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Position Paper on the Provincial Testing Program

For

Elizabeth Witmer Deputy Premier and Minister of Education

Submitted by: Council of Ontario Directors of Education

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Introduction

The Council of Ontario Directors of Education (C.O.D.E.) is comprised of the Chief Executive Officers representing 72 District School Boards; Public, Catholic, French and English Language. It was established in 1991 in response to calls to formalize the handling of emerging issues in provincial public education, to provide a method of networking, and to represent the view of senior executives to the Ontario Ministry of Education. The prime objective of the organization is to provide a means of communication for its members and to establish an open and positive relationship with the Minister of Education and the Deputy Minister. One of the strategies to includes position papers make this happen on significant (www.ontariodirectors.ca)

C.O.D.E. recognizes the commitment by the Ministry of Education to establish and promote a more rigorous curriculum designed to meet the needs of all children. As well, C.O.D.E. acknowledges that the government and the public have a right to know how well children are learning in our educational system. C.O.D.E. is supportive of the large-scale assessment in Grades 3, 6 and 9 for its potential to provide educators and policy makers with relevant and useful information and to promote student and teacher learning. Furthermore, C.O.D.E. is appreciative of the efforts that have been made by the Education Quality and Accountability Office to help teachers increase their knowledge and understanding of classroom assessment strategies to improve student learning. As Darling-Hammond (1994) indicated, teachers need to work in organizational and political settings where they are provided the training, resources, and environments necessary to do their work well and where assessment is used to give teachers practical information on student learning and to provide opportunities for school communities to engage in "a recursive process of self-reflection, self-critique, self-correction, and self-renewal."

The purpose of this paper is to provide an opportunity for the Directors of Education to clearly express their concerns about each of the following:

- an increased testing program that, in addition to the current EQAO testing in Grades 3, 6, 9 and 10, would include two core subjects to be tested each year from Grade 3 to Grade 11
- the high-stake Grade 10 Ontario Literacy Skills Test (OSSLT) as a requirement for graduation
- the lack of consistency in the target setting process linked to school improvement for the purpose of increasing literacy development
- the incentive program that provides dollars to schools that meet their targets
- publishing school results

To support C.O.D.E.'s concerns and the recommendations, as listed below, this paper also includes information related to each assessment issue integrated with appropriate research findings.

C.O.D.E. believes that the following recommendations have the potential to substantially enhance the large-scale assessment policy of the Ontario Ministry of Education.

Recommendations

CODE recommends that the Ontario Government:

- Announce a moratorium on any additional testing for a minimum of three years.
- Conduct a comprehensive evaluation of the current testing program in Grades 3,
 6, 9 and 10 including a cost-benefit analysis.
- Report provincial assessment data in combination with other data, particularly from provincial report cards, in order to provide a more accurate measure of student performance/achievement.
- Increase resources for training and development in student assessment and evaluation for school-based personnel.
- Revise the policy that makes the Grade 10 Ontario Literacy Skills Tests a highstakes one-time only assessment that affects the potential for students to graduate.
- Review and revise the process of target setting in order to increase consistency and fairness in setting targets.
- Change the competitive incentive program to a fair program of support for school improvement efforts.
- Maintain on-going research on how assessment, in combination with other factors, contributes to school improvement. Give attention to the special needs of various cultural groups.
- Establish a Testing Task Force with membership from C.O.D.E. to lead discussions across the province and to monitor the "equity and ethics issues" associated with large-scale assessment

The five major concerns expressed by C.O.D.E. are as follows:

Concern #1: An increased testing program that, in addition to the current EQAO testing in Grades 3, 6, 9 and 10, would include two core subjects to be tested each year from Grade 3 to Grade 11

For the purpose of this paper, large-scale assessment refers to provincial assessments that are mandatory for all school boards and for all students in selected grades and subject areas.

