individual study carrel, individual or small-group setting), additional time and/or periodic supervised breaks.

The following table shows the number of ESL/ELD first-time eligible students and the percentage of the ESL/ELD total that received each of the special provisions.

Number and Percentage of First-Time Eligible ESL/ELD Students Receiving Special Provisions

	Setting of the Test	Timing	Periodic Supervised Breaks
February 2002	1201 (76%)	1539 (97%)	886 (56%)
October 2002	1180 (63%)	1856 (99%)	851 (46%)

- The total number of special provisions exceeds the total number of students who received these provisions, since many students in ESL and ELD programs needed more than one type of special provision.
- The most common special provision provided was additional time.
- Fewer ESL/ELD students received special provisions compared to last year, especially with regard to changes in setting and periodic supervised breaks.
- 39% of these students received all three types of special provision.

Students with Special Needs

Students with special needs are those who have an Individual Education Plan (IEP), who may or may not have been identified as “exceptional pupils” by an Identification, Placement and Review Committee (IPRC) and who are receiving special education programs and services (see Ministry of Education Policy/Program Memorandum No. 127). Of the total number of first-time eligible students, the number of students with special needs excluding gifted students was 18 075 (12%), and including gifted students, 19 722 (13%).*

Accommodations

Students receiving accommodations are those with an IEP, who may or may not have been identified as exceptional pupils by an IPRC. EQAO’s *Guide for Accommodations, Special Provisions, Deferrals and Exemptions* describes various types of accommodation, grouped under the following four broad categories:

1. Setting of the test (e.g., an individual or small-group setting in a separate location or familiar space, an individual study carrel, special lighting or adaptive equipment or technology resources such as a Kurzweil reader)
2. Timing (e.g., additional time for the test beyond the time assigned or periodic supervised breaks)

*New information, added June 4, 2003

3. Presentation format (e.g., sign language, an oral interpreter, Braille or large-print or audiotaped versions of the test)
4. Response format (e.g., audiotaping of responses to the test, verbatim scribing of responses or use of computer or word processor for responses)

A total of 14 377 (11%) participating first-time eligible students were provided with accommodations to enable them to participate fully in the OSSLT. This number includes students who were identified by an IPRC as well as students who have an IEP.

The following table shows the number and the percentage of accommodated first-time eligible students who received each type of accommodation.

Number and Percentage of Accommodated First-Time Eligible Students Receiving Each Type of Accommodation

	Setting of the Test	Timing	Different Presentation Format	Different Response Format	Other Accommodation
February 2002	11 469 (86%)	12 873 (96%)	3404 (25%)	2722 (20%)	95 (1%)
October 2002	12 145 (84%)	13 946 (97%)	4014 (28%)	3982 (28%)	119 (1%)

- Students with special needs often require two or more types of accommodation. For example, students who are blind may require Braille or large-print and may also require extra time, scribing, breaks and/or a separate location. For this reason, the total number of accommodations provided exceeds the total number of students who were accommodated.
- Most accommodated first-time eligible students were provided with between two and four accommodations.
- The most common accommodations were changes in the test setting and additional time.
- The percentages of students receiving each type of accommodation are very close to last year's percentages with the exception of response format. A higher percentage of students used a different response format this year.

Achievement Results — First-Time Eligible Students

The following table provides a summary of provincial achievement results from the October 2002 OSSLT. The table includes all students who were eligible to write the OSSLT during the 2002–2003 school year. The number of students who were exempted from participation because they were not working toward an OSSD appears in the table. Exempted students are not included in the count of eligible students, nor are they reflected in the calculation of any percentages in this or any subsequent tables.

Students can be deferred under several circumstances, as outlined in EQAO's *Guide for Accommodations, Special Provisions, Deferrals and Exemptions*. A student is categorized as deferred only if the Student Information Form indicates a deferral and there is no work in any of the student's test booklets. If a student completes any portion of the OSSLT, he or she is not categorized as deferred.

The following tables present achievement information, including results by gender, by program (academic, applied and locally developed) as well as for ESL/ELD and special education students from the

second full administration of the OSSLT in October 2002. Clearly, some students need extra support in order to meet the provincial literacy standard. The information in these tables will help focus educators and other stakeholders on the areas in which students need to improve.

Summary of Results

	Number	Percentage	
		Method 1	Method 2
Successfully Completed the OSSLT			
Passed Both Reading and Writing	97 459	67%	72%
Wrote the OSSLT But Were Not Successful			
Passed Reading Only	5 797	4%	4%
Passed Writing Only	17 870	12%	13%
Did Not Pass Reading or Writing	14 902	10%	11%
Number Fully Participating in the OSSLT (present on both testing days)	136 028	93%	100%
Absent One or Both Days	3 991	3%	
Deferred	6 520	4%	
Total First-Time Eligible Students	146 539	100%	
Exempt	1 637		

Notes:

Percentages may not add up to 100%, due to rounding.

Method 1 provides a percentage breakdown of all students in the cohort who are working toward an OSSD. The only students excluded from the Method 1 percentages are those who were not working toward an OSSD and who were therefore exempted.

Method 2 provides a percentage breakdown of those students who fully participated in the OSSLT. Students are considered to have fully participated if they were present on both days of the administration.

Results for First-Time Eligible Students by Student Characteristic

The percentages provided for various student characteristics below are based on Method 2 (all first-time eligible students who fully participated in the OSSLT).

Results for First Time-Eligible Students by Program of Study

	Successfully Completed the OSSLT	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing
Academic Program # = 98 668	# = 83 723	# = 3256	# = 8270	# = 3419
	85%	3%	8%	3%
Applied Program # = 30 233	# = 11 426	# = 2207	# = 8177	# = 8423
	38%	7%	27%	28%
Locally Developed Program # = 4302	# = 606	# = 190	# = 992	# = 2514
	14%	4%	23%	58%

Observations:

- A large majority of first-time eligible students (85%) in the academic program successfully completed the OSSLT.
- Of those first-time eligible students in the applied program who wrote the test, 65% passed the writing component and 45% passed the reading component.
- Of those first-time eligible students in locally developed programs who wrote the test, 37% passed the writing component and 18% passed the reading component.
- Of the first-time eligible students in academic, applied and locally developed programs who wrote the test, a larger percentage of first-time eligible students passed the writing component than passed the reading component.

Results for First-Time Eligible Students by Gender

	Successfully Completed the OSSLT	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing
All First-Time Eligible Students # = 136 028	# = 97 459 72%	# = 5797 4%	# = 17 870 13%	# = 14 902 11%
Females # = 66 527	# = 50 091 75%	# = 2231 3%	# = 8573 13%	# = 5632 8%
Males # = 68 153	# = 46 581 68%	# = 3490 5%	# = 9077 13%	# = 9005 13%

Observations:

- Of first-time eligible students, a larger percentage of female (75%) than male students (68%) successfully completed the OSSLT.
- Of first-time eligible students, a larger percentage of male (13%) than female students (8%) did not pass reading or writing.

Results for First-Time Eligible ESL/ELD Students

	Successfully Completed the OSSLT	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing
ESL/ELD # = 2391	# = 816 34%	# = 61 3%	# = 659 28%	# = 855 36%

Observations:

- 62% of first-time eligible ESL/ELD students passed the writing component.
- 37% of first-time eligible ESL/ELD students passed the reading component.
- Of those first-time eligible ESL/ELD students who passed only one component, a larger percentage passed the writing component than passed the reading component.
- As previously noted, the number of ESL/ELD students eligible to write the test was 5317, of whom over half were deferred.

Note:

Results for gender are based upon the number of students for whom gender data were available.

Results for First-Time Eligible ESL/ELD Students Receiving Special Provisions

	Successfully Completed the OSSLT	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing
ESL/ELD Receiving Special Provisions	# = 678	# = 51	# = 525	# = 616
# = 1870	36%	3%	28%	33%

Observations:

- 64% of first-time eligible ESL/ELD students receiving special provisions passed the writing component.
- 39% of first-time eligible ESL/ELD students receiving special provisions passed the reading component.
- Of those first-time eligible ESL/ELD students receiving special provisions who passed only one component, a larger percentage passed the writing component than passed the reading component.

Results for First-Time Eligible Students with Special Needs*

	Successfully Completed the OSSLT	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing
Special Needs (includes gifted)	# = 7460	# = 831	# = 4018	# = 4911
# = 17 220	43%	5%	23%	29%
Special Needs (excludes gifted)	# = 5846	# = 823	# = 4015	# = 4907
# = 15 591	37%	5%	26%	31%

Observations:

- 66% of first-time eligible students with special needs (including gifted) passed the writing component.
- 63% of first-time eligible students with special needs (excluding gifted) passed the writing component.
- 48% of first-time eligible students with special needs (including gifted) passed the reading component.
- 43% of first-time eligible students with special needs (excluding gifted) passed the reading component.
- Of those first-time eligible students with special needs who passed only one component, a larger percentage passed the writing component than passed the reading component.

*New information, added June 4, 2003.

Results for First-Time Eligible Students Receiving Accommodations

	Successfully Completed the OSSLT	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing
Received Accommodations, IEP only # = 2713	# = 1051	# = 167	# = 715	# = 780
	39%	6%	26%	29%
Received Accommodations, IEP and IPRC # = 10 983	# = 4026	# = 564	# = 2905	# = 3488
	37%	5%	26%	32%

Observations:

- 65% of first-time eligible IEP students who received accommodations passed the writing component.
- 45% of first-time eligible IEP students who received accommodations passed the reading component.
- 63% of first-time eligible IEP and IPRC students who received accommodations passed the writing component.
- 42% of first-time eligible IEP and IPRC students who received accommodations passed the reading component.
- A larger percentage of IEP and IPRC students who received accommodations passed the writing component than passed the reading component.

Summary of Reading Results for First-Time Eligible Students by Type of Reading Selection, Reading Skill and Reading Strategy

The following table presents the mean scores of students who passed and students who did not pass, out of the total number of marks available for each selection type, reading skill and reading strategy.

Examining the mean scores gives an indication of the students' relative strengths and weaknesses in reading skills and strategies. This also provides information for planning remediation. For example, the lowest mean score — 19/50 or 38% — indicates that the reading skill in most need of improvement for unsuccessful students is “making connections between personal experiences and the ideas and information in the reading selections.” This skill is also the area in which successful students were weakest.

Summary of Reading Results for First-Time Eligible Students by Reading Selection Type, Reading Skill and Reading Strategy

	Mean Score on the Reading Component for Students Who Passed Reading (# = 103 256)	Mean Score on the Reading Component for Students Who Did Not Pass Reading (# = 32 733)
Reading Selection Type		
Information (e.g., explanation, opinion)	64/90 (71%)	42/90 (47%)
Graphic (e.g., graph, schedule, instructions)	38/50 (76%)	25/50 (50%)
Narrative (e.g., story, dialogue)	45/60 (75%)	28/60 (47%)
Reading Skill		
Understands directly stated ideas and information	47/60 (78%)	33/60 (55%)
Understands indirectly stated ideas and information	68/90 (76%)	43/90 (48%)
Makes connections between personal experiences and the ideas and information in the reading selections	32/50 (64%)	19/50 (38%)
Reading Strategy		
Vocabulary	22/30 (73%)	15/30 (50%)
Syntax	20/30 (67%)	13/30 (43%)
Organization	24/36 (67%)	15/36 (42%)
Graphic features	17/24 (71%)	10/24 (42%)

Observations:

- The pattern of strengths and weaknesses in reading skills is similar for successful and unsuccessful students.
- Students performed slightly better in reading graphic selections, but not significantly more so, than in reading other types of reading selections.
- All students, successful and unsuccessful, had most success in demonstrating the skill of understanding directly stated ideas and information.
- Successful students demonstrated the skill of understanding directly stated ideas and information and the skill of understanding indirectly stated ideas and information almost equally well.
- Unsuccessful students were weak in all three reading skills, especially in understanding indirectly stated ideas and information (48%) and making connections between personal experience and ideas and information in the reading selection (38%).
- Students who were unsuccessful in the reading component showed weakness in all reading strategies.

Note:

This table contains data for students who did not use a large-print or audiotaped version of the OSSLT. The Individual Student Report (ISR) shows the results for each reading skill for each selection type and can assist in the remediation of individual students. The small sample size in some schools prevents accurate reporting at the school level of results in reading by the reading selection types, reading skill and reading strategy.

Summary of Writing Results for First-Time Eligible Students by Writing Task

The following tables contain data on all students who wrote the writing component of the OSSLT. The tables describe student performance according to the columns used in the holistic scoring rubrics. Refer to EQAO's Web site (www.eqao.com) for further information about scoring rubrics.

Summary

	Percentage of Students by Performance on Writing Task (# = 136 028)
Blank/Illegible	8%
Irrelevant Content/Non-Compliant	8%
Column 1	3%
Column 2	18%
Column 3	40%
Column 4	23%

Paragraphs Expressing an Opinion

	Percentage of Students by Performance on Writing Task (# = 136 028)
Blank/Illegible	2%
Irrelevant Content/Non-Compliant	5%
Column 1	<1%
Column 2	15%
Column 3	55%
Column 4	23%

News Report

	Percentage of Students by Performance on Writing Task (# = 136 028)
Blank/Illegible	2%
Irrelevant Content/Non-Compliant	2%
Column 1	<1%
Column 2	8%
Column 3	56%
Column 4	31%

Information Paragraph

	Percentage of Students by Performance on Writing Task (# = 136 028)
Blank/Illegible	3%
Irrelevant Content/Non-Compliant	10%
Column 1	1%
Column 2	17%
Column 3	52%
Column 4	17%

Overall Observations

- The majority of students reached Column 3 in all four writing tasks.
- Students showed various degrees of proficiency across the four writing tasks. They were most proficient in writing the news report and least proficient in writing the summary.
- There were fewer Column 4 information paragraph responses than Column 4 responses to other writing tasks. Since coherent organization is a key factor distinguishing Column 4 from Column 3, this indicates that students are finding it a challenge to organize information into a single paragraph.
- Many student responses were blank or were non-compliant. The highest incidence of blank responses was in the summary. The highest incidence of non-compliance was in the information paragraph. A blank or non-compliant response in one writing task significantly reduced a student's chance of success in the writing component of the OSSLT.

Detailed Analytic Writing Results for First-Time Eligible Students Who Did Not Pass Writing

The following tables contain data on all students who wrote the writing component of the OSSLT. The tables describe student performance according to the rubrics used in analytic scoring.

Summary

Characteristic	Feedback Comments	Percentage (# = 13 919)
Main Idea	Not from original	8%
	Inaccurate	55%
	Accurate	37%
Supporting Details	None or not from original	18%
	One detail or details unrelated to main idea	28%
	Two details from original	20%
	Two details related to main idea	33%
Organization	Insufficient evidence to report	8%
	Random	6%
	Inconsistent	23%
	Simple	56%
	Coherent	7%
Spelling, Grammar and Punctuation	Insufficient evidence to report	8%
	Errors confuse	6%
	Errors distract	20%
	Errors do not distract	34%
	Few errors	32%

Note:

Students who used a scribe or a word processor and students whose responses were audiotaped and then transcribed are not included in spelling, grammar and punctuation. This explains any differences between the insufficient evidence to report percentages under one task.

