



Welcome

By Marguerite Jackson, Chief Executive Officer

Welcome to our second issue of the year. We are pleased to see that *EQAO Connects'* new format has been well received and that the previous issue's audio interview with researcher Ruth Calman was of particular interest to so many of you.

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21st-Century Skills: Are We Succeeding in Preparing Ontario's Students?

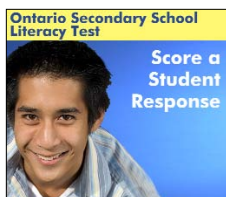
By Judith Hunter



[Video interview with Judith Hunter](#) | Running time: 9:14

Most people would agree that students today need to develop a specific set of skills to be successful in the increasingly complex and information-rich world of the 21st century. What are these skills and how can we, as educators, support student success?

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How Would You Score This?

Try Your Hand at Scoring a Student Response!

Take a look at this reading item and student response from the Ontario Secondary School Literacy Test. How would you score it?

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Welcome to our second issue of the year. We are pleased to see that *EQAO Connects'* new format has been well received and that the previous issue's audio interview with researcher Ruth Calman was of particular interest to so many of you.

This issue's feature article summarizes the findings of the latest study carried out under the banner of EQAO's research program. There has been much talk about how Ontario students need to develop the particular skills required for the world and workforce of the 21st - century. EQAO has been able to map the curriculum expectations assessed through our two secondary school tests to certain essential 21st-century skills. The article provides an overview of how Ontario students are progressing toward the development of those skills.

I'm certain you will also enjoy the video interview in which long-time educator and researcher Judith Hunter shares her perspectives on the research with Manon Fortin, EQAO's Manager of the Grade 9 and OSSLT assessment programs.

I trust that this issue's feature article will be of interest to educators and non-educators alike as we continue our collective efforts to support students. As always, we welcome your feedback on this article and on the webmag in general. ■



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21st-Century Skills: Are We Succeeding in Preparing Ontario's Students?

By **Judith Hunter**

Judith Hunter is an Education Officer with the Assessment and Reporting team. She was previously a classroom teacher and elementary and secondary English/Literacy consultant with the Toronto District School Board.



[Video interview with Judith Hunter](#) | Running time: 9:14

Most people would agree that students today need to develop a specific set of skills to be successful in the increasingly complex and information-rich world of the 21st century. What are these skills and how can we, as educators, support student success?

This is an area that EQAO investigated as part of its research program. Using the descriptions of 21st-century skills defined by the [Conference Board of Canada](#) and [Ontario's Ministry of Training, Colleges and Universities](#) as a starting point, EQAO assessed which of the skills were currently being measured on provincial tests administered in secondary schools—the Ontario Secondary School Literacy Test (OSSLT) and the Grade 9 Assessment of Mathematics.

EQAO examined the Ontario Curriculum literacy and numeracy expectations measured by the provincial test questions and determined that the tests

What are the 21st-Century Skills?

The skills described by the Conference Board of Canada and Ontario's Ministry of Training, Colleges and Universities are also referred to as “essential skills” or “employability skills” and can be categorized as

- numeracy;
- communication;
- critical thinking and problem solving;
- personal skills;
- interpersonal skills and
- information management, technology and information systems.

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measure abilities that are part of three of the key 21st-century-skill categories:

- communication,
- numeracy and
- critical thinking and problem-solving.

What follows is a brief summary of the findings of EQAO's analysis. The recently published EQAO research bulletin "Preparing Students for the World Beyond the Classroom: Linking EQAO Assessments to 21st-Century Skills" provides further details on the specific EQAO data indicators that can be used to pinpoint student achievement in each of these three areas. The bulletin also provides a current snapshot of province-wide student achievement across the dimensions of communication, numeracy, and critical thinking and problem-solving.

Communication

According to the study, more than 80% of first-time eligible (FTE) students have been successful on the OSSLT since 2006 and are progressing toward core 21st-century communication skills, including writing clearly, correctly and effectively and understanding information presented in a variety of forms.



Approximately one-third of students have achieved the top scores for the development of a topic on the OSSLT's long-writing tasks. In the OSSLT's short-writing tasks, three-quarters of students achieved the top score for topic development. Of interest, the study further reveals that FTE students who were successful on the OSSLT performed equally well on the three types of reading skills assessed (i.e., reading, understanding and responding), whereas unsuccessful students had difficulty across all three skills.

