

## APPENDIX B

### TCDSB External Research Applications: Approved 2014 - 2015 Studies Completed

#### 1. *The 2017 Ontario Student Drug Use and Health Survey (OSDUHS)*

- **Purpose:** To inform health education.
- **Method:** Bi-annual student questionnaire (Grade 7-8; 9-12 sample).
- **Summary:** Overall drug and alcohol use continues to decrease, consistent with the trend since 1999. Drug use is correlated with gender and with grade level. Males are more likely to use drugs than females, and drug use increases with grade, peaking in grades 11 and 12. The 2017 survey began to measure *fentanyl* use among secondary students. Results show that about 1% of students used fentanyl at least once in the past year, suggesting that this dangerous drug has surfaced in the student population.
- **Results and Application:** Results inform education and health professionals to identify areas of concern and emerging trends, and to create professional learning opportunities for teachers and administrators. These results will be shared with the Health/Physical Education Resource Teachers to inform professional learning offered this school year as well as the Mental Health Lead and others in the Teaching Learning Collaborative.

#### 2. *Assessment Development Project*

- **Purpose:** To develop an on-line mathematics assessment.
- **Method:** Students enrolled in Grades 11 and 12 mathematics courses participated in field test of the online assessment.
- **Summary:** An online assessment was developed to address the mathematics ‘readiness’ of students entering college business or technology programs within the framework of the continuing College Student Assessment Project. Nine mathematics content dimensions (Whole Numbers, Arithmetic, Integers, Decimals, Fractions, Ratio and Proportion, Percents, Basic Algebra, Measurement) across three categories of performance expectation (Knowing, Applying, Reasoning) were identified. Remedial instructional modules linked to assessment results were also developed. Field testing suggests that at this time, more data is needed to establish the reliability and validity of this assessment.
- **Results and Application:** This research will inform the ongoing development of the online assessment and support the continuing collaboration between Colleges and School Boards to address the mathematics preparedness of students.

#### 3. *Evaluation of the Power to Explore! (P2X) Nutrition Education Program*

- **Purpose:** To evaluate learning outcomes of a nutrition education program.

- **Method:** Pre- and post- measures of Grade 4 and 6 students; student and teacher interviews.
- **Summary:** Students who participated in the P2X program scored significantly better on the post-program nutrition knowledge test than the pre-test. Students were enthusiastic in their praise of P2X, especially regarding the program videos and program-based class and small-group activities, and 3 out of 4 students reported improving their eating habits after participating in P2X. Teachers reported that their favourite aspects of the program included the coverage of healthy eating and its integration across the curriculum; the engaging content; inclusion of multi-cultural perspectives across materials and its comprehensive, clearly laid-out and easy to use materials.
- **Results and Application:** Results informed updating of the P2X program in 2018 and will be shared with the Health/Physical Education Resource Teachers to inform professional learning offered during the school year as well as the Angel Foundation for Learning for information.

#### 4. *Schools with Promising Practices in Mathematics Teaching and Learning*

- **Purpose:** To identify promising practices in Grade 9 Applied Mathematics classrooms.
- **Method:** Interviews, surveys, and focus groups with teachers and students.
- **Summary:** This case study focused on John Hattie's research on the school and teacher-related factors that have a measurable impact on student achievement. The five schools in the case study have all shown improvements over the last six years in the pass rates on report cards for Applied Mathematics and the percentage meeting the standard on the EQAO Grade 9 Assessment of Mathematics, although there is variation among the schools. A number of factors (e.g., school contributions, teacher contributions/strategies, curricular contributions) were identified which may have an influence on the variation across the schools and across time.
- **Results and Application:** Results are preliminary and the authors state that it would be unwise to draw strong conclusions. Several areas for further exploration were identified (e.g., the impact of student characteristics on achievement, the impact of school size and programs on student achievement, impetus for changed pedagogy) to further understand promising practices in mathematics teaching and learning.