Looking back to 1986, the only large-scale assessment in Ontario was a provincial review program based on a sampling of OAC courses in order to provide greater consistency in evaluation procedures (Earl & O'Connor, 1995). From 1993-95 provincial testing was administered to all Grade 9 students in two subject areas, Reading and Writing. Beginning in 1996-97, the Education Quality and Accountability Office (EQAO), an organization working at arm's length to the Ministry of Education was established to coordinate all provincial, national and international assessments. At this time, elementary performance assessments were introduced for every student in Grade 3 in three subject areas: Reading, Writing, and Mathematics. One year later in 1998-99, performance assessments were introduced for every Grade 6 student in the same three subject areas. By 2000-01 a provincial assessment in Mathematics was added for all students in Grade 9. This was followed by the introduction of the Ontario Literacy Skills Test for all students in Grade 10. Unlike the assessments in the other grades, passing the Grade 10 assessment was made a requirement for graduation from high school effective 2001-2002. Ontario's latest testing initiative, if it were put into place, would add the assessment of two core subjects each year from Grades 3 to 11. From 1986 to 2002, the volume of large-scale assessment in the province of Ontario has grown from a random sample of students taking OAC courses to the testing of approximately 600,000 students every year in four grades.

It should also be noted at this time, that many school boards do conduct their own testing programs including norm-referenced tests such as the Canadian Tests of Basic Skills, Canadian Achievement Tests, Canadian Cognitive Abilities Tests, and criterion-referenced system wide and common exams for students in elementary and high school. Ontario schools also participate in national and international assessments that involve random selection of school boards and schools. Because a limited number of students are involved in national and international assessments and individual, school and Board results are not provided.

According to Earl (2002) large-scale assessments provide a snap shot of achievement in particular areas at various points in time or grade levels and allow decision makers to consider student performance in relation to external reference points. She recommends the smallest amount of testing possible in order to focus the attention of educators and to give reasonable reference points for decisions about curriculum, teaching and learning in the schools. Within schools, there ought to be a complementary system of data collection and classroom assessment, from a wide variety of sources, that provides detailed information for the years in between. Earl (2002) goes on to say, "The majority of assessment activities are the ones that happen every day in classrooms-quizzes, test, assignments, projects, etc.... These are equally important and require as much or more attention to be valuable and useful for enhancing student learning. Classroom assessment cannot be neglected. If it is, there is a risk that large-scale assessment will get more attention than it

deserves and that classroom assessment will not get the attention it needs so that it is done better."

The links among accountability, the purpose of schooling, and assessment are integrated with the wide range of experiences and activities that schools in Ontario engage in on a daily basis. To be accountable, as a school system, is to show taxpayers, parents and students, that the main purpose of school, namely, student learning, is occurring. Because student learning is complex and affected by many factors, it is not easily measured. Therefore, it is important to consider how the current provincial large-scale assessments can be integrated with other relevant data including teachers' classroom assessments, School District's norm-referenced testing programs, and contextual data to provide more realistic and accurate summaries of student learning. According to Stake (1998) accountability should connect student performance with classroom practice and should encourage deeper discussion of educational problems.

C.O.D.E. believes that the current program of provincial assessments in grades 3, 6 and 9 provides useful and timely external data about student achievement. In addition, C.O.D.E. firmly believes that it is critical to focus more attention on helping teachers develop quality classroom assessments and reporting to parents and students as feedback to learning. Hgh quality classroom assessment would complement the large-scale assessment program.

At the time this paper was developed, a one-year delay in the new testing program has been announced. The reason for that delay appears to relate to cost of large-scale testing which now averages approximately \$10 million dollars for each grade level (EQAO, 2002). In general, the costs include the design and development of the assessments, the training of teachers to administer the assessments, the printing and shipping costs to schools across the province, the training of teachers for marking, and the reporting of results.

While the Ministry of Education has provided money for researchers to conduct various studies using EQAO data and published the reports in the EQAO Research Series (1999), no formal evaluation to determine the impact of large-scale provincial assessment on students, teachers, administrators, and parents, has ever been conducted by the Ontario Ministry of Education since the introduction of large-scale assessment in 1996.

According to the principles outlined by the National Centre for Fair and Open Testing (http://fairtest.org/princind.htm) assessment systems must be regularly reviewed and improved to ensure that the systems are educationally beneficial to all students. Assessment systems must evolve and improve. Reviews are the basis for making decisions to alter all or part of the assessment system. Reviewers should include stakeholders in the education system and independent expert analysis. As well, a cost-benefit analysis of the system focuses on the effects of assessment on learning. This is consistent with Bauer (1992) who feels there has not been adequate descriptive research done on current testing practices.

