

Appendix I. Funding for the Renewed Mathematics Strategy

Introduction

Funding for the Renewed Mathematics Strategy (Strategy) in 2016-17 is designed to provide additional supports to all district school boards (DSB) with a focus on improving achievement in mathematics. This is intended to help the system achieve key goals related to the Strategy and aligns with the goals of *Achieving Excellence*, Ontario's renewed vision for education. That is, it recognizes the system's needs to increase mathematics achievement overall and close the mathematics achievement gaps, so that all students can succeed.

While funding for the Strategy will begin with the 2016-17 school year, it is important to note that there are many existing strategies and supports in place for district school boards to assist them with their efforts in improving mathematics achievement in the current school year

Overview

What follows are an overview and details of funding for the Strategy and the criteria used to calculate DSBs' 2016-17 allocations. Due to the varying nature of the elementary and secondary school structures, a funding approach for each panel has been developed to better address the differences.

K-12 Supports

Component	Description
1. DSB-Based Mathematics Facilitator	Funding for salary and travel per facilitator is allocated at \$115,000 per qualifying DSB. Funding for one shared DSB facilitator will be provided for the three school authorities
2. French-Language DSB Mathematics Facilitator	Funding for salary per facilitator is allocated at \$100,000 per qualifying DSB (Note: Travel expenses covered separately)
3. Special Education	An additional \$1.5M funding will be provided to all school boards through the same allocation model used in other years to support Learning for All K-12 projects, that is a base of \$17,000 plus adjustment for Average Daily Enrolment (ADE)
4. Regional Networking	Funding for regional networking is allocated at \$25,000 per DSB
5. Continuity (\$0.8M)	The present model is needs-based. As a result, some DSBs will generate increase funds and some will experience a decline in funds. In order to ensure continuity, all DSBs total elementary funding will fall within $\pm 25\%$ of 2015-16 funding.

Elementary Schools

A. Funding Overview and Criteria

The elementary funding approach is designed to differentiate support to all district school boards by providing support for all elementary schools, increased support for some schools, and intensive support for a few schools. These supports are provided to address the strengths and needs of all elementary students in service of increasing mathematics achievement in Grades 3 and 6.

The following chart depicts the key considerations and assumptions that underlie the elementary funding approach.

Component	Description
1. Student Achievement on EQAO Grades 3 and 6	Funding to support schools based on achievement on EQAO Grades 3 and 6 Mathematics aggregated to both schools and DSBs
2. School Size	Funding is differentiated based on school size determined by Average Daily Enrolment (ADE)
3. All Elementary Schools	Funding for all elementary schools is based on October 2014 enrollment
4. Teacher Professional Learning	Funding to support teacher professional learning in mathematics has been modeled after an average rate of \$250 per day, per teacher for release time
5. Principal Release for Professional Learning	Funding to support principal professional learning in mathematics has been modeled after an average rate of \$350 per day per school administrator, for four days for all schools
6. Professional Learning for Lead Teachers	Funding to support professional learning for a lead teacher learner of mathematics in all schools has been modeled after five days of release time for between one and three lead teachers depending on school size
7. School-Based Facilitator	Funding for salary and travel per facilitator is allocated at \$110,000 per teacher per DSB (with at least 0.3 to 0.5 full-time equivalent for the schools that require the greatest support; where DSBs are eligible for less than one School-based Facilitator, one FTE is allocated to them.)
8. Pedagogical Leadership K-3	Funding to support the release for participating in the Pedagogical Leadership K-3 sessions is allotted at \$5,000 per DSB

B. Description of Key Elementary Data Sources

The key data sources used to support the determination of 2016-17 funding for all elementary schools are:

- EQAO results in Grades 3 and 6 Mathematics
- Average Daily Enrolment (ADE)
- October Enrolment

The following chart provides an overview of the key data sources applied to the elementary funding formula:

Component	Data Source	Academic Year(s)	Description	Thresholds
Student Achievement Component	EQAO Grade 3 and 6 Mathematics	2012-13, 2013-14, 2014-15	<p>Percentage of students achieving levels 3 and 4 (meeting or exceeding provincial standard - MEPS) over 3 academic years (i.e., 3-year rolling average converted to a percentage)</p> <p>Count of students eligible to participate over 3 academic years</p>	<p>SOME schools receiving increased support are identified by:</p> <ul style="list-style-type: none"> < 50% of students MEPS in G3M OR < 30% of students MEPS in G6M, excluding FEW schools; At least 30 students participating in each of G3M and G6M (where participating) <p>A FEW schools receiving intensive support are identified by:</p> <ul style="list-style-type: none"> < 30% of students MEPS in at least one of G3M or G6M and < 30% or 50% of students MEPS in the other assessment (G3M or G6M where applicable) At least 30 students participating in each G3M and G6M (where participating) <p>DSB-Mathematics Learning Facilitator identified by:</p> <ul style="list-style-type: none"> DSBs with $\leq 50\%$ MEPS in G6M over the most recent three years
School Size Component	Average Daily Enrolment	2014-15	<i>Average Daily Enrolment</i> - ADE is provides an ongoing measure of attendance of students in schools	<ul style="list-style-type: none"> Small schools (ADE<300) Medium schools (300<=ADE<750) Large schools (ADE>750)
Source of all Elementary Schools Component	October Enrolment	2014-15	October 2014 enrolment provided through the Ontario School Information	This includes all elementary schools open as of October 2014. The following is a summary of

Component	Data Source	Academic Year(s)	Description	Thresholds
			System (OnSIS) is used to determine the list of open elementary schools, of all configurations, that excludes schools that are care and treatment facilities.	<p><u>exclusion criteria</u> applied to the elementary data set:</p> <ul style="list-style-type: none"> • All adult continuing education schools • All adult continuing education day schools • All care and treatment schools • All night schools • All summer schools • All schools that are closed or merged/consolidated with other schools

Achievement and school size were used to determine funding amounts for school professional learning. The following table outlines amounts used for funding calculations:

Funding component	Small Schools	Medium Schools	Large Schools
Base for professional learning for all elementary schools	\$1,250	\$2,000	\$2,500
Professional learning for lead teachers in all elementary schools	\$1,250	\$2,500	\$3,750
Principal release time for all schools	\$1,400	\$1,400	\$1,400
Increased supports for some elementary schools	+\$2,000	+\$3,000	+\$4,500
Additional intensive support for a few schools*	+\$5,000	+\$12,000	+\$12,000

*Few schools have also generated funds for districts to hire a school-based learning facilitator(s).

* Although specific middle-schools (only Grades 7 and 8) will not be listed as schools requiring additional or intensive support within the strategy, DSBs should include these schools as part of their DSB mathematics strategy, using a K-12 perspective. They have generated funds for professional learning, as noted above.

Secondary Schools

A. Secondary Funding Overview for 2016-17

The secondary funding approach is designed to differentiate support to all district school boards by providing support for all secondary schools, increased support for some schools, and intensive support for a few schools. These supports are provided to address the needs of all secondary students in order to continue to close the mathematics achievement gap in Grade 9.

The following chart depicts the key considerations and assumptions that underlie the secondary funding approach.

Component	Description
1. Student Achievement: EQAO Grade 9 Applied Mathematics	Funding to support schools based on achievement in EQAO Grade 9 Applied Mathematics.
2. School Size: Attempted Credits in Grade 9 Applied Mathematics	Funding to support schools based on number of attempted credits by students in Grade 9 Applied Mathematics.
3. Teacher Professional Learning	Funding to support teacher professional learning in mathematics has been modeled after an average rate of \$250 per day, per teacher for release time. <i>This is available to “some” and “few” schools.</i>
4. Lead Teacher or Department Head Release Time	Funding to support lead mathematics teachers or department heads to provide additional supports in applied classes is calculated based on the proportion of a teacher FTE that is being funded. One section of release time in a school year is calculated at \$15,000 for small and medium sized schools requiring intensive support. Two sections of release time is calculated at \$30,000 for large schools requiring intensive support.
5. Summer Learning Institute: OAME/OMCA Grade 9 Applied Mathematics	Funding towards registration fee (\$200) for the OAME/OMCA Grade 9 Applied Mathematics Summer Institute. <i>This is available to “few” schools.</i>
6. 7-9 Transition Planning	Funding allocations for all boards are based on secondary student enrolment projections for 2016-17 under <i>Building Capacity for Effective Mathematics Instruction</i> . <i>This is available to “all” schools.</i>
7. 7-12 AQ Supports	A provincial application-based fund of \$1 million will support teachers and school teams to fund registration fees for AQs in mathematics and/or special education. <i>This is available to “all” schools.</i>
8. Regional Math Leaders Network/ Knowledge Mobilization	Funding to support participation in this network at \$1000 per team. <i>This is available to “some” and “few” schools.</i>

B. Description of Key Data Sources

The two key data sources used to support the calculation of 2016-17 funding for all secondary schools are:

- EQAO results in Grade 9 Applied Mathematics
- Attempted credits in Grade 9 Applied Mathematics