Numeracy

Approximately three-quarters of students taking the academic mathematics course and one-third of students taking the applied

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mathematics course have performed at or above the provincial standard (Level 3) since 2006 and are progressing toward attaining important 21st-century numeracy skills, including performing mathematical operations accurately, deciding what to measure or calculate and explaining or clarifying mathematical thinking. On the student questionnaires that form part of EQAO's assessments, three-quarters of students taking academic mathematics courses and two-thirds of students taking applied mathematics courses indicated that they understood most of what they have been taught. However, fewer than half of all students stated that they saw the mathematics they were learning as useful in everyday life, suggesting that the majority of students did not see real-life connections to the mathematics they were learning. This is an area of concern, particularly for students enrolled in the applied course.

Critical Thinking and Problem Solving

EQAO's provincial tests require students to demonstrate their critical thinking and problem solving skills. Students who performed at or above the provincial standard on the Grade 9 Assessment of Mathematics



and those who were successful on the OSSLT showed a progression toward acquiring important skills such as applying a variety of thinking skills, demonstrating a systematic approach to solving problems, and analyzing information to make judgments and draw conclusions. However, digging deeper into the data, the study revealed that students in the academic mathematics course have consistently been performing better on questions assessing their knowledge and understanding and their application of mathematical concepts than on the questions assessing their problem-solving abilities. Similarly, students in the applied mathematics course have performed least well on problem-solving questions and have had difficulty solving multi-step problems.



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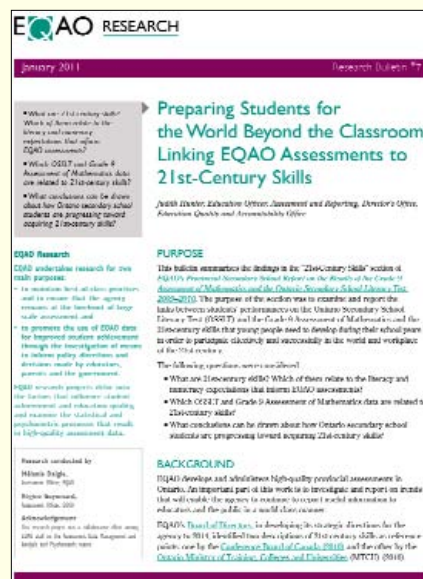


On the OSSLT, at least three-quarters of students have performed well on questions assessing the reading skills of making inferences and constructing interpretations; however, unsuccessful students have demonstrated particular difficulty analyzing the ideas and information in texts to make judgments, draw conclusions and support their answers.

Raising the Bar

In general, these findings suggest Ontario students are well on their way to developing their skills in communication, numeracy, and critical thinking and problem solving—three categories of the 21st-century skills needed for success. At the same time, the bulletin suggests three key areas that can be woven through all instructional programs to support student learning, including:

- 1 using critical-thinking skills to solve problems;
- 2 communicating ideas clearly, coherently and effectively and
- 3 making real-life connections to numeracy and literacy skills.



[EQAO Research Bulletin](#)

For Further Information

EQAO's Web site provides [school, board and provincial results](#) as well as responses to provincial questionnaires given to teachers and students who participated in EQAO assessments.

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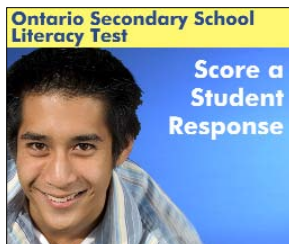
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How Would You Score This?

Try your hand at scoring a student response!

1. Read this [information paragraph](#) from the 2010 OSSLT.
2. Read the student response to the question below:

Summarize this selection. Include a main idea and one detail that supports it.

In Northern Ontario during the 1920's a very small idea made huge impacts. Passenger rail cars were converted into classrooms for the less fortunate and it began to social clubs and later history. The experiment defined the culture in Northern Ontario and is still recognized today.

3. Use the scoring guide to the right to determine how you would score the student response.
4. Roll over the score code you would choose.
5. Click the score code to view sample student responses and annotations for that code.

Check out [additional examples](#) from past years' assessments.

Scoring Guide for Reading Open-Response Information Paragraph

Code	Description
10	• response indicates minimal reading comprehension • response provides minimal or irrelevant ideas and information from the reading selection The response provides • only a <u>main idea</u> from the reading selection. OR • only one or more <u>details</u> from the reading selection. OR • a <u>main idea</u> with one or more <u>irrelevant details</u> from the reading selection
20	• response indicates some reading comprehension • response provides vague ideas and information from the reading selection; it may include irrelevant ideas and information from the reading selection The response provides • a <u>correct main idea</u> and one or more <u>vague details</u> from the reading selection to support it. OR • a <u>vague main idea</u> and one or more <u>specific or vague details</u> from the reading selection to support it. The response often requires the reader to make the connection between the main idea and supporting detail(s).
30	• response indicates considerable reading comprehension • response provides accurate, specific and relevant ideas and information from the reading selection The response provides a <u>correct main idea</u> and one or more <u>specific and relevant details</u> from the reading selection to support it.