C.O.D.E. agrees with Earl (2002) who suggested that it is not fiscally sound to have large-scale assessments done provincially in every grade. Instead she feels there should be mechanisms in place to use the provincial data to inform local data collection and classroom assessment so that it can be used for focused decisions in each school on a routine basis. Furthermore, she supports an "alternative to costly provincial performance assessments that would include the use of the EQAO assessments and exemplars, along with the curriculum documents, to create high-quality classroom assessments and to train teachers to use them diagnostically in their own classrooms. This would maintain professional responsibility and reinforce the role of teachers in helping students learn, rather than focusing on getting good scores on an external test".

Concern #2: The high-stake Grade 10 Ontario Literacy Skills Test (OSSLT) as a requirement for graduation

The OSSLT is a test with very different purposes than the assessments administered in grades 3,6 and 9. This test is very high-stakes for students. Failure on the OSSLT and the resulting implications for earning a high school diploma is consistent with Popham's (2002) definition that a high-stake test is one that carries severe consequences for failure. Because it has such high stakes attached to it for students (graduation from high school), C.O.D.E. has strong doubts about the value and validity of the OSSLT.

Downing and Haladyna (1996) maintain that because all high-stakes testing programs have profound influences on peoples' lives, attention should be directed toward ensuring that all test interpretations and uses are responsible and legally defensible. Fairtest: The National Centre for Fair and Open Testing (http://fairtest.org) provides seven principles and indicators of student assessment systems. Key messages from their list of principles that are relevant to the discussion of the OSSLT include the following:

- Assessment systems, including classroom and large-scale assessment are organized around the primary purpose of improving student learning and provide important information about whether students have reached important learning goals and about the progress of each student.
- Assessment for other purposes supports student learning. Teachers, schools and education systems make important decisions on the basis of information that is gathered over time, not from a single assessment.

Fairtest also draw particular attention to the inadequacy of using one mechanism to make major decisions affecting students' futures.

- Assessment systems including instrument, policies and practices are fair to all students so as not to limit students' present and future opportunities
- Assessment systems allow for multiple methods to asses student progress and for multiple and equivalent ways for students to express knowledge and understanding

The debate around minimum competency testing remains much the same today as it has been in the past. A lack of solid empirical research has allowed the controversy to continue unchecked by evidence or experience (Griffin & Heidorn, 1996).

To help address the issue of lack of empirical evidence, Jacob (2001) using data from the National Educational Longitudinal Survey and controlling for prior student achievement and a variety of other student, school, and state characteristics, found that graduation tests have no significant impact on 12th grade math or reading achievement. What he did find, however, was that although graduation tests have no appreciable effect on the probability of dropping out for the average student, they increase the probability of dropping out among the lowest ability students. He also found that the recent success of some high-stakes testing policies for young students in several urban districts such as Chicago may provide guidance concerning the right combination of incentive and support necessary to produce significant achievement gains without increasing the dropout rate. In Chicago, the additional resources provided to the at-risk students in the form of reduced class sizes, after-school tutoring, and intensive summer school programs play an important role in the observed achievement gains - Chicago spent more than \$17 million on its after school program in 1999. (Rodernick, Bryk, Jacob, Easton & Allensworth, 1999).

Over the years, there has been considerable documentation of the unintended consequences of such high-stakes tests. Stake (1998) commented that while there is general agreement to high-stakes testing, there are uncomfortable issues that are not being discussed. Among the reported negative consequences of raising the stakes of assessment are the following issues: instruction is diverted; student selfesteem is eroded; teachers are intimidated; the locus of control of education is more centralized; undue stigma is affixed to the school; school people are lured towards falsification of scores; some blame for poor instruction is redirected toward students when it should rest with the profession and the authorities, and the withholding of needed funding for education appears warranted. Earlier, Smith and Rottenberg (1991) reported the unintended consequences of external testing in high-stake environments to include such things as reduction in instructional time; omission of curriculum material that is not covered on external tests; instructional methods that begin to resemble tests; changes on school/class organization (e.g., placing students in homogeneous groups and tracks); negative affects on teachers. Stiggins (1999) noted that increasing pressure to score highly on tests combined with a lack of focused opportunities to learn can lead students to a sense of futility-a feeling of hopelessness that can cause them to stop caring and stop trying and a long lasting loss of confidence.