The following chart provides an overview of the key data sources applied to the secondary funding formula:

Component	Data Source	Academic Year(s)	Description	Thresholds
Student Achievement Component	EQAO Grade 9 Applied Mathematics	2009-10, 2010-11, 2011-12, 2012-13, 2013-14	Percentage of students achieving levels 3 and 4 (meeting or exceeding the provincial standard) over 5 academic years (i.e., 5-year rolling average converted to a percentage)	All schools: $\geq 50\%$ of students achieving at levels 3 and 4 Some schools attracting increased support: $\geq 30\%$ and $< 50\%$ of students achieving at levels 3 and 4 A few schools attracting more intensive support: $< 30\%$ of students achieving at levels 3 and 4
School Size Component	Attempted Credits in Grade 9 Applied Mathematics	2011-12, 2012-13, 2013-14	Number of attempted credits by students in MFM1P over 3 academic years (i.e., 3-year rolling average)	Small schools: ≤ 25 attempted credits Medium schools: > 25 and < 75 attempted credits Large schools: ≥ 75 attempted credits

Student achievement and school size were used to determine funding amounts for school professional learning. The following table outlines amounts used for funding calculations:

Funding component	Small Schools	Medium Schools	Large Schools
Teacher Professional Learning for Some Schools	\$10,000	\$10,000	\$10,000
Lead Teacher or Department Head Release Time for Few Schools	\$15,000	\$15,000	\$30,000
Summer Learning Institute: OAME/OMCA Grade 9 Applied Mathematics	\$200	\$200	\$200
7-9 Transition Planning for All Schools	Varies	Varies	Varies
Regional Math Leaders Network/Knowledge Mobilization	\$1,000	\$1,000	\$1,000

The following section documents the considerations made for the secondary data set and the two data sources from the student achievement and school size components.

Secondary Data Set

The following is a summary of **exclusion criteria** applied to the secondary data set:

- All adult continuing education schools
- All adult continuing education day schools
- All alternative schools
- All night schools
- All summer schools
- All schools that are closed or merged/consolidated with other schools

These schools were excluded from the data set because students from these schools do not participate in the EQAO Grade 9 Applied Mathematics assessment. However, the secondary data set **includes** vocational schools and junior high schools¹ because students from these schools can participate in the EQAO Grade 9 Applied Mathematics assessment and/or participate in Grade 9 Applied Mathematics (MFM1P).

Student Achievement Component

As per the EQAO Policies and Procedures Guide for Grade 9 Mathematics², the Grade 9 Mathematics assessments:

- Include all students working towards an applied or academic Grade 9 math credit (regardless of whether they have participated in a previous administration).
- Include students who are English Language Learners
- Include students with special education needs.
- Do not include students enrolled in a locally developed Grade 9 mathematics course or mathematics credit recovery program.
- Do not include students enrolled in a co-op course associated with Grade 9 mathematics who have previously passed the Grade 9 academic or applied mathematics course.

For secondary schools without five consecutive years of EQAO Grade 9 Applied Mathematics data, the following rules were followed:

- 1-4 years – rolling average based on available data points was calculated
 - If only 1 year of data was from 2014-15, this was applied
- “Mixed years” (data in between years of missing data) – rolling average of available data points (including 2014-15³, as applicable) was calculated

A case-by-case analysis of secondary schools without five consecutive years of EQAO Grade 9 Applied Mathematics data was reviewed by senior management to determine inclusion or exclusion within the final data set.

School Size Component

¹ Junior high schools with missing data on attempted credits in MFM1P were excluded from the secondary data set.

² <http://www.eqao.com/en/assessments/grade-9-math/assessment-docs/policies-procedures-grade9.pdf>

³ The 2014-15 EQAO results were only considered in these cases; the 2014-15 EQAO results weren't applied to the entire formula because many English school boards didn't participate in these assessments due to labour disruptions.

- Data on attempted credits for Grade 9 Applied Mathematics (MFM1P) includes all students attempting the credit, including those second, third and fourth year students who are taking the Grade 9 course for the second time, and reach ahead students from elementary.
- The thresholds for attempted credits are based on assumption that 25 credit attempts is roughly equivalent to 1 Full-Time Equivalent (FTE) staff required to teach the course.
- A case-by-case analysis of secondary schools without three consecutive years of data on attempted credits was reviewed by senior management to determine inclusion or exclusion within the final data set.
- Note: Enrolment data on students taking Grade 9 Applied Mathematics (MFM1P) – as a possible data source – is not available and as such, data on attempted credits was applied to the secondary funding formula.