#### 5. *Youth Mental Health and Addictions Champion (YMHAC) Project*

- **Purpose:** Youth with mental health needs are especially vulnerable to substance abuse and there is public stigma towards mental illness and addictions. This research examines the effectiveness of the YMHAC program model in addressing

the needs of youth, school staff, and adults in the community who are supportive of youth with mental health needs (“champions”).

- **Method:** Youth and “champions” were presented with educational materials (classroom lectures, youth camps, etc.). The research methods included pre-post surveys, focus groups and observations. Preliminary results were shared and more results are forthcoming.
- **Summary:** All parties generally thought they received effective support in addressing mental health and addiction. As a result of the program, staff and student “peer supporters” felt more comfortable in assisting students with mental health and addiction problems. The program resulted in increased awareness of the importance of promoting mental health and addiction, and reducing stigma by all stakeholders, including educators.
- **Results and Application:** Using the findings, researchers developed educational resources for mental health for all to use, including school staff. These results will be shared with the Superintendent of Special Services and Mental Health Lead.

#### **6. *2014 Ontario Child Health Study***

- **Purpose:** The study examines the association between the school environment and student mental health and well-being.
- **Method:** A survey of 31,000 elementary and secondary students in over 200 schools, their teachers and principals.
- **Summary:** Overall, 11% of students reported needing professional help in mental health, but only about half of that sample found it and fewer approached the school. Older female students were most likely to seek help. Students expressed concern about stigma, others learning of their mental health concerns, as well as service availability and effectiveness.
- **Results and Application:** Results are to be used by education and health professionals to educate students, parents and staff on mental health, coordinate community and school services and inform on available mental health services, and address stigma. These results will be shared with the Superintendent of Special Services and Mental Health Lead.

#### **7. *One Principal's Moral and Ethical Orientation to Practice***

- **Purpose:** To reflect on principal practice.
- **Method:** Case study with interviews, observations and document analysis
- **Summary:** The case study confirmed that the principal’s communication practices were significant in establishing a moral tone in the school. Written and verbal messages that outlined expectations for how people should treat one another were important ways for the principal to establish a tone of care and compassion. In turn, these communication procedures provided a way of better understanding the moral

values and ethical virtues that the principal upheld in her practice. The principal, cognizant that decisions and actions have an influence on the moral tone of the school, established relationships that enabled people to feel supported and guided in their work.

- **Results and Application:** The study reinforces the value of discussion and reflection with trusted mentors and colleagues on how life experiences can bring clarity to moral dilemmas and how this type of engagement contributes to the professional learning experience for principals. Results will be shared with Superintendents within the Teaching Learning Collaborative to inform their work in this area.

#### **8. *Not Just Teaching: A Case Study of Catholic Education in Neo-Liberal Times***

- **Purpose:** To study the role of teachers in society within a Catholic context.
- **Method:** Interviews and focus groups with students, teachers and principals
- **Summary:** Key findings point to the significant role of ethically- and morally-based teaching, an openness to possibilities and the good of all. This is in contrast to views of the work of teachers as technical, managerial and aligned to deterministic interpretations of the occupation, and society, which value more narrow perspectives of economic growth and market forces. Findings suggest that the work of teachers, and possibly all work, be undertaken with a view to ‘the common good,’ valuing the potential of all, as well as relationships, over more concrete, more easily measured, values, that prioritize subsistence over a fuller existence.
- **Results and Application:** The study supports the view that the work of teachers is at its best when practitioners approach it from a place of deep moral and ethical conviction. These findings will be shared with the Superintendents within the Teaching and Learning Collaborative.