Series of Paragraphs Expressing an Opinion

Characteristic	Feedback Comments	Percentage (# = 18 876)
Main Idea	No opinion on topic	6%
	Unclear or inconsistent opinion	29%
	Clear	65%
Supporting Details	None	5%
	Insufficient	28%
	Sufficient	43%
	Substantial	25%
Organization	Insufficient evidence to report	38%
	Random	1%
	Inconsistent	20%
	Simple	30%
	Coherent	10%
Spelling, Grammar and Punctuation	Insufficient evidence to report	38%
	Errors confuse	2%
	Errors distract	14%
	Errors do not distract	27%
	Few errors	20%

News Report

Characteristic	Feedback Comments	Percentage (# = 18 319)
Main Idea	Report not focused	9%
	Report partly focused	13%
	Report focused	78%
Supporting Details	None	6%
	Insufficient	37%
	Sufficient	52%
	Substantial	5%
Organization	Insufficient evidence to report	28%
	Random	2%
	Inconsistent	12%
	Simple	52%
	Coherent	6%
Spelling, Grammar and Punctuation	Insufficient evidence to report	27%
	Errors confuse	3%
	Errors distract	20%
	Errors do not distract	34%
	Few errors	16%

Information Paragraph

Characteristic	Feedback Comments	Percentage (# = 17 365)
Main Idea	None	48%
	More than one	12%
	Unstated focus	19%
	Stated focus	21%
Supporting Details	Unrelated	48%
	Insufficient	24%
	Sufficient	28%
Organization	Insufficient evidence to report	2%
	Random	30%
	Inconsistent	54%
	Simple	11%
	Coherent	3%
Spelling, Grammar and Punctuation	Insufficient evidence to report	2%
	Errors confuse	4%
	Errors distract	14%
	Errors do not distract	32%
	Few errors	48%

Overall Observations:

- Most unsuccessful students were successful in focusing on one event for the news report. However, most unsuccessful students did not identify the main idea of the original summary text with accuracy, and approximately three-quarters of unsuccessful students did not clearly identify one aspect of the topic as the focus of the information paragraph.
- For the summary, news report and information paragraph, many unsuccessful students did not provide a sufficient number of supporting details to develop the main idea.
- While the majority of the unsuccessful students expressed an opinion, many of them did not present their opinion clearly or consistently throughout the series of paragraphs expressing an opinion.
- The responses of many unsuccessful students were too short to provide detailed feedback in organization and spelling, grammar and punctuation.

Results from the Student Questionnaire — First-Time Eligible Students

Response Rate

First-Time Eligible Students	Completed Questionnaires	Response Rate
146 539	143 948	98%

Student Computer Use, Language and Background

Percentage of first-time eligible students indicating that	Females (# = 69 981)	Males (# = 72 000)
– they have a computer at home	92%	90%
– English is the first language that they learned at home	77%	76%
– English is the language spoken most frequently at home	76%	75%
– they were born outside Canada	19%	20%

Observations:

- There were no significant differences in the above contextual information for male and female first-time eligible students.
- A high percentage of both males and females reported that they have access to a computer at home.

Reading and Writing Outside School

Percentage of first-time eligible students indicating that	Females (# = 69 981)	Males (# = 72 000)
– they read English outside school for three or more hours a week (not counting homework)	40%	33%
– they read the following kinds of material outside school most weeks:		
biographies or other non-fiction books	20%	18%
comics	28%	35%
Internet material	80%	74%
letters	44%	17%
magazines	81%	64%
manuals, instructions	10%	25%
newspapers	44%	50%
novels, fiction, short stories	64%	42%
poetry, song lyrics	47%	22%
religious or spiritual readings	14%	11%
– they write in English outside school for three or more hours a week (not counting homework)	34%	25%
– they do the following types of writing outside school most weeks:		
e-mail messages, chat-room conversations	88%	82%
letters, journals, diaries	58%	11%
notes, directions, instructions	46%	28%
song lyrics, poems	32%	19%
stories, fiction	15%	11%
work-related writing	21%	22%

Observations:

- The majority of first-time eligible students (59% of females and 66% of males) indicated they do not read outside school for more than three hours a week. This was also true for writing: the majority of first-time eligible students (65% of females and 74% of males) indicated they do not write outside school for more than three hours a week.
- A higher percentage of female first-time eligible students than male first-time eligible students indicated they read and write outside school for three or more hours a week.
- Females most often select magazines, Internet materials, novels, fiction and short stories when they read outside school. Males most often select Internet material and magazines when they read outside school.

- Females most often select e-mail messages, chat-room conversations, letters, journals and diaries when they write outside school.
- Males most often select e-mail messages and chat-room conversations when they write outside school.
- A higher number of male students than female students select comics, newspapers, manuals and instructions to read outside school.
- A higher percentage of female students than male students select Internet material, letters, magazines, novels, fiction, short stories, poetry and song lyrics to read outside school.
- More female students than male students select e-mail messages, chat-room conversations, letters, journals, diaries, notes, directions, instructions, song lyrics and poems when they write outside school.

Participation of Previously Eligible Students

Previously eligible students are those who entered Grade 9 in September 2000 and were first eligible to participate in February 2002 (originally October 2001, moved to February 2002 due to the cancellation of the October administration). Previously eligible students are those who were deferred, absent or unsuccessful at that time. The following table provides the number of previously eligible students who took part in the test as well as this number by gender, by ESL/ELD and by special needs.

Participation in the October 2002 OSSLT

	Population	Percentage Absent One or Both Days	Percentage Deferred	Percentage Fully Participating
All Previously Eligible Students	37 242	6%	5%	89%
Gender				
Female	14 776	6%	4%	90%
Male	21 989	6%	5%	89%
Student Status				
ESL/ELD	1935	3%	34%	64%
- with special provisions	927	3%	<1%	96%
Special Needs (including gifted)*	10 817	5%	6%	89%
Special Needs (excluding gifted)*	10 769	5%	6%	89%
- IEP only (with accommodations)	1916	4%	<1%	96%
- IEP and IPRC (with accommodations)	7079	5%	<1%	95%

*New information, added June 4, 2003.

Gender

The number of previously eligible English-language students who participated in the OSSLT was 37 242. Of these, 21 989 (59%) were males, 14 776 (40%) were females and 477 (1%) were unspecified. Gender was not reported for some students.

ESL/ELD Students

ESL students are those who arrive in Canada from another country with a first language other than English and little or no previous experience with English. Most commonly, ELD students are those who arrive in Canada from countries where English is the first language but varieties of English other than standard Canadian English are in common use.

Of the total number of previously eligible students who wrote the OSSLT, the number of students enrolled in either an ESL or an ELD program was 1935 (5%). The participation of many of the ESL and ELD students (34%) was deferred.

Special Provisions

Of the 1935 previously eligible ESL and ELD students, 927 (48%) received special provisions, which included changes in setting (e.g., individual study carrel, individual or small-group setting), additional time and/or periodic supervised breaks.

The following table shows the number of previously eligible ESL/ELD students and the percentage of the ESL/ELD total that received each of the special provisions.

Number and Percentage of Previously Eligible ESL/ELD Students Receiving Special Provisions

Setting of the Test	Timing	Periodic Supervised Breaks
601 (67%)	882 (98%)	405 (45%)

- The total number of special provisions exceeds the total number of students who received these provisions, since many students in ESL and ELD programs needed more than one type of special provision.
- The most common special provision was additional time.
- Of these students, 40% received all three special provisions.

Students with Special Needs

Students with special needs are those who have an IEP, those who may or may not have been identified as “exceptional pupils” by an IPRC and those who are receiving special education programs and services (see Ministry of Education Policy/Program Memorandum No. 127). Of the total number of previously eligible students, the number of students with special needs excluding gifted students was 10 769 (29%), and including gifted students, 10 817 (29%).*

*New information, added June 4, 2003.

Accommodations

Students receiving accommodations are those with an IEP who may or may not have been identified as “exceptional pupils” by an IPRC. EQAO’s *Guide for Accommodations, Special Provisions, Deferrals and Exemptions* describes various types of accommodations, grouped under the following four broad categories:

1. Setting of the test (e.g., an individual or small-group setting in a separate location or familiar space, an individual study carrel, special lighting or adaptive equipment or technology resources, such as a Kurzweil reader)
2. Timing (e.g., additional time for the test beyond the time assigned or periodic supervised breaks)
3. Presentation format (e.g., sign language, an oral interpreter, Braille, or large-print or audiotaped versions of the test)
4. Response format (e.g., audiotaping of responses to the test, verbatim scribing of responses or use of computer or word processor for responses)

A total of 8881 previously eligible students (27%) were provided with various types of accommodations to enable them to participate fully in the OSSLT. This number includes students who were identified by an IPRC as well as students who have an IEP.

The following table shows the number and the percentage of accommodated previously eligible students who received each type of accommodation.

Number and Percentage of Accommodated Previously Eligible Students Receiving Each Type of Accommodation

Setting of the Test	Timing	Presentation Format	Response Format	Other Accommodation
7557 (85%)	8634 (97%)	2934 (33%)	2231 (25%)	88 (1%)

- Students with special needs often require two or more types of accommodation. For example, students who are blind may require Braille or large-print and may also require extra time, scribing, breaks and/or a separate location. For this reason, the total number of accommodations provided exceeds the total number of students who were accommodated.
- Most accommodated previously eligible students were provided with between two and four accommodations.
- The most common accommodations were changes in the test setting and additional time.

Achievement Results — Previously Eligible Students

The following tables provide a summary of provincial achievement results from the October 2002 OSSLT. The table includes those students who were previously eligible to write the OSSLT during 2001–2002 but were deferred or unsuccessful at that time. The number of students who were exempted from participation because they were not working toward an OSSD also appears in the tables. Exempted students are not included in the count of previously eligible students nor are they reflected in the calculation of any percentages in this or any subsequent table.

Students can be deferred under several circumstances, as outlined in EQAO's *Guide for Accommodations, Special Provisions, Deferrals and Exemptions*. A student is categorized as deferred only if the Student Information Form indicates a deferral and there is no work in any of the student's test booklets. If a student completes any portion of the OSSLT, he or she is not categorized as deferred.

The following tables present achievement information, including results by gender, for ESL/ELD and special education students for the second full administration of the OSSLT in October 2002. Achievement information is organized according to the component or components of the test that the students were required to successfully complete.

Summary of Results

		October 2002	
		#	%
Exempt Students		350	
Previously Eligible Students		37 242	
Absent One or Both Days		2203	6%
Deferred		1731	5%
Required to Pass Both Reading and Writing # = 17 075	Passed Both Reading and Writing	5645	33%
	Passed Reading Only	1035	6%
	Passed Writing Only	4714	28%
	Did Not Pass Reading or Writing	5681	33%
Required to Pass Reading Only # = 10 385	Passed Reading	5310	51%
	Did Not Pass Reading	5075	49%
Required to Pass Writing Only # = 5848	Passed Writing	5072	87%
	Did Not Pass Writing	776	13%

Results for Previously Eligible Students by Student Characteristic

The percentages for various student characteristics below are based on Method 2 (all previously eligible students who fully participated in the OSSLT).

Results for Previously Eligible Students by Gender

	Required to Pass Both Reading and Writing # = 17 075				Required to Pass Reading Only # = 10 385		Required to Pass Writing Only # = 5848	
	Passed Both Reading and Writing	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing	Passed Reading	Did Not Pass Reading	Passed Writing	Did Not Pass Writing
	# = 5645	# = 1035	# = 4714	# = 5681	# = 5310	# = 5075	# = 5072	# = 776
All Previously Eligible Students # = 33 308	33%	6%	28%	33%	51%	49%	87%	13%

	Required to Pass Both Reading and Writing # = 6668				Required to Pass Reading Only # = 4651		Required to Pass Writing Only # = 1999	
	Passed Both Reading and Writing	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing	Passed Reading	Did Not Pass Reading	Passed Writing	Did Not Pass Writing
	# = 2347	# = 326	# = 1990	# = 2005	# = 2231	# = 2420	# = 1756	# = 243
Females # = 13 318	35%	5%	30%	30%	48%	52%	88%	12%

	Required to Pass Both Reading and Writing # = 10 188				Required to Pass Reading Only # = 5634		Required to Pass Writing Only # = 3780	
	Passed Both Reading and Writing	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing	Passed Reading	Did Not Pass Reading	Passed Writing	Did Not Pass Writing
	# = 3226	# = 695	# = 2672	# = 3595	# = 3029	# = 2605	# = 3255	# = 525
Males # = 19 602	32%	7%	26%	35%	54%	46%	86%	14%

Observations:

- Of those students who needed to pass both components of the test, 35% of female students and 32% of male students did pass both components.
- 35% of female students and 33% of male students who needed to pass the two components passed one of the two components.
- 48% of female students and over half (54%) of male students who were required to pass reading only, did pass reading.
- 88% of female students and 86% of male students who were required to pass writing only, did pass writing.
- More students who needed to pass writing were successful than those who needed to pass reading.

Results for Previously Eligible ESL/ELD Students

	Required to Pass Both Reading and Writing —				Required to Pass Reading Only —		Required to Pass Writing only —	
	Passed Both Reading and Writing —	Passed Reading Only —	Passed Writing Only —	Did Not Pass Reading or Writing —	Passed Reading —	Did Not Pass Reading —	Passed Writing —	Did Not Pass Writing —
ESL/ELD —	25%	3%	34%	38%	47%	53%	85%	15%

Observations:

- 25% of ESL/ELD students who needed to pass the two components did pass both components.
- 37% of ESL/ELD students who needed to pass the two components passed one of the two components.
- 47% of ESL/ELD students who needed to pass only the reading component did pass reading.
- 85% of ESL/ELD students who needed to pass only the writing component did pass writing.

Note:

Total counts have been suppressed to protect student confidentiality where numbers are low.

Results for Previously Eligible ESL/ELD Students Receiving Special Provisions

	Required to Pass Both Reading and Writing —				Required to Pass Reading Only —		Required to Pass Writing Only —	
	Passed Both Reading and Writing —	Passed Reading Only —	Passed Writing Only —	Did Not Pass Reading or Writing —	Passed Reading —	Did Not Pass Reading —	Passed Writing —	Did Not Pass Writing —
	—	—	—	—	—	—	—	—
ESL/ELD Receiving Special Provisions —	26%	3%	37%	34%	50%	50%	85%	15%

Observations:

- 26% of ESL/ELD students who received special provisions and needed to pass the two components did pass both components.
- 40% of ESL/ELD students who received special provisions and needed to pass the two components passed one of the two components.
- Half (50%) of ESL/ELD students who received special provisions and needed to pass the reading component did pass reading.
- 85% of ESL/ELD students who received special provisions and needed to pass the writing component did pass writing.

Note:

Total counts have been suppressed to protect student confidentiality where numbers are low.

Results for Previously Eligible Students with Special Needs*

	Required to Pass Both Reading and Writing # including gifted = 5663 # excluding gifted = 5624				Required to Pass Reading Only # including gifted = 2958 # excluding gifted = 2955		Required to Pass Writing only # including gifted = 956 # excluding gifted = 952	
	Passed Both Reading and Writing	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing	Passed Reading	Did Not Pass Reading	Passed Writing	Did Not Pass Writing
Special Needs (includes gifted) # = 9577	# = 1317 23%	# = 311 5%	# = 1634 29%	# = 2401 42%	# = 1252 42%	# = 1706 58%	# = 794 83%	# = 162 17%
Special Needs (excludes gifted) # = 9531	# = 1280 23%	# = 310 6%	# = 1633 29%	# = 2401 43%	# = 1249 42%	# = 1706 58%	# = 790 83%	# = 162 17%

Observations:

- 23% of students with special needs (including gifted) who needed to pass the two components did pass both components.
- 23% of students with special needs (excluding gifted) who needed to pass the two components did pass both components.
- 34% of students with special needs (including gifted) who needed to pass the two components passed one of the two components.
- 35% of students with special needs (excluding gifted) who needed to pass the two components passed one of the two components.
- 42% of students with special needs (including gifted) who needed to pass only reading did pass reading.
- 42% of students with special needs (excluding gifted) who needed to pass only reading did pass reading.
- 83% of students with special needs (including gifted) who needed to pass only writing did pass writing.
- 83% of students with special needs (excluding gifted) who needed to pass only writing did pass writing.