In both the United States and Canada, organizations with responsibility for testing of young people have developed guidelines for the appropriate and fair use of tests. The Principles of Fair Assessment Practices in Canada (1994) and The Standards for Educational and Psychological Testing (1999) in the United States.

In 1999, The American Educational Research Association (AERA) together with The American Psychological Association and the National Council on Measurement in Education were so concerned about the use of high-stakes tests that they published a position paper on high stakes testing, based on the Standards for Educational and Psychological Testing (1999).

AERA Position Statement Concerning High-Stakes Testing In PreK-12 Education

- 1. Protection Against High-Stakes Decisions Based on a Single Test: As a minimum assurance of fairness, when tests are used as part of making high-stakes decisions for individual students such as promotion to the next grade or high school graduation, students must be afforded multiple opportunities to pass the test. More importantly, when there is credible evidence that a test score may not adequately reflect a student's true proficiency, alternative acceptable means should be provided by which to demonstrate attainment of the tested standards.
- Adequate Resources and Opportunity to Learn: In particular, when testing is
 used for individual student accountability or certification, students must have
 had a meaningful opportunity to learn the tested content and cognitive
 processes.
- 3. Full Disclosure of Likely Negative Consequences of High-Stakes Testing Programs: Where credible scientific evidence suggests that a given type of testing program is likely to have negative side effects, test developers and users should make a serious effort to explain these possible effects to policy makers.
- 4. Alignment Between the Test and the Curriculum: Because high-stakes testing inevitably creates incentives for inappropriate methods of test preparation, multiple test forms should be used or new test forms should be introduced on a regular basis, to avoid a narrowing of the curriculum toward just the content sampled on a particular form.
- 5. **Validity of Passing Scores and Achievement Levels**: When testing programs use specific scores to determine "passing" or to define reporting categories like "proficient," the validity of these specific scores must be established in addition to demonstrating the representation of the test content.
- 6. **Meaningful Remediation**: Remediation should focus on the knowledge and skills the test is intended to address, not just the test performance itself.
- 7. **Language Differences**: Special accommodations for English language learners may be necessary to obtain valid scores.
- 8. **Students with Disabilities**: In testing individuals with disabilities, steps should be taken to ensure that the test score inferences accurately reflect the intended

construct rather than any disabilities and their associated characteristics extraneous to the intent of the measurement.

- Careful Adherence to Explicit Rules for Determining Which Students Are to be Tested: Such policies must be uniformly enforced to assure the validity of score comparisons. In addition, reporting of test score results should accurately portray the percentage of students exempted.
- 10. Ongoing Evaluation of Intended and Unintended Effects of High-Stakes Testing: With any high-stakes testing program, ongoing evaluation of both intended and unintended consequences is essential. Furthermore, dissemination of research findings concerning both the positive and the negative effects of the testing program is a sound practice.

C.O.D.E. believes that these standards are comprehensive and should be used to provide Ontario policymakers with direction on appropriate test use and interpretation.

Concern #3: The lack of consistency in the target setting process linked to school improvement for the purpose of increasing literacy development

In the June 1st, 2001 Ontario Ministry of Education Backgrounder on Ontario's Early Reading Strategy, target setting is defined in the following manner: "Target-setting means that each school will set multi-year targets, covering a three year period, for improvement and will develop a plan to reach those targets. Each school will measure its success and then adjust and refine its plan, based on its results in the province-wide grade 3 reading and writing test. Schools will report annually on their progress." (p. 2)

Watson and Supovitz (2001) suggest that internal accountability can be a powerful force. However, the pressures of collective responsibility unleashed by placing the responsibility for student achievement on teachers works in both constructive and destructive ways. At first glance, target setting by schools and school boards may appear to be a move that allows those groups greater autonomy. C.O.D.E.'s observations, however, suggest that the process used by schools and boards of education for target setting are not consistent. In some school districts teachers received their EQAO results from central office and were asked to do their projections for the next three years. They set minimal targets of one to three percentage points as projected increases. In other school districts, research staff made the projections of increases of five percent or more and then sent the projections to the schools for discussion purposes. Yet in other school districts, principals made the decisions concerning target increases based on informal conversations with grade 2 teachers. In very few cases, did schools or districts engage in the kind of curriculum target setting that has been shown in England to be the important link between target-setting and changes in classroom practice (Lofty, 1993).

