



Ensuring Quality Assessments:

Enhancements to EQAO's Assessment Program



The Move Forward

Building on strengths: refining the program

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Education
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Accountability
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Ensuring Quality Assessments:

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Building on strengths: refining the program

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Introduction	2
EQAO assessment programs	3
The Ensuring Quality Assessments review	3
The review process	4
Research and study	4
Consultation	4
Analysis and synthesis	5
Implementation	5
Building on strengths: refining the program	6
Enhancements to reporting	7
Honouring a strong foundation	7
Enhancements to assessment practices	8
Enhancements to assessment designs	8
<i>Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics</i>	9
<i>Grade 9 Assessment of Mathematics</i>	10
<i>Ontario Secondary School Literacy Test</i>	11
Maintaining the leading edge	12
<i>Psychometric expert panel</i>	12
<i>Systematic review</i>	12
Benefits of assessment design changes	13
Accountability framework: enhancements	14
<i>Purposes of the accountability framework</i>	14
<i>Reporting on student success in secondary school</i>	15
<i>Addressing the learning community</i>	16
Appendix A: Expert review panel	17
Appendix B: Stakeholder consultation	18

Introduction

In 1996, the Education Quality and Accountability Office (EQAO) was established in response to the public's demand for clearer information about, and greater accountability for, student achievement in Ontario schools.

EQAO is an arm's-length agency of the Ontario government. The agency's mandate is to evaluate and report on the quality and effectiveness of elementary and secondary education in Ontario. This is achieved through student assessments that produce objective, reliable and relevant information, and the public release of this information along with recommendations for system improvement.

To address its mandate, the agency establishes, conducts and reports results of a curriculum-based assessment program for all students in publicly funded schools. EQAO also manages and reports Ontario's results on national and international assessments.

EQAO is governed by a Board of Directors appointed by cabinet.

provincial testing: a check on student learning at a few critical transition points, and ... a vehicle for assuring people that, at those points, all students are being assessed by the same yardstick

*For the Love of Learning:
Report of the Royal Commission on Learning,
Volume II, Page 148*

EQAO assessment programs

EQAO's curriculum-based assessments provide data to parents, the public, school district staff and the government about student achievement in accordance with standards in designated grades and subjects. EQAO is dedicated to working with the education community so that these data are used to inform classroom instruction and positively impact student achievement.

EQAO conducts its curriculum-based assessments annually. In 1996–1997, the first assessment of Grade 3 students in reading, writing and mathematics was conducted, followed by Grade 6 reading, writing and mathematics, beginning in 1998–1999. In 2000–2001, the first assessment of Grade 9 mathematics was conducted and, in February 2002, the first Ontario Secondary School Literacy Test (OSSLT) was administered.

EQAO is dedicated to working with the education community so that ... data are used to inform classroom instruction and positively impact student achievement.

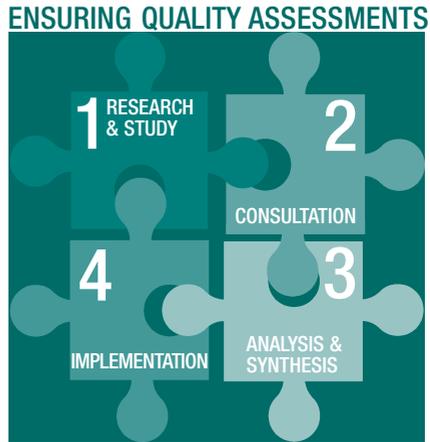
The Ensuring Quality Assessments review

Any organization must periodically review the effectiveness of its practices. In November 2002, the Board of Directors of EQAO launched the Ensuring Quality Assessments review to ensure the quality of assessments in Ontario.

The purpose of this initiative was to conduct a comprehensive review of all aspects of the EQAO assessment program to ensure that current international standards are met, that exemplary practices in large-scale assessment are matched, and that EQAO reporting practices meet user needs for accountability, improvement planning and staff development.

The review process

The review process undertaken within the Ensuring Quality Assessments review included four stages: research and study, consultation, analysis and synthesis, and implementation.