*New information, added June 4, 2003.

Results for Previously Eligible Students Receiving Accommodations

	Required to Pass Both Reading and Writing # = 1012				Required to Pass Reading Only # = 594		Required to Pass Writing Only # = 232	
	Passed Both Reading and Writing	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing	Passed Reading	Did Not Pass Reading	Passed Writing	Did Not Pass Writing
	# = 325	# = 64	# = 301	# = 322	# = 297	# = 297	# = 203	# = 29
Receiving Accommodations, IEP only # = 1838	32%	6%	30%	32%	50%	50%	88%	13%

	Required to Pass Both Reading and Writing # = 3966				Required to Pass Reading Only # = 2103		Required to Pass Writing only # = 621	
	Passed Both Reading and Writing	Passed Reading Only	Passed Writing Only	Did Not Pass Reading or Writing	Passed Reading	Did Not Pass Reading	Passed Writing	Did Not Pass Writing
	# = 852	# = 207	# = 1190	# = 1717	# = 854	# = 1249	# = 514	# = 107
Receiving Accommodations, IEP and IPRC # = 6690	21%	5%	30%	43%	41%	59%	83%	17%

Observations:

- 32% of previously eligible IEP students and 21% of previously eligible IEP and IPRC students who received accommodations and needed to pass the two components did pass both components.
- 36% of previously eligible IEP students and 35% of previously eligible IEP and IPRC students who received accommodations and needed to pass the two components passed one of the two components.
- Half the previously eligible IEP students and 41% of the previously eligible IEP and IPRC students who received accommodations and needed to pass the reading component did pass reading.
- 88% of the previously eligible IEP students and 83% of the previously eligible IEP and IPRC students who received accommodations and needed to pass the writing component did pass writing.

Summary of Reading Results for Previously Eligible Students by Reading Selection Type, Reading Skill and Reading Strategy

The following table presents the mean number of marks scored by students who passed and students who did not pass, out of the total number of marks available for each selection type, reading skill and reading strategy.

Examining the mean scores gives an indication of the students' relative strengths and weaknesses in reading skills and strategies. This also provides information for planning remediation. For example, the lowest mean score — 18/50 or 36% — indicates that the reading skill in most need of improvement for unsuccessful students is “making connections between personal experiences and the ideas and information in the reading selections.” This skill is also the area in which successful students were weakest.

	Mean Score on the Reading Component for Students Who Passed Reading (# = 11 990)	Mean Score on the Reading Component for Students Who Did Not Pass Reading (# = 15 453)
Reading Selection Type		
Information (e.g., explanation, opinion)	59/90 (66%)	41/90 (46%)
Graphic (e.g., graph, schedule, instructions)	35/50 (70%)	25/50 (50%)
Narrative (e.g., story, dialogue)	41/60 (68%)	28/60 (47%)
Reading Skill		
Understands directly stated ideas and information	44/60 (73%)	33/60 (55%)
Understands indirectly stated ideas and information	62/90 (69%)	43/90 (48%)
Makes connections between personal experiences and the ideas and information in the reading selections	29/50 (58%)	18/50 (36%)
Reading Strategy		
Vocabulary	20/30 (67%)	14/30 (47%)
Syntax	18/30 (60%)	12/30 (40%)
Organization	22/36 (61%)	15/36 (42%)
Graphic features	16/24 (67%)	10/24 (42%)

Observations:

- The pattern of strengths and weaknesses in the skills of previously eligible students is similar to that of first-time eligible students.
- The mean scores of previously eligible students who were not successful on their second attempt at the OSSLT are very similar to the scores of unsuccessful first-time eligible students.
- The mean scores for students who passed the OSSLT on their second attempt show that their skills have improved enough to pass but are still not strong.

Summary of Writing Results for Previously Eligible Students by Writing Task

The following tables contain data on all students who wrote the writing component of the OSSLT. The tables describe the student performance according to the columns used in the holistic scoring rubrics. Refer to EQAO's Web site (www.eqao.com) for further information about scoring rubrics.

Summary

	Percentage of Students by Performance on Writing Task (# = 33 308)
Blank/Illegible	19%
Irrelevant Content/Non-Compliant	8%
Column 1	4%
Column 2	22%
Column 3	34%
Column 4	12%

Series of Paragraphs Expressing an Opinion

	Percentage of Students by Performance on Writing Task (# = 33 308)
Blank/Illegible	11%
Irrelevant Content/Non-Compliant	10%
Column 1	1%
Column 2	22%
Column 3	47%
Column 4	9%

News Report

	Percentage of Students by Performance on Writing Task (# = 33 308)
Blank/Illegible	14%
Irrelevant Content/Non-Compliant	3%
Column 1	<1%
Column 2	14%
Column 3	53%
Column 4	15%

Information Paragraph

	Percentage of Students by Performance on Writing Task (# = 33 308)
Blank/Illegible	15%
Irrelevant Content/Non-Compliant	13%
Column 1	1%
Column 2	22%
Column 3	41%
Column 4	8%

Observations:

- The pattern of results of the previously eligible students on all writing tasks is similar to that of the first-time eligible students.
- For previously eligible students, there were many more blank responses and fewer Column 4s in all writing tasks than for first-time eligible students.

Detailed Analytic Writing Results for Previously Eligible Students Who Did Not Pass Writing

The following tables contain data on all students who wrote the writing component of the OSSLT. The tables describe student performance according to the rubrics used in analytic scoring.

Summary

Characteristic	Feedback Comments	Percentage (# = 4881)
Main Idea	Not from original	9%
	Inaccurate	53%
	Accurate	37%
Supporting Details	None or not from original	21%
	One detail or details unrelated to main idea	29%
	Two details from original	19%
	Two details related to main idea	31%
Organization	Insufficient evidence to report	8%
	Random	7%
	Inconsistent	24%
	Simple	55%
	Coherent	6%
Spelling, Grammar and Punctuation	Insufficient evidence to report	9%
	Errors confuse	8%
	Errors distract	22%
	Errors do not distract	33%
	Few errors	29%

Series of Paragraphs Expressing an Opinion

Characteristic	Feedback Comments	Percentage (# = 6595)
Main Idea	No opinion on topic	7%
	Unclear or inconsistent opinion	29%
	Clear	65%
Supporting Details	None	5%
	Insufficient	31%
	Sufficient	42%
	Substantial	22%
Organization	Insufficient evidence to report	43%
	Random	1%
	Inconsistent	20%
	Simple	29%
	Coherent	7%
Spelling, Grammar and Punctuation	Insufficient evidence to report	42%
	Errors confuse	3%
	Errors distract	15%
	Errors do not distract	25%
	Few errors	15%

News Report

Characteristic	Feedback Comments	Percentage (# = 6353)
Main Idea	Report not focused	10%
	Report partly focused	14%
	Report focused	77%
Supporting Details	None	7%
	Insufficient	39%
	Sufficient	50%
	Substantial	4%
Organization	Insufficient evidence to report	29%
	Random	2%
	Inconsistent	14%
	Simple	51%
	Coherent	4%
Spelling, Grammar and Punctuation	Insufficient evidence to report	29%
	Errors confuse	4%
	Errors distract	24%
	Errors do not distract	32%
	Few errors	12%

Information Paragraph

Characteristic	Feedback Comments	Percentage (# = 6016)
Main Idea	None	49%
	More than one	11%
	Unstated focus	19%
	Stated focus	21%
Supporting Details	Unrelated	49%
	Insufficient	24%
	Sufficient	27%
Organization	Insufficient evidence to report	3%
	Random	32%
	Inconsistent	53%
	Simple	10%
	Coherent	2%
Spelling, Grammar and Punctuation	Insufficient evidence to report	3%
	Errors confuse	5%
	Errors distract	17%
	Errors do not distract	32%
	Few errors	43%

Overall Observations:

- Most unsuccessful students were successful in focusing on one event for the news report. However, most unsuccessful students did not identify the main idea of the original summary text with accuracy, and approximately three-quarters of unsuccessful students did not clearly identify one aspect of the topic as the focus of the information paragraph.
- For the summary, news report and information paragraph, many unsuccessful students did not provide a sufficient number of supporting details to develop the main idea.
- While the majority of the unsuccessful students expressed an opinion, many of them did not present their opinion clearly or consistently throughout the series of paragraphs expressing an opinion.
- The responses of many unsuccessful students were too short to provide detailed feedback in organization and spelling, grammar and punctuation.

Results from the Student Questionnaire — Previously Eligible Students

Response Rate

Previously Eligible Students	Completed Questionnaires	Response Rate
37 242	34 844	94%

Student Computer Use, Language and Background

Percentage of previously eligible students indicating that	Females (# = 13 969)	Males (# = 20 465)
– they have a computer at home	84%	82%
– English is the first language that they learned at home	67%	70%
– English is the language spoken most frequently at home	65%	67%
– they were born outside Canada	29%	26%

Observations:

- There were no significant differences in the above contextual information for male and female previously eligible students.
- A high percentage of both males and females reported that they have access to a computer at home.

Reading and Writing Outside School

Percentage of previously eligible students indicating that	Females (# = 13 969)	Males (# = 20 465)
– they read English outside school for three or more hours a week (not counting homework)	26%	24%
– they read the following kinds of material outside school most weeks:		
biographies or other non-fiction books	20%	15%
comics	22%	31%
Internet material	69%	63%
letters	53%	23%
magazines	79%	64%
manuals, instructions	11%	24%
newspapers	47%	49%
novels, fiction, short stories	51%	28%
poetry, song lyrics	48%	24%
religious or spiritual readings	14%	10%
– they write in English outside school for three or more hours a week (not counting homework)	28%	23%
– they do the following types of writing outside school most weeks:		
e-mail messages, chat-room conversations	79%	73%
letters, journals, diaries	59%	14%
notes, directions, instructions	43%	27%
song lyrics, poems	34%	22%
stories, fiction	13%	9%
work-related writing	25%	24%

Observations:

- A higher percentage of female than male previously eligible students indicated that they read and write outside school for three or more hours a week.
- The majority of previously eligible students (72% of females and 74% of males) indicated that they do not read outside school for more than three hours a week. This was also true for writing: the majority of previously eligible students (69% of females and 74% of males) indicated that they do not write outside school for more than three hours a week.
- Females and males most often select magazines and Internet materials when they read outside school.
- Previously eligible females and males most often select e-mail messages and chat-room conversations when they write outside school; females also indicated that they write letters, journals or diaries.

- Male students most often select magazines, Internet material and newspapers when they read outside school.
- A higher percentage of female students than male students indicated they read biographies or other non-fiction books, Internet material, letters, magazines, novels, fiction, short stories, poetry and song lyrics.
- More female students than male students indicated that they write e-mail messages, chat-room conversations, letters, journals, diaries, notes, directions, instructions, song lyrics and poems when they write outside school.

Specific Recommendations

Since EQAO's release of the February 2002 OSSLT results last fall, school boards and other stakeholders have just begun to implement plans for improvement. Consequently, many of the recommendations made at that time remain relevant and are repeated in this report where data are consistent with those of February 2002.

Planning for Improvement

EQAO recommends

- that **school boards**, in consultation with their school communities, and using EQAO's *Guide to School and Board Improvement Planning*, incorporate the overall and specific data from the October 2002 OSSLT into their existing board and school improvement plans for developing student literacy. Boards should implement strategies for improving student achievement in reading and writing that extend across the elementary and secondary grades and across all subject areas.
- that **schools**, in consultation with their communities, incorporate the overall and specific data from the October 2002 OSSLT into their existing school literacy improvement plans and develop curriculum-wide strategies for improving student achievement in writing and, especially, in reading.

Relevance and Student Motivation

EQAO recommends

- that the **Ministry, school boards, principals and teachers**, in partnership with students, parents and school councils, take further steps to help students understand the relevance of literacy to learning in all subject areas, and the importance of literacy skills to future education opportunities, career opportunities and everyday life outside school.
- that **parents** enhance their own understanding of the reading and writing skills required for successful completion of the OSSLT and assist students in understanding the relevance and importance of literacy skills to future education and career opportunities and everyday life outside school.
- that the **Ministry, school boards, principals and teachers**, recognizing the strong connection between literacy and the use of technology, develop strategies students can use in school and at home when using computers, that will enhance student achievement in reading and writing (e.g., thoughtful use of spell and grammar checkers and the use of the "Find" function to track significant words in a reading selection).

Reading

EQAO recommends

- that **principals and teachers**, in consultation with students, parents and school councils, review the Student Questionnaire data for students in their school and determine how students' home reading can be used to encourage students to develop more effective reading strategies, increased reading comprehension and a greater enjoyment of reading.
- that **school boards** and **schools** carefully study the data on reading strategies to determine whether students in their jurisdictions are having particular difficulty with reading questions related to each of the four reading strategies, and have teachers in all subject areas assist students in developing an understanding of how these strategies are used to increase reading comprehension.
- that **school boards, principals** and **teachers**, in consultation with students, parents and school councils, examine the data on reading and writing achievement in order to identify subjects and/or courses in which additional emphasis on reading and writing skills is required.
- that **school boards** access available new funding from the Ministry to develop and provide remedial literacy programs that help students improve their reading and writing skills.
- that **teachers** use the Annotated Student Responses on the EQAO Web site (www.eqao.com) to help students understand the skills and strategies that contribute to success in reading as assessed by the OSSLT.
- that **teachers** use the OSSLT Curriculum Connections to identify cross-curricular and cross-grade opportunities for students to learn and practise the reading skills and strategies assessed by the OSSLT.

Writing

EQAO recommends

- that **teachers** use the Annotated Student Responses on the EQAO Web site (www.eqao.com) to help students understand the characteristics of successful writing as assessed by the OSSLT.
- that **teachers** use the OSSLT Curriculum Connections to identify cross-curricular and cross-grade opportunities for students to learn and practise the writing tasks, especially the summary, and the strategies assessed by the OSSLT.

Support for Teachers

EQAO recommends

- that **Faculties of Education** strongly consider the recommendation from the Final Report of the At-Risk Working Group (January 2003) to include, in pre-service training, modules on literacy instruction and related classroom assessment for all teacher candidates.
- that the **Ontario College of Teachers** include a compulsory course on reading skill acquisition and development as a requirement of the Professional Learning Program.
- that the **Ontario College of Teachers** strongly consider the recommendation from the Final Report of the At-Risk Working Group that literacy and classroom assessment modules be integrated into all Additional Qualifications courses, so that this training can be linked to every subject area.
- that **school boards** and **schools** offer professional development opportunities for teachers in the area of literacy instruction, especially in reading.

- that **teachers** be encouraged to use the Support Materials, Annotated Student Responses, Example Test Booklet and Getting Ready Guide, available and updated on EQAO's Web site (www.eqao.com), to help students prepare to write the OSSLT successfully (e.g., to understand the format of the test, the number and kinds of reading questions and writing tasks, the time constraints, the need to respond to all reading questions and writing tasks, the need to write on the topic and to follow the instructions provided for all writing tasks, and how the test is marked).