C.O.D.E. wishes to express concern about the short timelines extended to boards for reporting back to the Ministry and the lack of funds to adequately involve teachers in discussions about how targets should be set. Schools need more direction when they are planning their target setting and using it to review, plan and improve programs. If they do not know how the test may change in content, format, or evaluation, it is difficult for teachers and decision-makers at the school/board level to make relatively accurate projections on achievement levels. Other factors such as changes in staff, class size, lack of sufficient in-service and resources could easily affect projections over time.

The EQAO website http://www.eqao.com/eqao/home_page/actionplan.html specifies that all schools and boards must develop "Action Plans for improvement to build on the strengths and address the areas of concern identified by the assessment findings". Childs and Lawson (2001) in their report, *Testing in Ontario*, noted that grades 3 and 6 students in past years have had their overall scores, but not strand and category scores, adjusted for year to year comparability. This has led to considerable confusion and makes it difficult for schools to target curriculum areas for attention.

From C.O.D.E.' s perspective, for the most part, schools and boards were left to their own devices to determine their targets and strategies for improvement. In some cases this prompted the kind of discussion that Earl (1999) describes when she says: The most important purpose of large-scale assessment is that there is a focus on continuous improvement in all schools so that the nature of assessments is as important as the results, because they are starting points for discussions about how to enhance learning (p.5).

It is questionable whether target setting will have any influence on what actually happens in schools.

Concern #4: Incentive programs to reward schools that achieve their targets

The Ministry of Education announced that it would provide a sum of \$5,000 to all schools that increase their reading achievement scores consistent with their project targets. This money would be used for additional resources and innovative programs etc... Schools that do not meet their targets would not be eligible to receive any financial assistance.

Results on provincial assessments that determine whether schools receive additional funds are high-stakes assessments with important consequences. Based on the research, this kind of competitive incentive program raises many questions.

Popham (2002) reported that the Elementary and Secondary Education Act in the United States requires states to make steady progress in student achievement with the goal of 100% of third through eight graders becoming proficient in 12 years. Schools whose scores do not improve for two consecutive years will receive additional federal money, but if progress continues to lag they could have their staff replaced and curriculum changed. After one year in a failing school, low performing

students could receive federal funds to pay for transportation to another school. After two years, funds could be used to provide private tutoring or summer school.

Gullatt and Ritter (2002) reported that 14 states promised increased funding for schools to raise their performance scores higher than the state goal. Some offer a lump sum of \$1000 or some other allotment based on student enrolment...some indicated they were prepared to give salary bonuses for teachers serving in high performance schools; however, these pay for performance ideas had not made it through state legislatures at the time of the survey.

McColskey and McMumm (2000) argue that the quality of the learning process is being overshadowed as educators try to be responsive to the pressures for improved test scores often reaching for quick-fix strategies to boost test scores (e.g., motivating students through contests and bulletin board reminders, adding zero tolerance policies for discipline problems during test period, assigning practice tests, having students sign commitment contracts, reducing emphasis on assignments that were not aligned to tests, attending professional development workshops that promised improved scores etc..) These same authors also reported that teachers would consider changing schools if their school was designated low performing because they felt labeled. They cited Shapiro as saying: "the idealistic intentions that usually bring people into education-a desire to make some contribution to a better world, to improve the lives of kids, to offer a caring environment to children, and so on...become perverted by the limited pursuit of higher test scores and the crass exploitation of a few extra collars for achieving better results." (p. 202)

While Stiggins (1999) supports assessment for policy and program decision makers, he cautions that determining whether a school is working or not should not be made on the basis of tests that are administered once a year. He reminds us that critical decisions based on evidence gathered regularly in the classrooms are being made in the classrooms and in the living rooms of the nation by students, teachers and parents. He feels this important assessment has been mostly ignored in the school improvement journey.