1. Research and study



EQAO conducted an extensive review of best practices by studying the processes and procedures used by noteworthy testing organizations and jurisdictions worldwide. As well, an external review of EQAO's assessment processes was conducted by the Ontario Institute for Studies in Education of the University of Toronto (OISE/UT), who worked with a team of internationally recognized large-scale assessment specialists (Appendix A). This expert review resulted in a report that affirmed aspects of the current EQAO assessment program and also provided recommendations to refine current practices.

2. Consultation



EQAO held dialogue forums with the agency's Assessment Advisory Committee and more than 20 groups representing directors, supervisory officers, principals, teachers, board contacts, trustees, parents and students to gather information about the assessments and their administration in schools, the usefulness of EQAO data reports for

accountability and improvement planning and the impact of the assessments on staff development (Appendix B). As well, EQAO sought and considered public comment on the *Final Report of the External Evaluation of EQAO's Assessment Processes*, OISE/UT.

3. Analysis and synthesis



EQAO considered all of the information gathered from the review and, in particular, the feasibility of the various assessment design options proposed by the OISE/UT team in light of the following:

- Stakeholder feedback: key areas and needs identified through consultation
- Best practices research: congruence with best practices in identified 'exemplary' jurisdictions; strength of psychometric properties, such as reliability, validity, comparability and equating
- Impact on schools and boards: streamlining and simplifying administrative procedures to decrease the workload of schools and boards
- Impact on EQAO: timing, resources and costs

EQAO ... is implementing refinements to provide a clearer, more helpful and less burdensome accountability framework.

4. Implementation



Using the recommendations received and the insights gained through the first three phases of this review, EQAO confirmed a number of its practices and is implementing refinements to provide a clearer, more helpful and less burdensome accountability framework.

Building on strengths: refining the program

The review confirmed that EQAO has been successful in establishing an assessment program that meets its accountability mandate and provides valuable insights about student achievement of Ontario curriculum expectations.



As noted by the external review team, “In summary, we believe that EQAO has created world-class educational assessment programs. Our analysis and critique is aimed at identifying the strengths of the assessments and pointing out areas where clarification of purposes and constructs, improvement of systems and methodologies, and incorporation of new analysis and reporting technology could enhance EQAO’s work, which has become a vital part of Ontario education”

(Final Report of the External Evaluation of EQAO’s Assessment Processes, OISE/UT).

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The review also provided valuable insights that will improve EQAO approaches. EQAO will use these insights to implement enhancements to strengthen its overall program, its assessment practices and its assessment designs. Reports will be enhanced to provide the public, schools and school boards with clearer and more timely data that

address accountability and improvement planning. Other changes will involve streamlining processes so that the assessments are less burdensome to administer.

Enhancements to reporting

The following key enhancements are planned:

- Provide, in a timely fashion (for example, the end of August for Grades 3 and 6) ready-to-use reports to schools so that
 - *schools and school boards can demonstrate accountability and improvement of student achievement over time*
 - *school staff can refine their planning and professional practice in order to improve student achievement and close the gap between low- and high-achieving students*
- Report levels of proficiency from 1 through 4 in individual, school, board and provincial reports
- Report student results in a manner that shows students' degrees of mastery within each level
- Enhance school and board reports by providing contextual and historical data
- Provide support through seminars, workshops, bulletins and the EQAO Web site to assist school learning communities in using their data to improve student achievement of curriculum expectations

Honouring a strong foundation

As EQAO refines its assessment design and processes, it will honour the strong foundations laid for the agency in its initial years by continuing to

- involve teachers in all stages of the assessment cycle;
- work closely with the Assessment Advisory Committee, school boards and the government;
- design curriculum-based assessments that measure student achievement of Ontario's curriculum expectations;
- report at the individual student, school, school board and provincial levels using the provincial levels of achievement (1 through 4);
- provide achievement information that can be compared year to year and
- retain the performance-based nature of the assessments by including open-response as well as multiple-choice items so that students have a variety of ways to demonstrate what they know and can do.