Support for Parents/Guardians

EQAO recommends

- that **parents** be encouraged to use How to Prepare Your Child for the Ontario Secondary School Literacy Test, the Support Materials, Annotated Student Responses, Example Test Booklet and the Getting Ready Guide, available and updated on EQAO's Web site (www.eqao.com), to help their child prepare to write the OSSLT successfully (e.g., to understand the format of the test, the number and kinds of reading questions and writing tasks, the time constraints, the need to respond to all reading questions and writing tasks, the need to write on the topic and to follow the instructions provided for all writing tasks, and how the test is marked).

Diverse Student Populations

EQAO recommends

- that **school boards, principals** and **teachers** examine the data for applied and locally developed courses and ensure that the strategies and resources being used to teach and assess these courses appropriately reflect their focus, the provincial curriculum expectations for applied and locally developed courses and the needs and motivation of students, with emphasis on the reading and writing skills measured by the OSSLT.
- that **school boards, principals** and **teachers**, in consultation with students, parents and school councils, review the achievement and questionnaire data for students in all course types and determine what additional steps need to be taken in order to increase the percentage of students reaching the provincial standard in reading and writing on the OSSLT.
- that **school boards**, in consultation with parents, students and school councils, monitor the achievement of ESL and ELD students on the OSSLT, implement a variety of strategies for assisting students in these programs to be successful on the OSSLT and ensure that these students have a maximum number of opportunities to participate in the OSSLT.
- that **school boards**, in consultation with parents, students and school councils, monitor the achievement of students in special education courses on the OSSLT and implement a variety of strategies for assisting students in these programs to be successful on the OSSLT.

Previously Eligible Students

EQAO recommends

- that **school boards** and **schools** offer proven remedial programs or courses, including the Ontario Secondary School Literacy Course (OSSLC), to students who have not successfully completed the OSSLT.
- that **school boards** and **schools** study the data from the October 2002 OSSLT to review current strategies and programs for remediation.
- that **school boards** gather and share cross-curricular strategies and successful practices in remedial programs, so that students have a greater opportunity to reach the provincial standard.
- that **school boards** and **schools**, in consultation with parents, students and school councils, monitor the achievement of students who have been unsuccessful on the OSSLT and implement a variety of strategies for assisting students in remedial programs to be successful on the OSSLT.



National and International Assessments

Report of Provincial Results

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Results at a Glance

Highlights of Achievement Results

School Achievement Indicators Program (SAIP) Writing Assessment III (2002)

- In writing, Ontario 13- and 16-year-old students performed the same as English Canada.
- The vast majority (approximately 85%) of Ontario 13-year-olds performed at Level 2 or above. Nearly one-half (approximately 43%) of the 13-year-olds performed at Level 3 or above.
- A majority of Ontario 16-year-olds (approximately 58%) performed at Level 3 or above. Approximately 18% performed at Level 4 or 5.
- No Canadian jurisdiction scored higher than Ontario 13-year-olds.
- Only Quebec (English and French) and Canada (French) scored higher than Ontario 16-year-olds.
- The results of the 2002 SAIP Writing Assessment III reinforce the findings of other national and international assessments, namely that girls demonstrate a higher level of proficiency in writing than boys.

Progress in International Reading Literacy Study (PIRLS) 2001

- Ontario Grade 4 students performed near the top in overall reading achievement compared to 35 countries worldwide. Only Sweden performed significantly better than Ontario in overall reading achievement.¹
- Ontario students performed statistically better in reading for literary purposes than they did for informational purposes.
- In all countries and provinces, Grade 4 girls performed significantly better than Grade 4 boys in reading achievement. In Ontario, there was a 20-point difference favouring the girls. This trend was found in Ontario in reading for both literary and informational purposes.

Key Messages

- Ontario's 13- and 16-year-olds performed as well as or better than most Canadian jurisdictions. Ontario 16-year-olds were outperformed only by Quebec 16-year-olds.
- Of the 35 countries participating in the PIRLS assessment, only Sweden performed significantly better than Ontario Grade 4 students in overall reading achievement.

Recommendations

The Education Quality and Accountability Office (EQAO) will

- ensure that Ontario schools and school boards are aware of national and international assessment programs, and promote participation and the programs' value;
- encourage schools and boards to use the provincial (Grades 3, 6 and 9, and OSSLT), national (SAIP) and international (the Trends in International Mathematics and Science Study [TIMSS], PIRLS and the Programme for International Student Assessment [PISA]) reports on achievement to develop a more comprehensive understanding of their students' achievement;
- facilitate the understanding and use of the achievement data gathered through national and international assessments and encourage the undertaking of related research projects and
- ensure that schools and boards are made aware of research projects that may be of value or interest to them.

¹ See the appendix for a definition of the term "significant difference."

Introduction

EQAO's purpose is to ensure greater accountability in the publicly funded education system in Ontario and to improve the quality of education in the province. In order to fulfill its mandate, EQAO conducts several province-wide assessments and is responsible for managing Ontario's participation in national and international assessments. EQAO's involvement in the latter includes

- attending planning meetings,
- contributing to the underlying project frameworks and blueprints,
- verifying assessment materials for cultural appropriateness and equity,
- verifying translations,
- developing and selecting test items,
- communicating with schools and securing their co-operation,
- conducting pilot tests and field tests of assessment materials,
- administering the assessments,
- scoring and coding the student responses,
- capturing and preparing data for analysis,
- analyzing provincial data,
- setting expectations for student achievement,
- reporting at the provincial level and
- contributing to reporting at the national and international levels.

National Assessments

At the national level, the province takes part in SAIP, a national testing program conducted under the auspices of the Council of Ministers of Education, Canada (CMEC). This program tests randomly selected samples of 13- and 16-year-old students. Reporting is at the provincial and national levels only. Individual student, school and school board data are unavailable. Ontario, through EQAO, has been part of every development team since the program began.

Assessments conducted to date or planned for the future:

Year	National, SAIP Assessments
1993	Mathematics
1994	Reading and Writing
1996	Science
1997	Mathematics
1998	Reading and Writing
1999	Science
2001	Mathematics
2002	Writing
2004	Science

SAIP Writing III 2002

Background

The SAIP Writing Assessment III was administered in April and May 2002 to a random sample of students drawn from all jurisdictions. The sample was made up of 13 200 thirteen-year-old students and 11 400 sixteen-year-old students. Students completed the assessment in their first official language; about 16 400 students wrote in English and about 8200 in French. Students in French Immersion wrote in English. In Ontario, approximately 2000 English-language students from 200 schools and 1800 French-language students from 160 schools participated in the assessment.

The writing assessment was administered in two sessions. In the first session, approximately one hour long, students were asked first to respond to a short text for 20 minutes. This was a secondary, experimental study on the students' "habits of mind" (how student thinking unfolds when they are asked to respond to a simple but thought-provoking text) undertaken by the consortium at the request of the jurisdictional coordinators. This secondary study is discussed in the CMEC public report. The students then discussed, as a group with their teachers, a series of brief texts that explored a theme, which was presented in a resource handbook. In the second session, administered within five days of the first, students had two and a half hours to complete an assigned writing task.

The development team responsible for the 2002 SAIP Writing assessment included representatives from Saskatchewan, Ontario, Quebec, New Brunswick and Prince Edward Island. After 13- and 16-year-olds' classroom writing was examined, English and French descriptive criteria were produced and used to design the assessment and the scoring rubric. An extensive consultation process with Ministry personnel, educators and members of the general public was used to revise and validate the criteria and assessment instrument.

Framework

The following statement to principals, teachers and students comes from pages 11 to 12 of the *School Achievement Indicators Program, Writing Assessment III, Handbook for Schools*, which was provided for the administration of the assessment. It describes the perspective on writing that underlies this assessment, as well as the expectations of and information about the writing task.

Writing takes place within a specified context or situation. Therefore, the situation, purpose, and intended audience form the framework that governs how all writing elements function within the text. This SAIP assessment will consider the writer's skill in integrating such elements as development of ideas, organization, language conventions and usage, and stylistic features employed in carrying out a purpose.

Writing is socially situated in that it is meant to be read. This social dimension calls for particular qualities such as clarity of communication and correctness of language. In this assessment, consideration will be given to the overall effectiveness of communication.

Writing is also social in the sense that it is intended for specific discourse communities such as the academic milieu or the workplace. In curricular practices across the Canadian education community, writing serves as a means of generating and communicating thought and understanding across all subject areas. In this SAIP assessment, the instrument will take the writing task beyond the language classroom to reinforce an increasing awareness that writing is a general competency that supports learning across the curriculum and effectiveness in life. The assessment attempts to link school writing demands to writing demands beyond the classroom.

Writing is a complex process that includes drawing on prior knowledge and experience; developing and organizing ideas; choosing and shaping the form of presentation associated with a specific purpose; selecting the words, syntax, and stylistic devices; and applying the rules of language accurately and purposefully. Students need sufficient time during assessments to apply these strategies in order to demonstrate their abilities effectively. In this assessment, students will be provided with a resource booklet of readings so as to ensure equal access to sufficient background knowledge pertinent to the task. They will have the opportunity to take the readings home. The assessment will take place over two sessions within a two- to five-day period in order to allow give students time to reflect and prepare.

Writing is a means of generating ideas and information as well as a medium of communication: it is a way of creating, exploring, and refining ideas. Just as there are divergent learning styles, there are preferential modes of expression. This test design will allow students to respond in either an analytic or a narrative mode. Both modes require integration of the common writing elements, and both will allow students to demonstrate their ability to assimilate, interpret, and convey ideas and information. Moreover, both analytic and narrative modes offer a wide variety of options for writing such as stories, opinion pieces, accounts of personal or imaginary experiences, magazine or news articles, speeches, and scripts.

The *Handbook for Schools* can be viewed at www.cmec.ca.

Selected Writing Assessment Criteria

As previously mentioned, SAIP uses five levels to describe student performance. The following descriptions of Levels 1 (the lowest performance level) and 5 (the highest performance level) are taken from CMEC's *Handbook for Schools*.

Level 1

The writing demonstrates an elementary and uncertain grasp of fundamental elements of writing relative to purpose. Integration of those elements is not evident. The writing conveys simplistic and/or partial and/or fragmented meaning.

- The writing demonstrates little or no evidence of addressing the demands of the task.
- The overall idea(s) and development are rudimentary and may not be clear.
- Tone/Voice/Stance are discernible but may be ambiguous, inappropriate, and/or unclear.
- Lack of control of syntax and the rules of language obscures communication.

Level 5

The writing demonstrates an effective and confident command of the elements of writing appropriate to purpose. The writing is thoroughly integrated and precisely and fully developed, and the elements enhance one another. The writing conveys an insightful and sophisticated perspective.

- The writing clearly fulfills the demands of the task.
- The overall idea(s) and development are thoughtful and well considered.
- Tone/Voice/Stance are confident and enhance the impact of the writing.
- Command and control of stylistic features, syntax, and the rules of language effectively enhance communication. Errors are minimal.

Comparisons Between Languages

Caution should be exercised when comparing achievement results based on assessment instruments prepared in different languages. The development team made every effort to ensure equivalence for the sake of equity and fairness for all students. The writing task, descriptors, scoring scripts and process were highly equivalent in both languages. However, teaching and cultural differences related to language structure and use make comparisons between languages difficult.

Comparisons over Time

An important factor to be taken into consideration when making comparisons is the impact of modifications made to the curriculum and changes in teaching practice over time. Generally, SAIP assessments in all subject areas are designed to permit comparisons of student achievement over time. However, in our judgment, changes to the design of the writing prompt and the scoring process suggest that comparing writing achievement from the 1998 and 2002 assessments is ill-advised. Lower achievement results for 13-year-olds at Level 2 or above and for 16-year-olds at Level 3 or above, for all jurisdictions, is a further indication that making such comparisons is not possible or appropriate.

Expectations

National expectations were established for the 2002 SAIP Writing Assessment III so that actual achievement results could be compared with expected results. To set these performance expectations, CMEC held three regional meetings with educators and non-educators in Western, Central and Atlantic Canada to decide what percentage of 13- and 16-year-old students should attain or surpass each of the achievement levels. The resulting information helped CMEC interpret how well Canadian students performed on the assessment.

Results for Canada

Comparisons with Other Jurisdictions

The following chart indicates how the student achievement results of the provinces and territories compare with Canada overall. The chart shows the proportions of 13-year-old students attaining achievement Level 2 or above, and the proportion of 16-year-olds attaining achievement Level 3 or above.²

Provinces and Territories Compared with Canada Overall

(Percentage of 13-Year-Olds, Level 2 and Above; Percentage of 16-Year-Olds, Level 3 and Above)

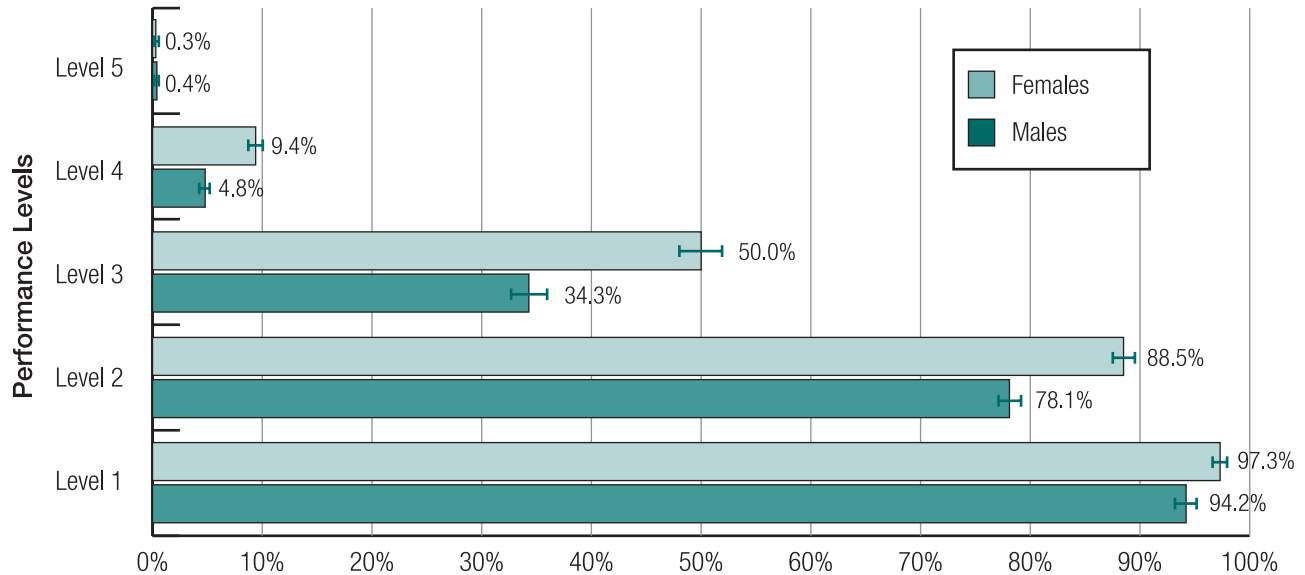
	Higher Than Canada	Same As Canada	Lower Than Canada
Age 13	Canada (F) 87.3% (± 1.2) Quebec (F) 88.4% (± 2.2)	Alberta 82.6% (± 2.7) British Columbia 80.8% (± 2.7) Canada 83.5% (± 0.7) Canada (E) 82.4% (± 0.8) Manitoba (E) 83.0% (± 2.3) Ontario (E) 85.3% (± 2.4)	Manitoba (F) 75.0% (± 2.0) New Brunswick (E) 77.6% (± 2.6) New Brunswick (F) 78.5% (± 2.5) Newfoundland/Labrador 74.8% (± 3.0) Northwest Territories 57.7% (± 2.4) Nova Scotia (E) 75.6% (± 2.7) Nova Scotia (F) 72.8% (± 2.7) Ontario (F) 79.5% (± 2.9) Prince Edward Island 77.9% (± 2.7) Quebec (E) 79.0% (± 2.7) Saskatchewan 75.4% (± 2.8) Yukon 67.6% (± 2.4)
Age 16	Canada (F) 71.7% (± 1.9) Quebec (E) 66.6% (± 3.5) Quebec (F) 74.5% (± 3.0)	Alberta 59.2% (± 3.7) British Columbia 57.0% (± 3.7) Canada 60.6% (± 0.9) Canada (E) 57.7% (± 1.1) Manitoba (E) 60.0% (± 3.3) New Brunswick (E) 58.4% (± 3.2) New Brunswick (F) 56.4% (± 3.3) Newfoundland/Labrador 58.2% (± 3.7) Ontario (E) 57.5% (± 3.6) Saskatchewan 57.1% (± 3.1)	Manitoba (F) 42.3% (± 3.5) Northwest Territories 43.0% (± 3.8) Nova Scotia (E) 52.8% (± 3.5) Nova Scotia (F) 42.8% (± 4.1) Ontario (F) 44.8% (± 4.2) Prince Edward Island 51.8% (± 3.5) Yukon 50.8% (± 3.7)

² In the absence of data for Ontario overall, we have used the results for Ontario (English) for comparison purposes. Because of the relative sizes of the English and French populations, statistics for Ontario overall would have been virtually identical to the statistics for Ontario (English).