As early as 1991, Stake noted that," Knowing the rank order of students as to proficiency is not the same as knowing what students know. Education is not so much an achieving of some fixed standard. Education is a personal process and a personally unique accomplishment." (p.26). Considering the range of experiences and activities that schools in Ontario are responsible for and holding true to beliefs that schooling is really for learning and for all children, then it follows that the "effectiveness of a policy, such as that of testing, has to be measured against that purpose" (Earl, 2002, p. 1). Since the purpose dictates how any assessment should be constructed, administered, scored, and used, Stake (1998) urged policymakers to rethink large-scale testing, beyond the enormous cost of such testing, and to revisit the pedagogical principles of individualization and equity.

Stake (1998) noted that accountability systems should make the interests of all children common in the true sense of public schooling. He feels that statistical

accountability systems divide schools and communities as they compete for prestige and resources. More devastating is that these systems isolate schools and devote fewer resources to students whom require greater assistance because they may be more difficult to teach.

Herman (1992) reported in her synthesis of research on good assessment that the pressure to improve test scores in the absence of serious, parallel supports for instructional improvement is likely to produce serious distortions. Furthermore, Ellwein and Glass (1987) noted that when policymakers and others try to raise standards based on test results, safety nets are strung up (in the form of exemptions, repeated trials, softening cut-scores, tutoring for retests) to catch those who fail.

C.O.D.E. endorses the perspective put forward by Stake (1998) that the dominance of educational test scores today conflicts with the fact that we do not have to use statistics as the dominant way of describing schools and their problems, and that in the past many other means were used. Evaluation of schools by test score statistics is one among many possible ways of seeing education through national, provincial and local perspectives. In addition, there are many other evaluation strategies that deserve inclusion.

Concern #5: Publishing School Results

The government's action of publishing schools' results has drawn profession-wide criticism. Though some claim that this information should be public in a democratic society, others counter that raw-score reporting cannot begin to represent the complex picture of the many different kinds of learning that occur in schools.

Bates (1991) observes:

"Raw scores only tell part of the story. They tell nothing of the other features

of a school's life. They take no account of pupils with special needs or those who have done better than could reasonably have been expected of them".

Lofty (1993) in a similar vein, while in favor of informing the public of the levels that students and schools achieve, notes that raw-score reporting is likely to present a reductive picture of complex achievements. Furthermore, he maintains that with the intention of making assessment more objective and rigorous, an original emphasis on continuous assessment by teachers has been reversed, a move that many teachers see as counterproductive to raising standards.

C.O.D.E. would welcome the opportunity to participate in a debate to establish the most informative and comprehensive methods for keeping the public informed about the effectiveness of Ontario schools.

Summary

While it is very clear that school systems need to be accountable to the public and that accountability and assessment are the central elements in educational reform today, C.O.D.E. is not convinced, that the expansion of large-scale assessment programs at every grade level will actually improve student and teacher learning. Furthermore, it believes that high-stake tests such as the OSSLT are affecting students in negative ways, and it is not convinced that target setting as it is being carried out moves Ontario schools forward in terms of school improvement.

In conclusion, C.O.D.E. has looked seriously at the implications of a province-wide testing program as a means of accountability. It believes that parents and other stakeholders are entitled to know how well students and schools are achieving in educational programs provided by the school systems. However, before the Ministry of Education implements additional testing programs, C.O.D.E. believes it is fundamental to address the importance of a more balanced approach to accountability- one that includes decision-making based on sound research and the redirection of limited financial resources to include the training and development of classroom teachers in the area of assessment and evaluation-a critical element in school improvement.

C.O.D.E. is committed to working with the Ministry of Education and the Government of Ontario in providing the best possible education for our students. As the educational leaders of the school boards, we look forward to working cooperatively in meeting that challenge.

Respectfully submitted
On behalf of all Directors of Education by the CODE Executive,

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APPENDIX A

Recommendations

CODE recommends that the Ontario Government:

- 1. Announce a moratorium on any additional testing for a minimum of three years.
- 2. Conduct a comprehensive evaluation of the current testing program in Grades 3, 6, 9 and 10 including a cost-benefit analysis.
- 3. Report provincial assessment data in combination with other data, particularly from provincial report cards, in order to provide a more accurate measure of student performance/achievement.
- 4. Increase resources for training and development in classroom assessment and evaluation for school-based personnel.
- 5. Revise the policy that makes the Grade 10 Ontario Literacy Skills Tests a highstakes one-time only assessment that affects the potential for students to graduate.
- 6. Review and revise the process of target setting in order to increase consistency and fairness in setting targets.
- 7. Change the competitive incentive program to a fair program of support for school improvement efforts.
- 8. Maintain on-going research on how assessment, in combination with other factors, contributes to school improvement. Give attention to the special needs of various cultural groups.
- Establish a Testing Task Force with membership from C.O.D.E. to lead discussions across the province and to monitor the "equity and ethics issues" associated with large-scale assessment