Enhancements to assessment practices

The following enhancements will be made to EQAO assessment practices:

- Extend the involvement of educators through the establishment of formal working committees to assist in activities such as item review (for content and bias), item selection, validation of scoring guides and rubrics, as well as review and validation of validity, reliability and training papers
- Develop, and make publicly available, framework documents for each assessment that outline the links between the construct definitions for reading, writing, literacy and mathematics, the skills being measured and the expectations as presented in Ontario curriculum documents
- Update the methodology for linking assessments over time by extending equating beyond the use of multiple-choice items, and reducing context effects through the positioning of equating items in the assessments
- Administer the Grades 3 and 6 assessments at a later time in the school year

school staff can refine their planning and professional practice in order to improve student achievement and close the gap between low and high achieving students

Enhancements to assessment designs

EQAO's assessment designs will be updated to address both pedagogical understandings and measurement requirements as recommended by the expert panel.

Each framework will clearly identify the purpose of the assessment and its links to *The Ontario Curriculum*. The frameworks allow for more specific feedback on student performance and an assessment design

that requires less student time to administer. The following provides a brief overview of the designs for the Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics; the Grade 9 Assessment of Mathematics and the OSSLT.

Grade 3 and Grade 6 Assessments of Reading, Writing and Mathematics

These assessments will continue to be administered to all students.

Extend the involvement of educators ...

- Three booklets, one for each of reading, writing and mathematics
- Total testing time will be reduced to six hours, approximately two hours per booklet
- Each booklet will contain ‘common’ items (items all students attempt), which will comprise 80% of the testing time, and ‘matrixed’ items (used for field test and equating), which will make up 20% of the testing time
- The common items will be
 - *Reading: fiction and non-fiction passages, with varying levels of difficulty, followed by open-response and multiple-choice items*
 - *Writing: short and long writing prompts and multiple-choice items*
 - *Mathematics: open-response and multiple-choice items*
- Multiple matrixed items will be distributed to different students for field test and equating purposes; each student will attempt a small number of test items of various types in each of reading, writing and mathematics
- Open-response and multiple-choice items will be presented throughout the test
- Results will be reported as scale scores, together with achievement levels, for each of reading, writing and mathematics
- Common items and their scoring guides will be released

Grade 9 Assessment of Mathematics

This assessment will continue to be administered to all students taking Grade 9 applied and academic mathematics.

- Two booklets
- Total testing time will be reduced to two hours
- Each booklet will contain ‘common’ items (items all students attempt), which will comprise 80% of the testing time, and ‘matrixed’ items (used for field test and equating), which will make up 20% of the testing time

... provide for clearer links to the Ontario curriculum, more specific feedback on student performance and an assessment design that requires less student time to administer.

- The common items will be open-response and multiple-choice
- Multiple matrixed items will be distributed to different students for field test and equating purposes; each student will attempt a small number of items of various types
- Open-response and multiple-choice items will be presented in both booklets
- Results will be reported as scale scores, together with achievement levels
- Common items and their scoring guides will be released

A unique challenge: Grade 9 mathematics

The review profiled a unique challenge associated with a curriculum-based provincial test of Grade 9 mathematics:

The mathematics curriculum in Grade 9 provides students with the option of enrolling in either an applied or academic mathematics course and, in many cases, in either the first or second semester of the school year. Therefore, the combination of French and English assessments results in eight distinct tests in each school year.

The complexity of analyzing, equating and reporting on all eight assessments results in a ten-month delay between when first semester

students write the assessment and when they receive their individual student results. This provides minimal opportunity for school staff to use the data to effect improvement for individual students. Further, limited population sizes within the various streams often makes reporting impractical at the school level and, indeed, even at the board level in a number of cases.

The Ministry of Education is currently working with expert educators and key stakeholders to revise the Grade 9 mathematics curriculum. Because EQAO assessments are curriculum-based, it is anticipated that this challenge may be more appropriately addressed with the adjustments that result from any modifications introduced by the Ministry, and that further enhancements to the Grade 9 design may occur at a future date.

Ontario Secondary School Literacy Test

This assessment will continue to be administered to all students.