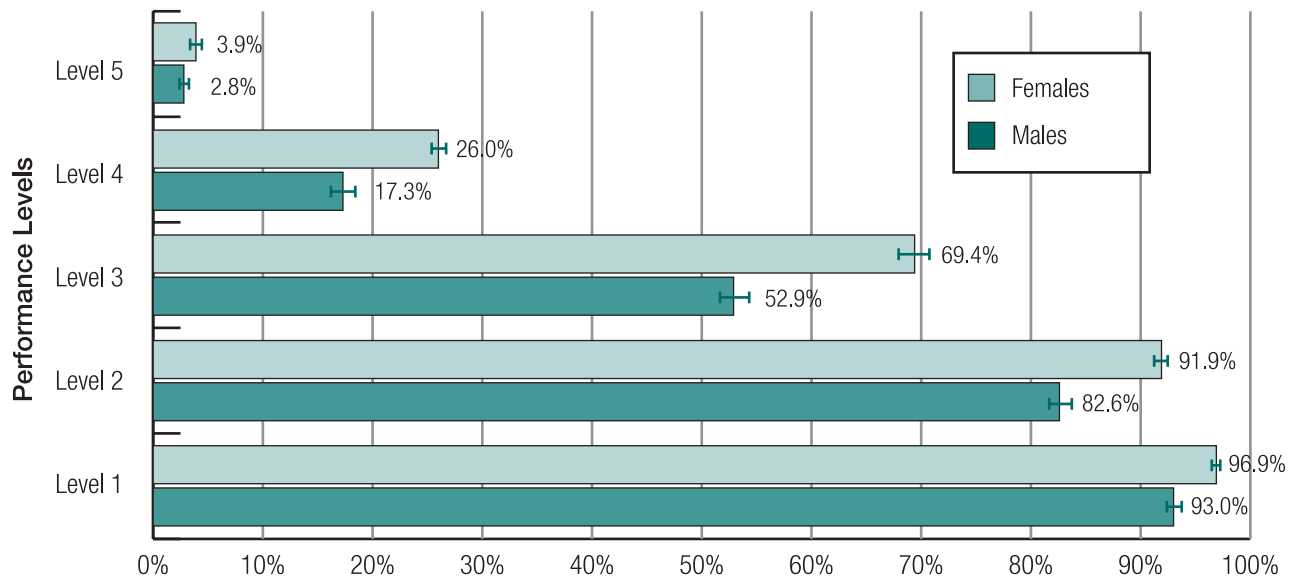
- The above groupings take sampling error and confidence intervals into account. Refer to the appendix for a description of the standard error statistic, confidence interval and significant difference.
- Levels 2 and 3 are highlighted because, in designing SAIP, the program developers established the principle that most 13-year-olds would meet the criteria for Level 2 and most 16-year-olds would meet the criteria for Level 3.
- “(E)” and “(F)” refer to English and French, respectively.

Gender Comparisons

SAIP Writing 2002—Percentage of 13-Year-Olds by Performance Level and by Gender



SAIP Writing 2002—Percentage of 16-Year-Olds by Performance Level and by Gender



Results for Ontario

The following chart indicates how the student achievement results for the provinces and territories (and Canada overall) compare with Ontario (English).³ The groupings are derived from the proportions of 13- and 16-year-old students attaining achievement Level 2 or above and Level 3 or above, respectively.

Provinces and Territories Compared with Ontario (English)

(Percentage of 13-Year-Olds, Level 2 and Above; Percentage of 16-Year-Olds, Level 3 and Above)

	Higher Than Ontario (English)	Same As Ontario (English)	Lower Than Ontario (English)
Age 13		Alberta 82.6% (± 2.7) British Columbia 80.8% (± 2.7) Canada 83.5% (± 0.7) Canada (E) 82.4% (± 0.8) Canada (F) 87.3% (± 1.2) Manitoba (E) 83.0% (± 2.3) Ontario (E) 85.3% (± 2.4) Quebec (F) 88.4% (± 2.2)	Manitoba (F) 75.0% (± 2.0) New Brunswick (E) 77.6% (± 2.6) New Brunswick (F) 78.5% (± 2.5) Newfoundland/Labrador 74.8% (± 3.0) Northwest Territories 57.7% (± 2.4) Nova Scotia (E) 75.6% (± 2.7) Nova Scotia (F) 72.8% (± 2.7) Ontario (F) 79.5% (± 2.9) Prince Edward Island 77.9% (± 2.7) Quebec (E) 79.0% (± 2.7) Saskatchewan 75.4% (± 2.8) Yukon 67.6% (± 2.4)
Age 16	Canada (F) 71.7% (± 1.9) Quebec (E) 66.6% (± 3.5) Quebec (F) 74.5% (± 3.0)	Alberta 59.2% (± 3.7) British Columbia 57.0% (± 3.7) Canada 60.6% (± 0.9) Canada (E) 57.7% (± 1.1) Manitoba (E) 60.0% (± 3.3) New Brunswick (E) 58.4% (± 3.2) New Brunswick (F) 56.4% (± 3.3) Newfoundland/Labrador 58.2% (± 3.7) Nova Scotia (E) 52.8% (± 3.5) Ontario (E) 57.5% (± 3.6) Prince Edward Island 51.8% (± 3.5) Saskatchewan 57.1% (± 3.1) Yukon 50.8% (± 3.7)	Manitoba (F) 42.3% (± 3.5) Northwest Territories 43.0% (± 3.8) Nova Scotia (F) 42.8% (± 4.1) Ontario (F) 44.8% (± 4.2)

³ In the absence of data for Ontario overall, we have used the results for Ontario (English) for comparison purposes. Because of the relative sizes of the English and French populations, statistics for Ontario overall would have been virtually identical to the statistics for Ontario (English).

- The above groupings take sampling error and confidence intervals into account. Refer to the appendix for a description of the standard error statistic, confidence interval and significant difference.
- Levels 2 and 3 are highlighted because, in designing SAIP, the program developers established the principle that most 13-year-olds would meet the criteria for Level 2 and most 16-year-olds would meet the criteria for Level 3.
- “(E)” and “(F)” refer to English and French, respectively.

Summary of Results

- In writing, Ontario 13- and 16-year-old English-language students performed the same as English Canada.
- The vast majority (approximately 85%) of Ontario (English) 13-year-olds performed at Level 2 or above. Nearly one-half (approximately 43%) of the 13-year-olds performed at Level 3 or above.
- A majority of Ontario (English) 16-year-olds (approximately 58%) performed at Level 3 or above. Approximately 18% performed at Level 4 or 5.
- No Canadian jurisdiction scored higher than Ontario (English) 13-year-olds.
- Only Quebec (English and French) and Canada (French) scored higher than Ontario (English) 16-year-olds.
- Ontario (French) 13- and 16-year-olds' performance was lower than Canada overall.
- More than three-quarters (approximately 79%) of Ontario (French) 13-year-olds performed at Level 2 or above. Nearly one-third (approximately 30%) performed at Level 3 or above.
- Nearly one-half (approximately 45%) of Ontario (French) 16-year-olds performed at Level 3 or above. Approximately 11% performed at Level 4 or 5.
- The results of the 2002 SAIP Writing Assessment III reinforce the findings of other national and international assessments, namely that girls demonstrate a higher level of proficiency in writing than boys.

International Assessments

At the international level, Ontario has participated and/or is participating in a variety of assessments, including the International Association for the Evaluation of Educational Achievement's (IEA's) TIMSS (1995, 1999 and 2003), the Second Information Technology in Education Study (1998 and 2001) and PIRLS (2001, 2006), as well as the Organisation for Economic Co-operation and Development's PISA 2000 (reading), 2003 (mathematics) and 2006 (science).

These assessments test randomly selected samples of students at different ages and grades depending upon the study. As a result, reporting is at the provincial, national and international levels only. Individual student, school and school board data are unavailable.

PIRLS 2001

Background

PIRLS is a newly developed assessment of Grade 4 students' reading achievement, designed to measure trends in reading literacy with respect to two major reading purposes—literary and informational. PIRLS is based on the IEA's 1991 Reading Literacy Study, in which Ontario did not participate. Three PIRLS assessments have been planned. The first took place in 2001, with future assessments planned for 2006 and 2009. PIRLS provides data that are complementary to the IEA's TIMSS, which also assesses Grade 4 students.

Participants

The following 35 countries participated in PIRLS 2001.

Argentina	Hungary	New Zealand
Belize	Iceland	Norway
Bulgaria	Iran, Islamic Republic of	Romania
Canada (Ontario and Quebec)	Israel	Russian Federation
Colombia	Italy	Scotland
Cyprus	Kuwait	Singapore
Czech Republic	Latvia	Slovak Federation
England	Lithuania	Slovenia
France	Macedonia, Republic of	Sweden
Germany	Moldova, Republic of	Turkey
Greece	Morocco	United States
Hong Kong	Netherlands	

The Ontario Context

In Canada, only Ontario and Quebec participated in this assessment, which the two provinces administered in partnership. In the spring of 2001, each province conducted the study with a random sample of about 200 schools (English- and French-language), involving approximately 4000 9- and 10-year-old students from each province. Sufficient data were collected to report on the reading achievement of Grade 4 students from both linguistic groups in each province.

Data Sources

Data were collected by means of student assessment booklets and questionnaires. Each student completed one of eight test booklets and a student questionnaire during a testing time of 80 minutes for the assessment and an additional 15–30 minutes for the questionnaire. A “Learning to Read Survey” was administered to parents or primary caregivers; a Teacher Questionnaire was administered to the language teacher of the students tested and a School Questionnaire was completed by the principal, to provide a more complete picture of the students’ learning context.

Reporting Scales

In the PIRLS 2001 International Report, released in April 2003 by the International Study Center at Boston College, students’ performance is expressed as a score on a scale from 0 to 1000, with an international average of 500. The international report can be viewed on the PIRLS Web site, <http://timss.bc.edu>, under “Publications.” Reports and information related to other IEA studies can be viewed on the IEA Web site, www.iea.nl.

Reading Literacy in PIRLS

PIRLS defines reading literacy as “the ability to understand and use those written language forms required by society and/or valued by the individual. Young readers can construct meaning for a variety of texts. They read to learn, to participate in communities of readers, and for enjoyment.”

PIRLS focuses on three aspects of reading literacy:

- purposes for reading (for personal interest or pleasure, to participate in society, to learn);
- processes of comprehension and
- reading behaviours and attitudes.

Test Structure

Purposes for reading and processes of comprehension are the foundation for the PIRLS assessment of reading comprehension. Below are the percentages of the reading assessment devoted to these two aspects.

Purposes for reading are divided into two categories:

1. acquire and use information (50%) and
2. literary experience (50%).

The following processes of comprehension are assessed by PIRLS:

1. focus on and retrieve explicitly stated information (20%);
2. make straightforward inferences (30%);
3. interpret and integrate ideas and information (30%) and
4. examine and evaluate content, language and textual elements (20%).

Reading behaviours and attitudes are assessed through the various questionnaires.

Curriculum Match

The content of the PIRLS assessment is reflected in the expectations up to and including Grade 4 in *The Ontario Curriculum, Grades 1–8: Language*. The two general PIRLS purposes for reading categories—literary experience and acquire and use information—reflect the overall Ontario curriculum expectation “read a variety of fiction and non-fiction materials for different purposes.” The expectations in specific areas of the Ontario reading curriculum reflect the four processes of comprehension presented in the PIRLS assessment framework. Thus, the areas of reasoning and critical thinking and understanding of form and style are well reflected in the PIRLS processes of comprehension “make straightforward inferences,” “interpret and integrate ideas and information” and “focus on and retrieve explicitly stated information.” The area of knowledge of language structures and, to a lesser extent, the areas of vocabulary building and use of conventions are reflected in the PIRLS process “examine and evaluate content, language and textual elements.”

Examples of reading passages, questions and scoring guides for both reading “for literary experience” and “to acquire and use information” can be found in Appendix C of the PIRLS 2001 International Report.

Achievement Results

The following charts provide information about Grade 4 students’ achievement in reading. Some of the charts show PIRLS results for participating countries and for Quebec’s results compared with Ontario’s. Some charts show the jurisdictions that scored the same as, higher than or lower than Ontario (within these categories, jurisdictions are listed in alphabetical order). Other charts simply indicate Ontario’s performance compared to the other participating jurisdictions.

Countries' and Provinces' Overall Average Reading Achievement Compared to Ontario's⁴

Higher Than Ontario		Same As Ontario		Lower Than Ontario	
Sweden	561 (2.2)	Bulgaria	550 (3.8)	Argentina	420 (5.9)
		Canada (ON and QC)	544 (2.4)	Belize	327 (4.7)
		England	553 (3.4)	Colombia	422 (4.4)
		Hungary	543 (2.2)	Cyprus	494 (3.0)
		Italy	541 (2.4)	Czech Republic	537 (2.3)
		Latvia	545 (2.3)	France	525 (2.4)
		Lithuania	543 (2.6)	Germany	539 (1.9)
		Netherlands	554 (2.5)	Greece	524 (3.5)
		Ontario	548 (3.3)	Hong Kong	528 (3.1)
		Ontario (English)	550 (3.3)	Iceland	512 (1.2)
		Quebec (English)	543 (3.5)	International Avg.	500 (0.6)
		United States	542 (3.8)	Iran, Islamic Rep. of	414 (4.2)
				Israel	509 (2.8)
				Kuwait	396 (4.3)
				Macedonia	442 (4.6)
				Moldova, Rep. of	492 (4.0)
				Morocco	350 (9.6)
				New Zealand	529 (3.6)
				Norway	499 (2.9)
				Ontario (French)	494 (4.2)
				Quebec	537 (3.0)
				Quebec (French)	537 (3.3)
				Romania	512 (4.6)
				Russian Federation	528 (4.4)
				Scotland	528 (3.6)
				Singapore	528 (5.2)
				Slovak Republic	518 (2.8)
				Slovenia	502 (2.0)
				Turkey	449 (3.5)

⁴ Overall average reading achievement scale scores are provided for each jurisdiction; standard error statistics are provided in parentheses. Please refer to the appendix for an explanation of the terms "standard error statistic," "confidence interval" and "significant difference."