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PRESENTATION TO FINANCE REVIEW COMMITTEE ON INFORMATION COMMUNICATIONS TECHNOLOGY IN THE CLASSROOM

Background

Student learning and student performance improve with constructive use of technology as a learning tool. Conclusive evidence now exists to illustrate a positive connection between ICT use in schools and student achievement. The Office for Standards in Education in Great Britain recently concluded, "Improvement in teaching and learning with ICT are evident in those schools that have been connected to broadband services." (ICT in Schools – Effect of Government Initiatives, p.3) Other studies with the same conclusion exist in the United States and Australia where the emphasis was focused on appropriate teacher guided use, not random wandering on the internet.

School Boards in the Province of Ontario have been struggling with the many issues that present themselves when addressing the use of technology in classrooms. These go well beyond the matters that pertain to the acquisition of hardware and software. In fact the purchase of these items represent a fraction of the actual costs incurred in providing meaningful access to technology in our schools. In addition, it must be recognized that at the present time inequities exist among district school boards that need to be addressed. This paper will provide an overview of the salient issues that should be strongly considered in any future revisions to the Funding Model.

The Ontario Knowledge Network For Learning made a series of recommendations to the provincial government in 2001. OKNL's final report emphasized the importance of computer literacy for Ontario and its students if they are to remain competitive in the world economy. It is suggested that the recommendations within that report be reconsidered and updated to assist in funding decisions.

Information Gathering

The content in this paper was obtained through scheduled meetings with administrators from ten district school boards responsible for the information technology portfolio. These boards included Public, Catholic and French language jurisdictions.

Hardware

It must be recognized that the cost of purchasing computer hardware is exceeded by the cost of supporting all aspects of information and communications technology. At this point, the school boards interviewed are considering an overall ratio of 5 students per computer as a target for elementary schools with secondary schools being somewhat lower. With a replacement target of 5 years for a computer, the present funding allocation is not sufficient. Boards have found that machines that are older than 5 years carry prohibitive maintenance costs and are, in many cases, not capable of the functions

required. The Boards are, therefore, in a position of not being able to sustain an adequate number of computers to meet evolving program requirements. It is recommended that the Ministry conduct a study into the potential benefits of leasing arrangements to facilitate the acquisition of additional hardware.

Some Boards are using computer labs in schools while others are focusing their efforts on putting computers in regular classrooms. Most are using a combination of these configurations. In several cases, Boards are experimenting with the use of wireless technology through the use of LAN carts to better serve the needs of the students. These variations need to be studied to determine the advantages and disadvantages of each configuration and the related costs.

Software

The Ministry is to be commended for the excellent support to schools that is offered through the Ontario Software Acquisition Program Advisory Committee. Boards do not have the resources to purchase software in large quantities and the concept of the Ministry providing licenses for certain common types of applications is to be applauded and hopefully expanded. It is suggested that this licensing process go beyond classroom applications and include matters pertaining to data collection, student information systems, financial applications, etc.

The Internet

School Boards have implemented a variety of processes to govern student access to inappropriate websites while encouraging appropriate use of the Internet as a learning tool. Some jurisdictions have developed portals that effectively provide librarian services that the internet presently lacks. Sites are now available internationally such as the National Grid for Learning (www.safety.ngfl.gov.uk/schools) and the British Educational Communications and Technology agency (www.becta.org.uk/index.cfm). These sites provide a wide range of teaching and learning resources for teacher, student, parents, indeed for all learners. They also provide advice on Internet filtering, the use of chat rooms and e-mail in education, the use of pupil photographs in school websites and provide a number of case studies of good practice. Effectively, they provide quality controlled one-stop-shopping for e-learners.