- Total testing time will be reduced to two and one-half hours
- For each student, there will be ‘common’ items (items all students attempt), which will comprise 85% of the testing time, and ‘matrixed’ items (used for field test and equating), which will make up 15% of the testing time
- The common items will be
 - Reading: open-response and multiple-choice items
 - Writing: long and short writing prompts and multiple-choice items
- Multiple matrixed items will be distributed to different students for field test and equating purposes; each student will attempt a small number of test items of various types
- Reading and writing will be reported as a single literacy score; students will no longer have to pass reading and writing separately
- The literacy construct (reading and writing) will remain the same; testing will continue to focus on key skills in reading and writing
- Students will be able to demonstrate their writing skills in a variety of formats (short paragraphs, long writing tasks and multiple-choice items)
- Common items and scoring guides will be released

Maintaining the leading edge

EQAO remains committed to a philosophy of continuous improvement.

Psychometric expert panel

EQAO will establish a panel of measurement experts to validate and advise on psychometric procedures. The panel, composed of internationally recognized experts in large-scale assessment, will meet quarterly to advise EQAO on psychometric methodologies and practices.

Systematic review

EQAO will establish a systematic and cyclical peer review process. A peer review panel, composed of a minimum of three international experts on the development and management of large-scale assessments, will be established to complete the next cycle of review by 2009. The peer review process will ensure

- timely changes, reflecting new developments in the field of large-scale assessment and
- enhancements to EQAO assessment designs, administrative procedures and reporting to meet the changing requirements of stakeholders and policy-makers.

Benefits of assessment design changes

These enhanced designs provide a range of positive outcomes and benefits including the following:

- **Enhanced measurement precision:** increasing the number of short open-response and multiple-choice items, while retaining longer open-response items. This will increase the number of data points, thereby enhancing content and score validity and improving measurement precision, including equating, which will result in stronger year-to-year comparability.
- **Enhanced reporting:** scale scores will be reported together with levels of proficiency. Students' overall performance will continue to be described by achievement levels, but more fine-grained scale scores will show where students are performing within achievement levels. Tracking the progress of individual students, schools, school boards and the province will more effectively show where the system is succeeding in closing the gap between low- and high-achieving students.
- **Reduced burden on schools and boards:** collection of student demographic information will be done electronically, thereby reducing the need for school personnel to complete this information manually on forms. Credit tracking (in the case of the OSSLT) will be simplified for schools and boards with a single literacy score. The enhanced assessment designs allow for a reduction in the length of time required by students to complete each assessment.

Accountability framework: enhancements

In establishing an accountability framework with provincial assessments as its centrepiece, EQAO has met the vision of the Royal Commission on Learning (1994), which describes provincial testing as “a check on student learning at a few critical transition points, and as a vehicle for assuring people that, at those points, all students are being assessed by the same yardstick.”¹

Purposes of the accountability framework

1. measuring and reporting on the performance of individual students, schools and school boards, based on the provincial standards as outlined in *The Ontario Curriculum*
2. raising student achievement
3. improving classroom instruction
4. providing information to teachers, schools and school boards that contributes to improvement planning and improved student achievement

Further, the report states that schools should be engaged “in annual, province-wide testing of all children of the curriculum content ... and the test results should be clearly communicated to teachers, parents and students.”²

Experience has shown that data inform professional practice and set the stage for improving student achievement. EQAO assessments have achieved positive results by focusing attention on standards and providing a snapshot of student achievement against those standards with information to support educators in creating plans for improving student achievement.

¹ *For the Love of Learning: Report of the Royal Commission on Learning*, Volume II, Page 148

² *For the Love of Learning: Report of the Royal Commission on Learning*, Volume II, Page 149

However, large-scale assessment results are one piece of the picture of how students are achieving in our schools. Therefore, EQAO will extend its accountability framework in two areas: reporting on the success of students as measured by credit accumulation in their first two years of secondary school and providing more descriptors of each school's local learning community.

Reporting on student success in secondary school

Regular assessments conducted by a student's teachers should be the primary method of supporting students in their schooling. Day-to-day student success depends on classroom teachers regularly assessing what students know and focusing on gaps in their learning.