#### **9. *Formative Assessment Practices in Grade 9 Applied Mathematics Classrooms***

- **Purpose:** To explore mathematics teachers’ use of assessment for learning practices with students who may struggle in mathematics.
- **Method:** Online survey of 131 teachers and 4 case studies in school boards across Southern Ontario. Case studies included 60 minutes of interviewing, 5 classroom observations and the collection of educational materials used in the classrooms.
- **Summary:** It is known that critical features of Assessment for Learning (AfL) strategies, such as understanding common student misconceptions, are connected to mathematical knowledge for teaching. Specifically, mathematical knowledge for teaching supports AfL practices (namely, identifying and sharing success criteria, engineering effective classroom discussions and tasks that elicit evidence of learning, and providing feedback that moves learners forward). Findings highlighted that the potential of AfL practices are not yet fully realized in

classrooms, and teachers require domain specific pedagogical support in implementing the spirit of AfL. The research shows that secondary mathematics teachers implement AfL strategies along a continuum, from no implementation to deep integration in the classroom.

- **Results and Application:** AfL is valuable for all students, and in particular, struggling students may be the strongest beneficiaries of AfL. Results are in-line with strategies supported currently by the TCDSB mathematics department and will be shared with Mathematics resource teachers, coaches and facilitators and the Superintendent of Curriculum, Leadership and Innovation and the Superintendent of Student Success. Results of the study will be used by mathematics resource teachers, coaches and facilitators to inform in-servicing that is being delivered this school year.

#### ***10. Evaluation of Stress Lessons: From Stressed Out to Chilled Out: A Program for Teens on Managing Stress***

- **Purpose:** To evaluate a program for students in Grades 7 to 9 to manage stress.
- **Method:** Students were given a battery of tests and interviews on classroom behavior, stress management and coping strategies, before and after participating in the program. Teachers were also interviewed,
- **Summary:** Program content included awareness of stress, coping strategies, and stress management. On the post-test (relative to the pre-test) students demonstrated improved behavioral engagement, coping strategies, and self-efficacy. There was also an unexpected increase in student level of perceived stress, possibly because they were more aware of stress. Teachers reported improved behavior and fewer "outbursts." Teacher participation and adherence to the program protocol varied and researchers also thought that they should look at longer term efficacy of the program.
- **Results and Application:** Results will inform improvements to address methodological issues in the study. Stress management is an important area of study and these findings will be shared with Special Services Staff for consideration.

#### ***11. Into Kids Health Pilot Project Evaluation***

- **Purpose:** To address elementary student obesity through exercise, diet, education and leadership, group activities and community and parental engagement.
- **Method:** Monitoring the number of schools participating in the numerous activities on nutrition, community and parents using pre-post measures; pre- and post- surveys of parents, students and staff
- **Summary:** On the numerous measures of nutrition, exercise, and other healthy behavior, students generally improved (1% to 20%). Positive behaviors less related

to obesity also improved. This program appears to promote health around food and exercise among students, as well as a variety of prosocial behaviors. The program also promotes community engagement and student leadership.

- **Results and Application:** The findings from this pilot will inform future research of this important program that promotes health. These results will be shared with Health and Physical Education Resource Staff and the Mental Health Lead for their information and consideration.

**12. *Evaluating Positive Youth Development among Children with Autism Spectrum Disorder (ASD) Attending the Program to Assist Social Thinking (PAST)***

- **Purpose:** To evaluate positive youth development in the PAST Program and to understand the PAST experiences of students with ASD and their parents.
- **Method:** Interviews with parents; focus groups with Year 3 PAST students; pre- and post- student measures.
- **Summary:** Parents indicated that their child formed positive relationships at PAST (i.e., developing friendships, sense of belonging and bonds with PAST teachers). As a result of participating in the program, children were able to cope better with difficult situations and to manage stress. Parents reported positive changes in the social interest and engagement of their child since starting PAST. Students reported positive relationships and friendships fostered in PAST. Students found that an important element of PAST was working together and described many cooperation-based activities. Finally, students described various skill building components of PAST, in particular identifying and understanding their feelings and emotions, as well as, the feelings of others.
- **Results and Application:** The results highlight the benefits of PAST for students with ASD. They will be shared with the Chief of Autism Programs and Services, as well as, the Autism Program Review Committee and will be used to inform planning.