The Alberta Ministry of Education is currently in the process of developing a portal for that province and it is suggested that Ontario should be providing a similar resource for students and parents. The portal would enable school boards to post learning materials with full credit given, as could universities, libraries, museums, etc. This portal could also provide links to other learning sites. Without equitable access to the internet across the province, some students will be denied the opportunity to benefit from these educational portals. Thus the need for a provincial standard for connectivity to the internet.

Training

Staff development is one of the most critical factors in the effective use of information and communication technology. It is a continuous need.

Teachers are entering the profession with little or no preparation in the use of technology to assist students in meeting curriculum expectations in the classroom. Not only are they ill prepared from a curriculum standpoint, they are not able to manage Ministry mandated requirements such as the Provincial report card. Boards must have in place the necessary supports for these beginning teachers to enable them to be successful.

Experienced teachers need ongoing support to be effective in the classroom. Many teachers have not acquired a level of expertise that allows them to take full advantage of the technology available and enable them to keep abreast with current practice and applications. What's needed is a variety of strategies and approaches that meet the learning needs of staff and that address the geographical uniqueness of our various boards of education.

At the present time, Boards are providing the majority of teacher training outside of the regular school day. In many instances, training staff have been reduced. This limits what can be accomplished to a level far below what should be considered acceptable. The Council of Ontario Directors of Education recommends that funds be earmarked specifically for teacher professional development.

Technical Support

This category is greatly influenced by many significant factors such as geography, the replacement ratio for hardware within a Board, the skill level of the technicians available, the number of technicians, technician attrition due to market factors, the number of machines within a school Board, the warranty agreements that have been put in place, etc. Boards have found that support costs can be reduced through improvement in many of the factors previously listed. An adequate level of technical support might be defined as the ability to provide continuous critical system processes with no user perceptible interruptions.

School districts that have service contracts have struggled to define such things as what is covered and what is not, acceptable response times and whether it is a hardware problem, a software problem or a user problem. Whether or not a school Board provides support themselves or contracts such a service is not the issue. The cost of such support should be recognized and provided.

Access to Information

The OKLN report coined the phrase, "Any time, any pace, Everyone, every place." Access to information must be provided at a level considered in the market place to be "high speed". Many school Boards in the province have reached this capability, however, at a significant initial cost and considerable ongoing costs. The Council of Ontario Directors of Education is willing to use the experience of these Boards to develop advice to the Ministry on a minimum standard for elementary and secondary schools within the province. The nature of the technology is such that the standard will require regular review, perhaps on a three year cycle. The funding model would reflect the establishment and maintenance of this standard.

French Language

The French Language School Boards face additional costs when purchasing software and other materials that require translation because the market for these products and services is small and vendors are not anxious to enter into this field. Appropriate compensation for this inequity must appear within the funding model.

Geographical Factors

The present funding for technology does recognize that additional costs are incurred by rural and isolate Boards. It is suggested that this continue and that a review of the costs be conducted.

Peripherals

Effective use of technology in the classroom is not simply the desktop computer. Digital cameras allow for the capturing, manipulating and sharing of visual images. Digital projectors extend the technology. As a teaching tool they are as critical as a blackboard, an overhead projector or any other device, which allows one person to share ideas with one or more others. The funding formula should continue to allow Boards to purchase hardware beyond the desktop computer. As previously stated, however, inadequate funding has greatly limited purchases in this area. All students need to benefit from being able to access this important resource.

Summary

The government has provided support for technology in the classrooms of the province. It is apparent that additional revenues are required if students in Ontario are to experience the same educational benefits as students in other provinces and countries. The style of teaching and learning needs to focus on the use of technology such that ICT is used to support all facets of the school curriculum. It is suggested that the recommendations found in the Ontario Knowledge Network for Learning's Final Report be reviewed in the light of current information from Ontario, from other Canadian provinces, from Great Britain, the United States and Australia. This should assist in establishing an appropriate

funding level for information and communications technology for Ontario classrooms. The Council of Ontario Directors of Education is willing to provide advice to the Ministry on the establishment of standards regarding hardware capabilities, student/computer ratios, replacement cycles, and technical support. These standards will need to be supported through appropriate funding levels, which illustrate and appreciate the entire cost of maintaining a technological infrastructure. Such standards are absolutely necessary if the school districts in the province are to reach a point of equity and sustainability. Boards must be required to spend the financial resources provided for technology on technology. The government must ensure that its commitment to technology is long term.

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