Just as the mastery of early foundations is essential to future student success, research, reported over a number of years, has demonstrated that supporting the transition of students into their first two years of high school is critical to setting students up for successful completion of high school diploma requirements.

A recent report prepared for the Ministry of Education, *The Report of the Program Pathways for Students At Risk Work Group*, states "... research indicates that if students do not acquire an adequate number of credits in Grades 9 and 10, their chances of completing credits through to graduation decrease ..." (page 18). Success on classroom assessments in these grades is required for students to acquire credits, and it contributes to a school's 'holding power' – its capacity to hold on to students while they move in a timely fashion from Grade 9 to Grade 12.³

... EQAO will work with school boards to determine approaches for tracking and acting upon data about credit accumulation of students in Grades 9 and 10.

³ *Educational Leadership*, November 2003

“Learning from data is central to meeting our overarching responsibility as educators – being accountable for the success of each and every student.”

*Marguerite Jackson, CEO
Education Quality and
Accountability Office*

Tracking and reporting credit accumulation in Ontario secondary schools will provide information to support educators and parents in planning interventions and pathways that will lead to more students achieving success and completing the requirements for an Ontario Secondary School Diploma. Also, this information will provide further assurance to the public that Ontario schools serve our students well.

Therefore, as a next step in its support for quality education and student success in Ontario schools, EQAO will work with school boards to determine approaches for tracking and acting upon data about credit accumulation of students in Grades 9 and 10.

Addressing the learning community

Every student deserves a good outcome from his or her public education. Understanding and acting upon circumstances surrounding students allows a school learning community to provide focused attention to ensure students thrive in their schooling.

Much information exists about school communities. Identifying which information to address in the interest of higher student achievement has been the subject of many research studies.

EQAO will work with school boards to determine approaches for tracking, reporting and acting upon the data within these studies in the interest of improving student success.

Appendix A

Expert review panel

Principal investigators from the Ontario Institute for Studies in Education of the University of Toronto

Richard Wolfe, Ruth Childs, Susan Elgie

Liaison with EQAO's CEO

Kenneth Leithwood, OISE/UT

Technical advisors

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Dany Laveault, University of Ottawa

Alexandra Lawson, Lakehead University

Cinde L. Lock, Ottawa-Carleton District School Board

Pamela A. Moss, University of Michigan

David R. Olson, OISE/UT

Shelley Peterson, OISE/UT

Barbara S. Plake, University of Nebraska—Lincoln,

Buros Institute of Mental Measurements

Mark D. Reckase, Michigan State University

William H. Schmidt, Michigan State University

Christine A. Suurtamm, University of Ottawa

Merrill Swain, OISE/UT

Ross E. Traub, OISE/UT

Mark R. Wilson, University of California, Berkeley

Robert J. Wilson, Queen's University

Lauress L. Wise, Human Resources Research Organization, Alexandria, VA

Appendix B

Stakeholder consultation

The following stakeholder groups were consulted as part of the review process:

Students

- Ontario Student Trustees' Association

Parents

- Ontario Parent Council

Associations

- EQAO Assessment Advisory Committee
- French Language Forum
- Institute for Catholic Education
- Minister's Advisory Council on Special Education
- Ontario Mathematics Coordinators Association
- The Association of Educational Researchers of Ontario

Teacher federations

- Association des enseignantes et des enseignants franco-ontariens
- Elementary Teachers' Federation of Ontario
- Ontario English Catholic Teachers' Association
- Ontario Secondary School Teachers' Federation
- Ontario Teachers' Federation

Principals

- Association des directions et directions adjointes des écoles franco-ontariennes
- Catholic Principals' Council of Ontario
- Ontario Principals' Council

Directors

- Council of Ontario Directors of Education

Supervisory officers

- Association des gestionnaires de l'Éducation franco-ontarienne
- Ontario Catholic Supervisory Officers' Association
- Ontario Public Supervisory Officials' Association

Trustees

- Association des conseillers(ères) des écoles publiques de l'Ontario
- Association franco-ontarienne des conseils scolaires catholiques
- Ontario Catholic School Trustees' Association
- Ontario Public School Boards' Association

Government

- Ministry of Education

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