Because results are rounded to the nearest whole number, the categorization of some jurisdictions may appear to be inconsistent.

Countries' and Provinces' Average Achievement in Reading for Informational Purposes Compared to Ontario's⁵

Higher Than Ontario		Same As Ontario		Lower Than Ontario	
Bulgaria	551 (3.6)	Canada (ON and QC)	541 (2.4)	Argentina	422 (5.4)
Netherlands	553 (2.6)	Czech Republic	536 (2.7)	Belize	332 (4.9)
Sweden	559 (2.2)	England	546 (3.6)	Colombia	424 (4.3)
		Germany	538 (1.9)	Cyprus	490 (3.0)
		Hong Kong	537 (2.9)	France	533 (2.5)
		Hungary	537 (2.2)	Greece	521 (3.7)
		Italy	536 (2.4)	Iceland	504 (1.5)
		Latvia	547 (2.3)	International Avg.	500 (0.7)
		Lithuania	540 (2.7)	Iran, Islamic Rep. of	408 (4.6)
		Ontario	542 (3.2)	Israel	507 (2.9)
		Ontario (English)	544 (3.3)	Kuwait	403 (4.5)
		Quebec	541 (2.9)	Macedonia	445 (5.2)
		Quebec (French)	541 (3.3)	Moldova, Rep. of	505 (4.7)
		Quebec (English)	539 (4.0)	Morocco	358 (10.9)
		Russian Federation	531 (4.3)	New Zealand	525 (3.8)
		United States	533 (3.7)	Norway	492 (2.8)
				Ontario (French)	501 (4.2)
				Romania	512 (4.6)
				Scotland	527 (3.6)
				Singapore	527 (4.8)
				Slovak Republic	522 (2.7)
				Slovenia	503 (1.9)
				Turkey	452 (3.8)

⁵ Average achievement in reading for informational purposes scale scores are provided for each jurisdiction; standard error statistics are provided in parentheses. Please refer to the appendix for an explanation of the terms "standard error statistic," "confidence interval" and "significant difference."

Because results are rounded to the nearest whole number, the categorization of some jurisdictions may appear to be inconsistent.

Countries' and Provinces' Average Achievement in Reading for Literary Purposes Compared to Ontario's⁶

Higher Than Ontario		Same As Ontario		Lower Than Ontario	
Sweden	559 (2.4)	Bulgaria	550 (3.9)	Argentina	419 (5.8)
		Canada (ON and QC)	545 (2.6)	Belize	330 (4.9)
		England	559 (3.9)	Colombia	425 (4.2)
		Hungary	548 (2.0)	Cyprus	498 (2.5)
		Italy	543 (2.7)	Czech Republic	535 (2.3)
		Lithuania	546 (3.1)	France	518 (2.6)
		Netherlands	552 (2.5)	Germany	537 (1.9)
		Ontario	551 (3.3)	Greece	528 (3.3)
		Ontario (English)	553 (3.5)	Hong Kong	518 (3.1)
		Quebec (English)	546 (4.2)	Iceland	520 (1.3)
		United States	550 (3.8)	International Avg.	500 (0.6)
				Iran, Islamic Rep. of	421 (4.5)
				Israel	510 (2.6)
				Kuwait	394 (3.8)
				Latvia	537 (2.2)
				Macedonia	441 (4.5)
				Moldova, Rep. of	480 (3.7)
				Morocco	347 (8.4)
				New Zealand	531 (3.9)
				Norway	506 (2.7)
				Ontario (French)	488 (4.3)
				Quebec	534 (3.0)
				Quebec (French)	533 (3.4)
				Romania	512 (4.7)
				Russian Federation	523 (3.9)
				Scotland	529 (3.5)
				Singapore	528 (5.6)
				Slovak Republic	512 (2.6)
				Slovenia	499 (1.8)
				Turkey	448 (3.4)

⁶ Average achievement in reading for literary purposes scale scores are provided for each jurisdiction; standard error statistics are provided in parentheses. Please refer to the appendix for an explanation of the terms "standard error statistic," "confidence interval" and "significant difference."

Because results are rounded to the nearest whole number, the categorization of some jurisdictions may appear to be inconsistent.

Countries' and Provinces' Percentages of Students Reaching PIRLS International Benchmarks in Overall Reading Achievement

Countries and Provinces	Top 10% Benchmark	Upper Quarter Benchmark	Median Benchmark	Lower Quarter Benchmark
England	24 (1.6)	45 (1.9)	72 (1.6)	90 (1.0)
Bulgaria	21 (1.3)	45 (1.9)	72 (1.9)	91 (1.1)
Sweden	20 (1.1)	47 (1.4)	80 (1.3)	96 (0.5)
United States	19 (1.3)	41 (2.0)	68 (2.0)	89 (1.2)
Ontario	19 (1.4)	40 (1.8)	70 (1.6)	92 (0.8)
New Zealand	17 (1.4)	35 (1.7)	62 (1.9)	84 (1.3)
Canada (ON, QC)	16 (1.0)	37 (1.3)	69 (1.3)	93 (0.6)
Singapore	15 (1.5)	35 (2.3)	64 (2.3)	85 (1.6)
Netherlands	14 (1.0)	40 (1.7)	79 (1.5)	98 (0.5)
Italy	14 (1.0)	36 (1.3)	69 (1.5)	92 (0.8)
Scotland	14 (1.1)	32 (1.8)	62 (1.8)	87 (1.1)
Hungary	13 (0.9)	36 (1.5)	71 (1.2)	94 (0.6)
Lithuania	13 (1.4)	36 (1.7)	71 (1.7)	95 (0.6)
Latvia	12 (1.1)	36 (1.6)	73 (1.5)	96 (0.6)
Germany	12 (0.8)	34 (1.3)	69 (1.2)	93 (0.6)
Israel	11 (0.8)	28 (1.2)	54 (1.4)	79 (1.1)
Quebec	11 (1.0)	31 (1.8)	67 (2.0)	94 (0.8)
Romania	11 (1.3)	27 (2.0)	54 (2.1)	81 (1.7)
Czech Republic	10 (0.9)	32 (1.5)	68 (1.5)	93 (0.7)
Greece	10 (0.8)	28 (2.0)	60 (2.2)	89 (1.2)
France	9 (0.9)	26 (1.2)	60 (1.4)	90 (0.9)
Russian Federation	8 (1.0)	27 (2.1)	64 (2.3)	92 (1.6)
Slovak Republic	7 (1.0)	23 (1.4)	59 (1.7)	88 (1.1)
Iceland	7 (0.6)	23 (1.0)	53 (1.0)	85 (0.8)
Hong Kong	6 (0.7)	26 (1.7)	64 (1.9)	92 (1.1)
Norway	6 (0.9)	19 (1.2)	48 (1.4)	80 (1.4)
Cyprus	6 (0.8)	18 (1.3)	45 (1.6)	77 (1.4)
Slovenia	4 (0.5)	17 (1.0)	48 (1.2)	83 (0.9)
Moldova, Rep. of	4 (0.9)	15 (1.8)	42 (2.5)	79 (1.7)
Macedonia, Rep. of	3 (0.4)	10 (0.9)	28 (1.5)	55 (2.1)
Turkey	2 (0.3)	7 (0.9)	25 (1.6)	58 (1.7)
Argentina	2 (0.4)	5 (0.8)	17 (1.6)	46 (2.5)
Iran, Islamic Rep. of	1 (0.2)	4 (0.5)	16 (1.4)	42 (1.9)
Colombia	1 (0.4)	3 (0.8)	14 (1.5)	45 (2.4)
Morocco	1 (0.9)	3 (1.4)	8 (2.1)	23 (3.0)
Kuwait	0 (0.1)	2 (0.4)	10 (1.1)	36 (2.0)
Belize	0 (0.2)	1 (0.4)	5 (0.6)	16 (1.3)

Top 10% benchmark (90th percentile) = scale score of 615

Upper quarter benchmark (75th percentile) = scale score of 570

Median benchmark (50th percentile) = scale score of 510

Lower quarter benchmark (25th percentile) = scale score of 435

Countries' and Provinces' Average Reading Achievement by Gender⁷

Countries	Girls	Boys	Achievement Difference
Italy	545 (2.6)	537 (2.7)	8 (2.5)
France	531 (2.7)	520 (3.0)	11 (3.3)
Colombia	428 (5.1)	416 (4.7)	12 (4.3)
Russian Federation	534 (4.3)	522 (4.8)	12 (2.3)
Czech Republic	543 (2.8)	531 (2.6)	12 (2.8)
Germany	545 (2.2)	533 (2.5)	13 (2.7)
Quebec (English)	550 (3.7)	537 (4.1)	13 (3.3)
Romania	519 (4.2)	504 (5.7)	14 (3.8)
Quebec	544 (3.4)	530 (3.1)	14 (2.7)
Hungary	550 (2.4)	536 (2.5)	14 (2.1)
Netherlands	562 (2.7)	547 (2.8)	15 (2.2)
Slovak Republic	526 (3.0)	510 (3.3)	16 (3.0)
Quebec (French)	545 (3.8)	529 (3.5)	16 (3.2)
Lithuania	552 (3.0)	535 (2.7)	17 (2.7)
Scotland	537 (3.9)	519 (4.2)	17 (4.0)
Canada (ON and QC)	553 (2.6)	536 (2.6)	17 (2.1)
United States	551 (3.8)	533 (4.9)	18 (4.1)
Ontario (French)	503 (4.7)	485 (4.8)	18 (4.4)
Argentina	428 (6.2)	410 (6.5)	18 (4.7)
Hong Kong	538 (3.0)	519 (3.5)	19 (2.9)
Iceland	522 (1.9)	503 (1.5)	19 (2.4)
Ontario (English)	560 (3.8)	541 (3.3)	19 (2.8)
Turkey	459 (4.0)	440 (3.7)	19 (3.1)
International Avg.	510 (0.7)	490 (0.7)	20 (0.7)
Ontario	558 (3.8)	538 (3.4)	20 (2.7)
Morocco	361 (9.6)	341 (10.9)	20 (6.8)
Greece	535 (3.8)	514 (4.0)	21 (3.9)
Macedonia, Rep. of	452 (5.1)	431 (4.8)	21 (3.6)
Norway	510 (3.5)	489 (3.4)	21 (3.9)
Slovenia	512 (2.5)	491 (2.4)	22 (2.8)
Latvia	556 (3.1)	534 (2.6)	22 (3.4)
Israel	520 (3.4)	498 (3.7)	22 (4.3)
Sweden	572 (2.6)	550 (2.5)	22 (2.6)
England	564 (3.9)	541 (3.7)	22 (3.3)
Cyprus	506 (3.3)	482 (3.6)	24 (3.5)
Bulgaria	562 (3.7)	538 (4.7)	24 (3.6)
Singapore	540 (5.3)	516 (5.7)	24 (4.1)
Moldova, Rep. of	504 (4.7)	479 (4.0)	25 (4.0)
New Zealand	542 (4.7)	516 (4.2)	27 (5.4)
Iran, Islamic Rep. of	426 (5.7)	399 (5.6)	27 (8.1)
Belize	341 (5.3)	314 (5.2)	27 (4.8)
Kuwait	422 (5.6)	373 (6.3)	48 (8.4)

⁷ Average reading achievement scale scores are provided for each jurisdiction by gender; standard error statistics are provided in parentheses. Please refer to the appendix for an explanation of the terms "standard error statistic," "confidence interval" and "significant difference."

Summary of Results

- Ontario Grade 4 students performed near the top in overall reading achievement compared to 35 countries worldwide. Only Sweden performed significantly better than Ontario in overall reading achievement and achievement in reading for literary purposes.
- Only Bulgaria, the Netherlands and Sweden outperformed Ontario in achievement in reading for informational purposes.
- Ontario students performed statistically better in reading for literary purposes than they did for informational purposes.
- Ontario Grade 4 French-language students scored significantly lower than Ontario Grade 4 English-language students in overall reading achievement and reading achievement for literary and informational purposes.
- Approximately one-fifth (19%) of Ontario Grade 4 students reached the top 10% benchmark. Forty percent reached the upper quarter benchmark, defined as the 75th percentile. Statistically, only Sweden, Bulgaria and England outperformed Ontario on these indicators.
- In all countries and provinces, Grade 4 girls performed significantly better than Grade 4 boys in reading achievement. In Ontario, there was a 20-point difference favouring the girls. This trend was found in Ontario in reading for both literary and informational purposes.
- Based on parents' responses to statements about the following activities: "read books," "tell stories," "sing songs," "play with alphabet toys," "play word games" and "read aloud signs and labels," 67% of Canadian (Ontario and Quebec) students were in the high early home literacy activities (EHLA) category. The average achievement of these students was significantly higher than students who were in the medium or low EHLA categories. This positive relationship was found in every country.
- In Canada (Ontario and Quebec), as well as in most other countries, there was a strong relationship between speaking the language of the PIRLS test at home and performance on the PIRLS test.
- Across countries, Grade 4 students from high home educational resources (HER) homes (number of books and children's books in the home; available educational aids such as computer, desk and daily newspaper; and parents' education) had higher reading achievement than those from low HER homes. This was also true in Canada (Ontario and Quebec), where a significant difference was found between students with high HER and students with medium or low HER.
- Internationally, average reading achievement was considerably higher—40 scale-score points—for students from homes that were less than 10% economically disadvantaged than for students from homes that were more than 50% economically disadvantaged. This trend was found in Canada (Ontario and Quebec), where almost half of the students were in the first category.
- Canadian (Ontario and Quebec) students who had attended more than two years of preprimary education performed significantly better than students who had attended one to two years, one year or less or had not attended preprimary education. Internationally, average reading achievement was highest among those who attended preschool for more than two years (523 points).
- In Canada (Ontario and Quebec), approximately 60% of students attended schools that were in the high category in an index based on principals' characterizations of school climate. These students had significantly higher average achievement than students who attended schools where the perception of school climate was less positive. This trend is also found internationally.
- About half of Canadian (Ontario and Quebec) students (54%) had a positive attitude toward reading. As they did in all other countries, students with the most positive attitudes and with a positive reading self-concept had the highest reading achievement.

Conclusion

Ontario's 13- and 16-year-olds performed as well as or better than most Canadian jurisdictions in the SAIP Writing 2002 national assessment. Ontario 16-year-olds were outperformed only by Quebec 16-year-olds.

As in other international assessments, such as TIMSS and PISA, in the PIRLS assessment, Ontario Grade 4 students were part of a cluster of countries that performed near the top of the 35 countries worldwide in overall reading achievement. Only Sweden performed significantly better than Ontario.

Recommendations

EQAO will

- ensure that Ontario schools and school boards are aware of national and international assessment programs, and promote participation and the programs' value;
- encourage schools and boards to use the provincial (Grades 3, 6 and 9, and OSSLT), national (SAIP) and international (TIMSS, PIRLS, PISA) reports on achievement to develop a more comprehensive understanding of their students' achievement;
- facilitate the understanding and use of the achievement data gathered through national and international assessments and encourage the undertaking of related research projects and
- ensure that schools and boards are made aware of research projects that may be of value or interest to them.

