



REPORT TO

STUDENT ACHIEVEMENT AND WELL BEING, CATHOLIC EDUCATION AND HUMAN RESOURCES COMMITTEE

UPDATE ON THE PILOT PROJECT FOR JUMP MATHEMATICS 2017-2018

"I can do all things through him who strengthens me." Philippians 4:13

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RECOMMENDATION REPORT

Vision:

At Toronto Catholic we transform the world through witness, faith, innovation and action.

Mission:

The Toronto Catholic District School Board is an inclusive learning community uniting home, parish and school and rooted in the love of Christ.

We educate students to grow in grace and knowledge to lead lives of faith, hope and charity.



Rory McGuckin
Director of Education

D. Koenig
Associate Director of Academic Affairs

T. Robins
Acting Associate Director of Planning and Facilities

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Executive Superintendent of Business Services and Chief Financial Officer

A. EXECUTIVE SUMMARY

In January 2015, the JUMP Math Pilot was implemented within the TCDSB for fourteen elementary schools. Since 2015, schools have received JUMP teacher and student resources, as well as professional development to support implementation. This report summarizes the results of surveys (teachers, parents, students, principals) and EQAO data for participating schools.

A pilot project is designed to be a small-scale study to evaluate feasibility before determining if the project being piloted should be used system-wide, in a limited fashion or to be discontinued. The TCDSB has just completed the third year of the JUMP pilot project.

The report makes the following recommendations based on what has been learned from the JUMP Math Pilot:

- since enough data has been collected: move from a pilot project status to the status of an additional math resource going forward, in any school, consistent with their school learning improvement plan and professional learning plan;
- since the data collected showed that JUMP worked most effectively as a supplementary resource with primary students and with students achieving at level 2: JUMP can be employed as an additional supplementary resource in the primary division, or with students achieving at level 2;
- since plans for professional learning are underway for 2018-2019, continue with planned JUMP Math professional learning for Grade 3 and Grade 6 teachers in the former pilot schools, focusing on students achieving at level 2.

The cumulative staff time required to prepare this report was 65 hours.

B. PURPOSE

1. This is an annual report on the JUMP Math Pilot initiative made available to schools through the Curriculum Leadership and Innovation Department to inform planning within the Toronto Catholic District School Board.

C. BACKGROUND

1. The Toronto Catholic District School Board initiated a pilot of JUMP Math in January 2015.
2. Schools received JUMP Math teaching and student resources. The schools were: Christ the King*, D'Arcy McGee, St. Angela, St. Bede, St. Bernard, St. Brigid, St. Charles Garnier, St. Clare, St. James, St. John XXIII, St. Kevin, St. Leo, St. Paul, and St. Theresa Shrine.

(* Note: Christ the King merged with another school in 2017-2018 school year and is now The Holy Trinity).

3. Since the start of the JUMP Math pilot, schools have participated in ongoing professional development offered by the JUMP Math Office to support program implementation. Additionally, schools receive support from the TCDSB Mathematics Resource Team.

D. EVIDENCE/RESEARCH/ANALYSIS

1. ACHIEVEMENT DATA: EQAO Mathematics

EQAO Math across years: 2014 – 2018

Percent of students at Level 3&4	Grade 3 Math					Grade 6 Math				
	2014	2015	2017	2018	Trend	2014	2015	2017	2018	Trend
Province	67	EC	62	61		54	EC	50	49	
TCDSB	66	64	63	58		53	52	48	46	
St. Bernard	40	53	67	63		33	21	18	28	
St. Angela	60	46	50	40		24	31	48	24	
St. Charles Garnier	31	40	38	21		24	16	16	9	
St. Leo	70	64	42	72		43	30	64	49	
Christ the King*	91	76	69	76		55	70	74	52	
D'Arcy McGee	28	51	24	28		34	49	31	18	
St. Kevin	32	67	21	18		52	27	33	37	
St. Clare	70	62	97	67		66	68	38	17	
St. Paul	50	65	70	64		30	47	29	40	
St. John XXIII	67	45	58	49		55	66	91	68	
St. Bede	48	63	78	80		53	70	39	33	
St. Theresa Shrine	58	54	45	65		32	61	55	27	
St. James	38	58	41	27		27	14	32	42	
St. Brigid	82	82	68	58		60	52	51	71	

* Note: Christ the King merged with St Teresa in the 2017- 2018 school year and is now The Holy Trinity.

Summary of EQAO results

- The EQAO results in math for the JUMP pilot schools are **inconsistent**.
- The TCDSB has now had two groups of students who have participated in the JUMP math pilot, and have had EQAO cohort results for both Grade 3 and Grade 6 students (2014 Grade 3 – 2017 Grade 6; and 2015 Grade 3 – 2018 Grade 6). We were unable to find any data that supported a positive change related to JUMP math.
- Within the JUMP Pilot schools, there were schools that received support through the Renewed Math Strategy.
- Any changes in achievement scores must be interpreted at the local level to reflect effective practices, strategies, and supports implemented, recognizing that the context of each school is unique.

2. PERCEPTUAL DATA

In the Spring of 2018, all 14 schools in the JUMP Pilot were invited to provide feedback through four surveys: Teacher Survey, Student Survey, Parent Survey, and Principal Survey.

Teachers (n = 81)

- Responses from 81 teachers in 13 schools; teachers represented all divisions.