Appendix

Standard Error Statistic, Confidence Interval and Significant Difference

In both SAIP and PIRLS, the average achievement scale scores are based on samples of students; therefore, they are only estimates of the actual average achievement scale scores students would have demonstrated had they all taken the assessment. Because an estimate is rarely exact, it is common practice to provide a range of scores within which the actual achievement results might fall. This range of scores is called a **confidence interval** and represents the high- and low-end points between which the actual achievement results should fall 95% of the time. The high- and low-end points are calculated by multiplying the **standard error statistic** by 1.96. In the reports, the confidence interval is presented in parentheses alongside the achievement score.

One can be confident that the actual achievement score of students would fall somewhere within the established range 19 times out of 20 if the assessment were repeated with a different sample of students. If the confidence intervals of the jurisdictions overlap, we can conclude that there is no statistically significant difference in their achievement scores.

In this report, the term “**significant difference**” means that any differences are probably “real” differences and not due to chance.



Education
Quality and
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Office

Highlights Report

School Board Improvement Plan Review, 2003–2004



January 2004



WORKING TOGETHER TO IMPROVE STUDENT LEARNING

The purpose of EQAO is to help improve the quality of education and to ensure greater accountability in the publicly funded education system in Ontario. To support improvements in teaching and learning, EQAO conducts quality reviews in consultation with school boards. The school boards develop plans based on student achievement data to improve their systems; EQAO reviews and evaluates these plans.

In developing improvement plans, school boards consider local assessment and demographic data, Education Quality Indicators Program data from EQAO, report card marks and other information relevant to their students' performance.

The main purpose of the School Board Improvement Plan Review is to provide constructive suggestions to school boards to support their continued efforts to develop and implement board improvement plans that result in improved student achievement.

HIGHLIGHTS OF THE REVIEW

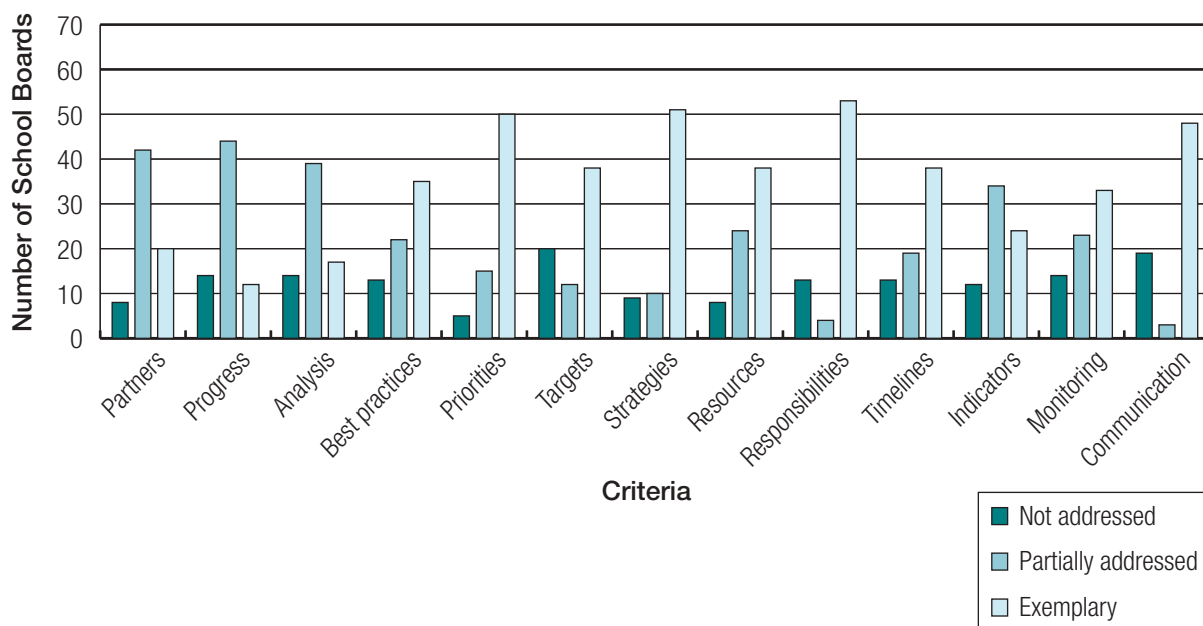
This year, some exemplary plans were received, and progress in school board improvement planning is evident across the province. Traditional planning elements are used well, and improvements can be seen in boards' involvement of education partners in developing, monitoring and revising their improvement plans. There remains considerable room for improvement in many plans, most importantly in basing strategies on findings from provincial or local data, linking strategies to measurable indicators of successful student learning and maintaining these strategies through monitoring, revision and review.

CRITERIA

Each board improvement plan was reviewed in consideration of the presence and quality of the following criteria:

- **Partners:** Involves education partners in improvement planning, including parents/school councils
- **Progress:** Provides information about progress on improvements and implementation of past improvement plans
- **Analysis:** Analyzes provincial and board assessment results and interprets data according to local context
- **Best Practices:** Identifies and communicates best practices (procedures and strategies that are working well)
- **Priorities:** Identifies areas for improvement and determines priorities
- **Targets:** Specifies goals and performance targets/expected results for areas of focus
- **Strategies:** Describes specific actions to improve student learning and achievement, which are based on findings from the data
- **Resources:** Identifies the human and material resources required to implement the improvement plan
- **Responsibilities:** Identifies who will be responsible for implementing each phase of the improvement plan
- **Timelines:** Provides appropriate and realistic timelines in a multi-year improvement plan
- **Indicators:** Identifies indicators of success for the performance targets/expected results in the areas of focus, e.g., attention to curriculum
- **Monitoring:** Describes how the improvement plan will be regularly monitored and revised if necessary
- **Communication:** Includes mechanisms for sharing the improvement plan and communicating widely with the school community

Review of 2003–2004 School Board Improvement Plans



RESULTS OF THE REVIEW

Provincial findings for the review of 2003–2004 school board improvement plans are summarized in the graph above. It shows the number of school board improvement plans that addressed each of the 13 criteria in exemplary fashion, partially and not at all.

OBSERVATIONS

- For future progress on the quality of plans province-wide, there is a need to focus clearly on the strategies' impact on the desired result: improved student learning. This focus makes the direct link between planning and the success of previous strategies or the lessons learned from failed strategies. Planning itself is not the goal of the task; the goal is improved student learning. Examining why strategies succeed or fail is a critical component.
- Increases since last year are evident in the number of school board improvement plans that report involvement of education partners in improvement planning and identify human and material resources. There is a particular increase in the number of plans that describe how the plan is monitored and revised, some including partners in this process. Increased monitoring represents important progress, as high-quality monitoring and revision are hallmarks of an effective, useful and well-used improvement plan. A continuous cycle of monitoring is critical to success in improving education in Ontario.
- In some plans, misinterpretation of data is evident, indicating the continued need for training in the use of assessment data for diagnosis and planning, though this strategy does not often appear in plans.
- There is still an urgent need for boards to give high priority to students and schools not achieving Level 3, the provincial standard, particularly those students achieving Level 1.
- Relationships are important for the creation of a strong, positive organizational culture. Research has shown that strong student-teacher relationships correlate positively with high student achievement. There is little reference in the improvement plans to this important aspect of school culture.
- It remains true that although there is an emphasis on professional development for teachers and to some extent for principals, it is primarily focused on how to implement the new strategy. The plans need to address ways to support educational practice, change relationships, change school culture, set performance targets and expected results and use assessment data. They must address the higher-level issues, not just the training for specific initiatives.
- Approaches to improvement planning vary across the province from entirely system-directed, through iterative (system direction>school needs> system

supports), to system plans that are “roll-ups” of school initiatives. System supports available, geography, funding, size of student population or number of schools and school-centred philosophies may be some of the factors contributing to these differences. Sharing of planning resources may be helpful in reaching a uniform, effective approach to improvement planning.

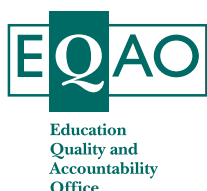
- The readability of the improvement plans, and thus their accessibility by a wider audience, has improved this year. This indicates a serious commitment to community involvement in school board improvement planning, which bodes well for future progress.

Recommendations

EQAO recommends that boards develop improvement plans that

- **focus on improving student learning** as demonstrated in local assessment and provincial assessment results, including both immediate and longer-term goals.
- **provide evidence that education partners**, particularly parents and school councils, are involved in the development, monitoring and sharing or communication of the improvement plan, and describe their roles.
- **include information about progress** or lack of progress (what has worked and what hasn't) from past improvement plans, in both implementation and student results; examine the reasons and use them to inform future plans.
- **include support for changing instructional practice** based on research and best practices.
- **include support for professional development** or training in assessment literacy and, in particular, in using assessment data along with best practices to develop strategies for improvement.
- focus on improving achievement for all students, with specific strategies for **students at risk in literacy and numeracy**, with reference to at-risk initiatives at the local level.
- provide information about areas for improvement, priorities, strategies, results, etc., at both the **elementary and the secondary levels**.
- **include measurable indicators** of success linked to both the strategies and the performance targets or expected results, in order to judge whether they are working.
- **identify the board's role in shaping the culture of the system and the school**, including fostering positive relationships between students and teachers, teachers and parents, school boards and schools, and schools and boards and their communities.
- provide details of how, when, why (results-focused data) and by whom the plan will be **regularly monitored and revised** if necessary.
- are written to be **understood by and useful to** the general public and shared successfully with education partners in the community.
- are **reviewed by school councils** for adherence to the criteria for successful improvement planning.

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School Board Improvement Plan Review *2003–2004*

Report of Provincial Results

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Results at a Glance

Highlights of the Review

All English- and French-language school boards submitted improvement plans to the Education Quality and Accountability Office (EQAO) for the 2003–2004 school year. These plans were assessed accordingly to 13 criteria, and boards will receive individual qualitative feedback. This year, some exemplary plans were received, and progress in school board improvement planning is evident across the province. Traditional planning elements are used well, and improvements can be seen in boards' involvement of education partners in developing, monitoring and revising their improvement plans. There remains considerable room for improvement in many plans, most importantly in basing strategies on findings from provincial or local data, linking strategies to measurable indicators of successful student learning and maintaining these strategies through monitoring, revision and review. The following key messages and recommendations reflect both the strengths of the plans and the areas in which continuing improvement is recommended. All school board improvement plans will be available on the EQAO Web site, www.eqao.com, for reference.

Key Messages

School board plans continue to display strengths in the traditional elements of planning: what to do, how to do it and who is involved. However, the criteria for data-based planning are not addressed consistently enough for real improvement in student learning. This is evident in the following summary.

Over 70% of the school board improvement plans addressed the following criteria in exemplary fashion:

- Identifying areas for improvement and determining **priorities**.
- Describing specific **actions** for improving student learning and achievement.
- Identifying who will be **responsible** for implementing each phase of the improvement plan.

- Including mechanisms for sharing the improvement plan and **communicating** widely with the school community (achieved primarily through posting of plans on Web sites).

Approximately 50% of the school board improvement plans addressed the following criteria in exemplary fashion:

- Identifying and communicating **best practices** (procedures and strategies that are working well).
- Specifying goals and performance **targets**/expected results for areas of focus.
- Identifying the human and material **resources** required to implement the improvement plan.
- Providing appropriate and realistic **timelines** in a multi-year improvement plan.

Fewer than 50% of the school board improvement plans addressed the following criteria in exemplary fashion:

- Involving education **partners** in improvement planning, including parents/school councils.
- Providing information about **progress** on improvements and implementation of past improvement plans.
- **Analyzing** provincial and board assessment results and interpreting data according to local context.
- Identifying **measurable indicators** of success for the performance targets/expected results in the areas of focus.
- Describing how the improvement plan will be regularly **monitored** and revised if necessary.

The Results of the Review section details the areas of strength in the improvement plans and the areas in which the quality of planning needs attention.

Recommendations

EQAO recommends that boards develop improvement plans that

- **focus on improving student learning** as demonstrated in local assessment and provincial assessment results, including both immediate and longer-term goals.
- **provide evidence that education partners**, particularly parents and school councils, are involved in the development, monitoring and sharing or communication of the improvement plan, and describe their roles.
- **include information about progress** or lack of progress (what has worked and what hasn't) from past improvement plans, in both implementation and student results; examine the reasons and use them to inform future plans.
- **include support for changing instructional practice** based on research and best practices.
- **include support for professional development** or training in assessment literacy and, in particular, in using assessment data along with best practices to develop strategies for improvement.
- focus on improving achievement for all students, with specific strategies for **students at risk in literacy and numeracy**, with reference to at-risk initiatives at the local level.
- provide information about areas for improvement, priorities, strategies, results, etc., at both the **elementary and the secondary levels**.
- **include measurable indicators** of success linked to both the strategies and the performance targets or expected results, in order to judge whether they are working.
- **identify the board's role in shaping the culture of the system and the school**, including fostering positive relationships between students and teachers, teachers and parents, school boards and schools, and schools and boards and their communities.
- provide details of how, when, why (results-focused data) and by whom the plan will be **regularly monitored and revised** if necessary.
- are written to be **understood by and useful to** the general public and shared successfully with education partners in the community.
- are **reviewed by school councils** for adherence to the criteria for successful improvement planning.

Introduction

Background

The purpose of EQAO is to help improve the quality of education and to ensure greater accountability in the publicly funded education system in Ontario. To support improvements in teaching and learning, EQAO conducts quality reviews in consultation with school boards. The school boards develop plans based on student achievement data to improve their systems; EQAO reviews and evaluates these plans.

The provincial requirement for boards to submit improvement plans was initiated in the 1998–1999 school year. Each school board is expected to develop and release a board-wide plan for fostering and supporting improved student achievement. Parents, school councils and other community members help analyze the achievement and contextual data and participate in the development, monitoring, revision and communication of the school board's improvement plan. Provincial student assessment results are used in conjunction with a wide range of additional information to inform improvement planning. In developing improvement plans, school boards consider local assessment and demographic data, Education Quality Indicators Program data from EQAO, report card marks and other information relevant to their students' performance.

EQAO supports school and board improvement planning by providing suggestions and procedures for developing and submitting plans and by sharing plans via the EQAO Web site, www.eqao.com.

EQAO's *Provincial Report on Achievement, 1998–1999* includes recommendations for improvement planning for boards. The *Ontario Report and Guide on School Improvement Planning, 1999–2000* reports on system improvement planning practices in Ontario school boards and includes an overview of the directions taken, the main areas of focus and further recommendations to enhance planning. In 2002, EQAO published its *EQAO Guide to School and Board Improvement Planning*. This document describes a generic five-step school and board improvement planning model and lists the major strengths of each board's improvement plan, as well as areas for improvement or future attention. A revised version will be available early in 2004.

School board improvement plans for 2003–2004 were to be submitted to EQAO by October 31, 2003. EQAO did not require that a common template be used for the board plans but provided one on request. EQAO committed to reviewing the plans and sending each board a brief report with suggestions for future plans, as well as to publishing this summary report in the winter of 2004.

School Board Improvement Plan Review, 2003–2004

EQAO developed a School Board Improvement Plan Review Form to ensure consistency and efficiency in reviewing the board improvement plans and writing brief board reports. The criteria for the review reflect the information in the improvement planning guides, identified above, as well as EQAO's *Educator Handbook*. The criteria reflect two other provincial resources, created by the Education Improvement Commission: *The Road Ahead—IV: A Report on Improving Schools Through Greater Accountability* and *School Improvement Planning: A Handbook for Principals, Teachers and School Councils*.