Survey Question Topic	Percentage of positive responses from teachers		
	> 80%	50-79%	< 50%
Supporting the curriculum		Ontario Curriculum Expectations 64%	
Meeting Ontario Curriculum Achievement Chart	Knowledge 80%	Application 59%; Thinking 52%	Communication 43%
Benefitting students		Confidence 79%; Participation 68%; Perseverance 66%; Achievement 61%	
Student enjoyment		Program 75%	
Helpfulness of materials		Student assessment and	Professional development 40%

Survey Question Topic	Percentage of positive responses from teachers		
	> 80%	50-79%	< 50%
		practice book 78%; Teacher resources 68%	
Frequency of use	Student assessment and practice book 84%	Lesson plans and teacher resources 62%	JUMP Math SMART Board lessons 22%
Quality of teacher resources		Content 72%; Organization 61%; Ease of use 54%	
Quality of student assessment and practice books	Content 83%;	Ease of use 74%; Organization 68%	
Quality of JUMP Math SMART board lesson materials			Content 38%; Organization 35%; Ease of use 32%
Helpfulness for students	Students at Level 2 in math 80%	Students at Level 1 in math 67%; Students at Level 3/4 in math 51%	
Use of program	Program required supplementation (e.g., Nelson Math, EQAO-type questions, practice problem solving sheets, online applications) 94%		
Continued use of JUMP math		With supplementation 78%	Exclusively 11%; Choose not to continue 10%

Students (n = 406)

- Responses from 11 schools; 164 students in Grade 3 and 239 students in Grade 6.

Survey question topic	Percentage of positive responses from students		
	> 80%	50-79%	< 50%
Attitudes regarding math		Reading math problems 65%; Good at math 50%;	Liking math 49%; Thinking about steps used to solve problems 44%; Answering difficult questions 29%; Talking to parents about math 27%
Perceptions of success		Feel more successful this year 67%	No difference from other years 27%; Feel less successful this year 5%

Parents (n = 86)

- Responses from 9 schools; 50 parents of Grade 3 students, 33 parents of Grade 6 students.
- About half the parents reported that their child likes math (49%); 52% of parents indicated that their child is experiencing greater success this year. About one third of parents (30%) reported “no change” in progress in math.
- When asked about the JUMP Math work at home, 54% of parents indicated that it was ‘just right’; 23% ‘not challenging enough’; 20% ‘difficult’.
- This type of variability is also reflected in the comments of parents: some are positive, some are not positive.

Principals (n=13)

- Responses from 13 principals (one principal is new to the school).
- The majority indicated that implementation levels were high (7 or above on a scale of 1 to 10) in the Primary Division. Implementation levels tend to be lower for the higher grades.
- When asked about school willingness to continue implementation, 10 schools responded ‘yes’, 3 schools indicated ‘no’.
- While some strengths were identified (e.g., in the Primary Division; for specific student needs), principals indicated the need for supplementing the program and required improvements in the learning materials.

Summary of all data above:

Metrics	Results
Math achievement	<ul style="list-style-type: none"> • Inconsistent Results • Overall no improvement • Points to the need to monitor and evaluate at the local level
Teacher survey	<ul style="list-style-type: none"> • Points to limitations to the program and perceived strengths • Points to a need to supplement with other math materials
Student survey	<ul style="list-style-type: none"> • Little evidence for positive or improved attitudes towards math
Parent survey	<ul style="list-style-type: none"> • Points to no evidence of positive change in attitudes and achievement
Principal survey	<ul style="list-style-type: none"> • Overall, continue implementation with supplementation of the JUMP math and professional learning
Program	<ul style="list-style-type: none"> • Supplementation of JUMP math is required to address student learning needs in mathematics • Does not meet the needs of all schools, all divisions, all students

E. ACTION PLAN

The TCDSB will continue to Focus on Fundamentals as per the Ministry of Education directive.

Curriculum staff will implement the following recommendations based on what has been learned from the JUMP Math Pilot:

- since enough data has been collected: move from a pilot project status to the status of providing JUMP math as an additional resource going forward, in any school, consistent with the school learning improvement plan and professional learning plan;
- since the data collected showed that JUMP worked most effectively as a supplementary resource with primary students and with students achieving at level 2: JUMP can be employed as an additional

supplementary resource in the primary division, or with students achieving at level 2;

- since plans for professional learning are underway for 2018-2019, continue with planned JUMP Math professional learning for Grade 3 and Grade 6 teachers in the former pilot schools, focusing on students achieving at level 2.

F. METRICS AND ACCOUNTABILITY

There will be continued monitoring of achievement in mathematics as part of the Board Learning and Improved Plan.

G. STAFF RECOMMENDATION

That the Board of Trustees approve the following with regard to JUMP Math:

1. since enough data has been collected: move from a pilot project status to the status of an additional math resource going forward, in any school, consistent with their school learning improvement plan and professional learning plan;
2. since the data collected showed that JUMP worked most effectively as a supplementary resource with primary students and with students achieving at level 2: JUMP can be employed as an additional supplementary resource in the primary division, or with students achieving at level 2;
3. since plans for professional learning are underway for 2018-2019, continue with planned JUMP Math professional learning for Grade 3 and Grade 6 teachers in the former pilot schools, focusing on students achieving at level 2.