School Board Improvement Plan Review Form

Criteria	Included in Improvement Plan	Comments
Involves education partners in improvement planning, including parents/school councils		
Provides information about progress on improvements and implementation of past improvement plans		
Analyzes provincial and board assessment results and interprets data according to local context		
Identifies and communicates best practices (procedures and strategies that are working well)		
Identifies areas for improvement and determines priorities		
Specifies goals and performance targets/expected results for areas of focus		
Describes specific actions to improve student learning and achievement		
Identifies the human and material resources required to implement the improvement plan		
Identifies who will be responsible for implementing each phase of the improvement plan		
Provides appropriate and realistic timelines in a multi-year improvement plan		
Identifies indicators of success for the performance targets/expected results in the areas of focus		
Describes how the improvement plan will be regularly monitored and revised if necessary		
Includes mechanisms for sharing the improvement plan and communicating widely with the school community		

Each board improvement plan was reviewed, and the presence and quality of the above criteria noted. If a criterion was addressed, the information was examined for quality: the extent to which important details were provided in the plan. The “Comments” column of the form was used for feedback to the boards regarding strengths and suggestions for planning. Finally, each criterion was coded 3 (exemplary: clear and detailed), 2 (partial: some important details missing) or 1 (not addressed: general, vague or no mention in the plan).

All school board improvement plans can be viewed at EQAO's Web site, www.eqao.com.

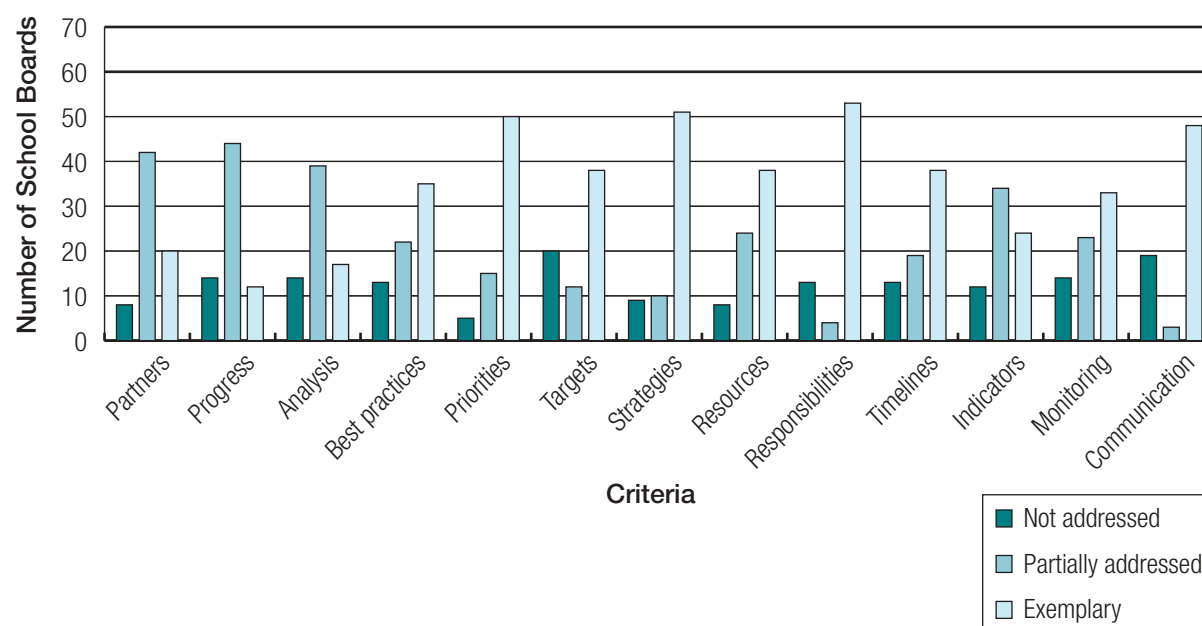
Results of the Review

Introduction

The main purpose of this report is to provide constructive suggestions to school boards to support their continued efforts to develop and implement board improvement plans that result in improved student achievement. For the 2003–2004 school year, 58 of the 60 English-language school boards and all 12 French-language school boards submitted improvement plans to EQAO in time for inclusion in this report.¹ English- and French-language board improvement plans were analyzed separately at first to determine whether the results would vary between the language groups. Following the initial review and analysis, it was clear that there were no important differences between the board improvement plans in the two languages. Consequently, a single report (available in English and in French) summarizes the findings of the English- and French-language school board improvement plan review.

Provincial findings for the review of 2003–2004 school board improvement plans are summarized in the following graph. It shows the number of school board improvement plans that addressed each of the 13 criteria in exemplary fashion, partially and not at all. The detailed findings follow the graph.

Review of 2003–2004 School Board Improvement Plans



¹ Two improvement plans were received too late for inclusion. Some school authorities and provincial and demonstration schools also submitted improvement plans. Although these plans were reviewed and reports returned to the schools, their results have not been included in this summary report.

Results of Review by Criterion

The findings are organized according to the criteria presented in the preceding School Board Improvement Plan Review Form. Data for exemplary practices are preceded by a $\Rightarrow$ for quick reference.

Involving education partners in improvement planning, including parents/school councils

- 62 of the school board improvement plans (89%) address the involvement of education partners in improvement planning.
 - $\Rightarrow$ 20 (29%) describe this element fully, including the roles of multiple partners in analysis and planning.
 - 42 (60%) provide partial descriptions but lack sufficient information about the nature of involvement, do not involve education partners extensively enough, refer to school-level as opposed to board-level involvement or imply but do not specify the role of education partners in improvement planning.
- Eight of the school board improvement plans (11%) make little or no mention of the participation of education partners in improvement planning.

Providing information about progress on improvements and implementation of past improvement plans

- 56 of the board improvement plans (80%) include some information about progress on improvements or implementation of past improvement plans.
 - $\Rightarrow$ 12 board improvement plans (17%) fully address progress toward results or performance targets and success of past actions or strategies and link these to revised or new actions or strategies.
 - 44 (63%) address only one of the elements and/or do not make links to the new actions or strategies.
- 14 of the board improvement plans (20%) provide no information regarding progress toward improvement or implementation of past improvement plans, or they provide only general comments on this criterion.

Analyzing provincial and board assessment results and interpreting data according to local context

- 56 of the school board improvement plans (80%) include information about analyzing provincial and board assessment results and interpreting data according to local context.
 - $\Rightarrow$ 17 (24%) fully describe this element and interpret results in the context of other local data (e.g., assessment and/or report card marks, local demographics).
 - 39 (56%) provide no evidence of the use of local context information in the analysis. In some cases, there is evidence that student achievement data were misinterpreted in the improvement plan.
- 14 of the school board improvement plans (20%) indicate that provincial and board assessment results have been analyzed and interpreted; however, no data or evidence are presented in these plans to support the interpretation.

Identifying and communicating best practices (procedures and strategies that are working well)

- 57 of the board improvement plans (81%) include information about identifying and communicating best practices (procedures and strategies that are working well).
 - $\Rightarrow$ 35 (50%) fully describe this element, including how best practices are documented and communicated.
 - 22 (31%) identify best practices but lack sufficient information about either documentation or communication strategies.
- 13 of the board improvement plans (19%) provide little or no information about documentation of best practices and communication strategies, although some refer to researching best practices or identify the need to share best practices.

Identifying areas for improvement and determining priorities

- 65 of the board improvement plans (93%) identify areas for improvement and determine priorities.
 - ⇒ 50 (71%) identify areas for improvement and priorities at both the elementary and the secondary levels based on evidence and data included in the plan.
 - 15 plans (21%) address only elementary divisions or do not provide evidence to support the priorities identified.
- Five improvement plans (7%) provide little or no information regarding areas for improvement and priorities at the board level.

Specifying goals and performance targets/expected results for areas of focus

- 50 of the board improvement plans (71%) include specific information about goals and performance targets or expected results for areas of focus.
 - ⇒ 38 (54%) list specific goals and results-focused performance targets for each area of focus, determined by local results and contexts and an expectation of success or improvement for all students.
 - 12 (17%) list specific goals and results-focused performance targets for some areas of focus; many focus on the provincial results as targets.
- 20 of the school board improvement plans (28%) list only general goals and performance targets or expected results for areas of focus. In these cases, the emphasis is on process and activities (e.g., training and support for principals in target setting) rather than on setting specific performance targets.

Describing specific actions to improve student learning and achievement

- 61 of the board improvement plans (87%) provide information about specific actions or strategies to improve student learning and achievement.
 - ⇒ 51 (73%) recommend specific actions or strategies for each goal.
 - 10 (14%) recommend specific actions or strategies for some of the goals.
- Nine of the school board improvement plans (13%) provide little or no information about specific actions or strategies to improve student learning and achievement. Some of these provide only general actions, strategies or guidelines.

Identifying the human and material resources required to implement the improvement plan

- 62 of the board improvement plans (89%) include information about the human and material resources required to implement the improvement plan.
 - ⇒ 38 (54%) fully describe the resources required for all actions and/or strategies.
 - 24 (34%) provide some information about resources required for some actions and/or strategies.
- Eight of the board improvement plans (11%) provide little or no information about the resources required to implement the improvement plan. In some of these cases, only a very general overview is given and no details are provided.

Identifying who will be responsible for implementing each phase of the improvement plan

- 57 of the board improvement plans (81%) include some information about personnel who will be responsible for implementing each phase of the improvement plan and their roles in doing so.
 - ⇒ 53 (76%) provide information about specific personnel and specific roles in implementation.
 - Four (6%) provide some specific and some general information in this regard.
- 13 of the board improvement plans (19%) provide little or no information about who will be responsible for implementing each phase of the improvement plan, and their roles.

Providing appropriate and realistic timelines in a multi-year improvement plan

- 57 of the school board improvement plans (81%) provide appropriate and realistic timelines in a multi-year improvement plan.
 - ⇒ 38 (54%) provide specific timelines for both immediate and longer-term goals, in the multi-year plan.
 - 19 (27%) provide specific timelines for longer-term goals but no immediate goals, or they provide only general timelines.
- 13 (19%) provide little or no information about timelines, perhaps assuming but not specifying the school year as the timeline.

Identifying indicators of success for the performance targets/expected results in the areas of focus

- 58 of the board improvement plans (83%) identify indicators of success for the performance targets and/or expected results in the areas of focus.
 - ⇒ 24 (34%) identify measurable performance-based indicators of improvement for the expected results.
 - 34 (49%) identify general or process indicators, which make it difficult to determine whether desired results are being achieved.
- 12 (17%) provide little or no information about indicators of success for the performance targets and/or expected results.

Describing how the improvement plan will be regularly monitored and revised if necessary

- 56 of the board improvement plans (approximately 80%) provide some information about monitoring and revising the plan.
 - ⇒ 33 (47%) describe how (e.g., what data) and by whom the improvement plan will be monitored and revised if necessary.
 - 23 (33%) mention monitoring processes but provide insufficient information about what data or information will be collected, how it will be gathered and who will analyze it.
 - 14 (20%) of the board improvement plans provide little or no information about the monitoring of the improvement plan.

Including mechanisms for sharing the improvement plan and communicating widely with the school community

- 51 of the board improvement plans (73%) provide information about sharing the improvement plan and communicating widely with the school community.
 - ⇒ 48 (69%) provide sufficient information about the processes for sharing and are written in plain language and in an accessible format, which facilitates sharing.
 - Three (4%) indicate that improvement plans are shared with the community, but the process or mechanisms for doing so are not elaborated; a broad communication plan is implied, but details are not provided; or sharing or communication plans are too limited (e.g., focus on parents only or utilize a single communication strategy, such as a Web site, to share information).
- 19 (27%) of the board improvement plans provide little or no information about whether or how the improvement plans are communicated widely to the school community. In some cases, the plans indicate that communication is a priority, without specific details.

Further Observations

- For future progress on the quality of plans province-wide, there is a need to focus clearly on the strategies' impact on the desired result: improved student learning. This focus makes the direct link between planning and the success of previous strategies or the lessons learned from failed strategies. Planning itself is not the goal of the task; the goal is improved student learning. Examining why strategies succeed or fail is a critical component.
- Increases since last year are evident in the number of school board improvement plans that report involvement of education partners in improvement planning and identify human and material resources. There is a particular increase in the number of plans that describe how the plan is monitored and revised, some including partners in this process. Increased monitoring represents important progress, as high-quality monitoring and revision are hallmarks of an effective, useful and well-used improvement plan. A continuous cycle of monitoring is critical to success in improving education in Ontario.
- In some plans, misinterpretation of data is evident, indicating the continued need for training in the use of assessment data for diagnosis and planning, though this strategy does not often appear in plans.
- There is still an urgent need for boards to give high priority to students and schools not achieving Level 3, the provincial standard, particularly those students achieving Level 1.
- Relationships are important for the creation of a strong, positive organizational culture. Research has shown that strong student-teacher relationships correlate positively with high student achievement. There is little reference in the improvement plans to this important aspect of school culture.
- It remains true that although there is an emphasis on professional development for teachers and to some extent for principals, it is primarily focused on how to implement the new strategy. The plans need to address ways to support educational practice, change relationships, change school culture, set performance targets and expected results and use assessment data. They must address the higher-level issues, not just the training for specific initiatives.
- Approaches to improvement planning vary across the province from entirely system-directed, through iterative (system direction>school needs>system supports), to system plans that are “roll-ups” of school initiatives. System supports available, geography, funding, size of student population or number of schools and school-centred philosophies may be some of the factors contributing to these differences. Sharing of planning resources may be helpful in reaching a uniform, effective approach to improvement planning.
- The readability of the improvement plans, and thus their accessibility by a wider audience, has improved this year. This indicates a serious commitment to community involvement in school board improvement planning, which bodes well for future progress.

Conclusion

All school boards in Ontario (72 English- and French-language school boards) submitted improvement plans for the 2003–2004 school year to EQAO, and most included the required elements. Some significant improvements were noted, and many exemplary practices in traditional planning were observed. Widespread exemplary practice in data-based planning elements, however, remains elusive. There is much room for improvement in the quality and effectiveness of plans.

Conclusion

The results of the 2002–2003 Ontario provincial assessments and improvement planning demonstrate progress in some areas; in others, the results have remained unchanged and further improvements are needed.

- Grade 3 results have remained stable over the past two years in all three subjects: reading, writing and mathematics.
- Grade 6 results have remained stable over the past three years in mathematics but have shown slow, steady improvement in reading and writing.
- The percentage of Grade 9 students in the academic program achieving the provincial standard for mathematics has increased significantly over the past three years. The percentage of students in the applied program achieving the provincial standard has remained the same as last year.
- As was the case in February and October 2002, a large majority of students are meeting the provincial standard for the OSSLT.
- Ontario's 13- and 16-year-olds performed as well as or better than most Canadian jurisdictions in the 2002 SAIP writing assessment. Ontario 16-year-olds were outperformed only by Quebec 16-year-olds.
- In the 2001 PIRLS assessment, Ontario Grade 4 students performed near the top in overall reading achievement compared to 35 countries worldwide.
- School board improvement plans continue to show strengths in the more traditional elements, such as identifying areas and priorities for improvement and describing actions and strategies to improve student learning and achievement.
- There remains considerable room for improvement in many plans, particularly in relation to involving education partners in improvement planning, providing information about progress on improvements and the implementation of past improvement plans, identifying measurable indicators of success and describing how the improvement plans will be regularly monitored.

Principals and teachers report using the Grades 3 and 6 assessment results to revise instructional activities and plan for the improvement of student learning. Educators, at all levels of the education system, are encouraged to use the results from all large-scale assessments to plan for instruction and student learning.

EQAO is committed to promoting and supporting research that can contribute to the improvement of student learning and the quality of education in our schools.

EQAO encourages boards and schools to implement their recommendations fully and to persist in their commitment to improving academic achievement in Ontario schools.