

## APPENDIX A

### TCDSB External Research Applications: Approved in 2018-2019

#### *1. Exploring Video Based multi-lingual tool to support English learners*

- **Purpose:** A video-based multi-lingual educational platform to support English language learners by allowing them to learn in both English and non-English languages (e.g., Arabic) to meet curriculum expectations was piloted. Based on the Ontario curriculum, the lessons focussed on Grade 6 mathematics and science and allowed students to learn in both English and Arabic. With professional learning and support from central resource staff (ELL and Mathematics), this platform was introduced in one elementary school. The purpose of the research was to learn about the impact of this educational platform on student engagement and learning and to identify elements that support effective implementation.
- **Method:** Collection of usage data; focus groups with students, interviews with teachers and the school principal. (This case study investigates the feasibility of this Swedish ed-tech application in the Ontario context).

#### *2. Impact of Early French immersion on Language and Cognitive Development in a Diverse Population*

- **Purpose:** Since the first French Immersion program in 1965, a large body of research has demonstrated positive effects of immersion education on children's language development and academic achievement. However, since the original research was conducted, two changes have occurred: (i) an increase in the diversity of children in terms of linguistic, socioeconomic, and cultural background in these programs and (ii) an accumulation of evidence showing positive effects of bilingualism on cognitive development. The purpose of this project is to examine the outcomes of these programs for this new demographic and to investigate the effect of children's emerging bilingualism on cognitive development.
- **Method:** Repeated measures on students from Grade 1 to Grade 3 (nonverbal and verbal individually administered tasks). (This is the second year of a three-year longitudinal study in French Immersion schools).

### ***3. Fit for School Fit for Life***

- **Purpose:** This study is a collaboration between child health researchers and children's primary care doctors. There is emerging evidence of an association between Body Mass Index (BMI) trajectories and school achievement. The goal is to determine if child health and developmental trajectories in early childhood, measured from birth to age 3 years, are associated with kindergarten outcomes, as measured by the Early Development Instrument (EDI) in JK and SK. Since 2014-2015, approximately 30 students (JK and SK) have been involved.
- **Method:** EDI data are collected from students attending TCDSB schools in Junior Kindergarten or Senior Kindergarten; BMI is collected through the health system. (This research is part of a nationwide longitudinal study).

### ***4. The 2019 Ontario Student Drug Use and Healthy Survey (OSDUHS)***

- **Purpose:** The OSDUHS is the longest running Canadian survey that shows trends in student substance use and mental and physical health; it began in 1977. It monitors drug use, mental health, physical health, gambling, bullying and risk behaviours among Ontario students in Grades 7 to 12, every two years. The repeated design allows researchers to track change over time. The main purpose is to share updated information for health promotion, education, and policy efforts at all levels of government with the ultimate goal of improving the well-being for Ontario youth.
- **Method:** Students in Grades 7 to 12 are surveyed; 4 elementary schools and 8 secondary schools from TCDSB. (Schools are selected representative of Ontario within a stratified sample).

### ***5. Optimizing Mothers' Milk for Preterm Infants (OptiMom)***

- **Purpose:** In Canada, being born at very low birth weight (VLBW) is considered a leading factor in health issues in children. A key goal of improving the early nutrition of VLBW infants is to improve their long-term neurodevelopment, especially at school age. Mother's own breastmilk is considered ideal as a way of feeding VLBW infants; however, many babies need a supplement of donor milk or preterm formula as not enough mother's own milk is available. The purpose of this research is to follow up on the development of VLBW infants who in hospital were fed donor milk or preterm formula and/or mother's own milk.
- **Method:** a measure of school readiness is obtained through the Early Development Instrument (EDI), completed by teachers; cognitive, motor, language, and brain development is assessed at the hospital. (This research is part of a longitudinal study).

**6. *High School Student Survey and Administration Survey 2018***

- **Purpose:** The Toronto Police Service measures the effectiveness of its service to the public to gauge the success in achieving priorities they have set for the service. As schools within Toronto are a valuable and vital part of the community, surveys are sent to schools to learn about the perceptions of students regarding their interaction and involvement with the service.
- **Method:** Surveys of principals and students from high schools in Toronto.

**7. *The Relationship between Self-Compassion and Mental Health Self-Stigma in High School Youth***

- **Purpose:** Self-reflection, understanding oneself and stigma related to mental illness are critical components of mental health. In this study, students are shown videos created to promote empathy and understanding. The responses of students will inform improvements in the creation of the materials for potential future use and expansion.
- **Method:** Students in Grade 11 viewed a video and completed a battery of tests. (This case study took place during one school period).

**8. *Research on Improving School Based Supports for Students with Autism***

- **Purpose:** The Ministry of Education has initiated a pilot project to improve school-based supports for students with Autism Spectrum Disorder (ASD). One component of the school-based support is providing a dedicated on-site space for external Applied Behavioural Analysis (ABA) service providers to conduct therapy with students with ASD. Another component is offering voluntary online ABA training for educational assistance (EAs). The purpose of the study is to identify what aspects of the pilot are working well, what are the impacts and outcomes, and what may be recommended for expansion.
- **Method:** Data collection includes school visits and interviews with staff in different roles. (This is the second year of the research it involves one elementary school and focusses on impacts and outcomes).

**9. *Minority official language promotion in education in Canada and Cameroon: A comparative analysis***

- **Purpose:** The objective of this research is to understand the importance of promoting the minority official language (e.g., French), in an effort to inform and raise proficiency in language acquisition. The research is part of a larger Canadian study; it is curriculum-based with important potential to inform education and training policy.
- **Method:** Teachers and students in Grades 10-12 will be invited to complete surveys; one secondary school with Core French; one with French Immersion. (This research is being conducted in four provinces).

***10. An Evaluation of Stress Lessons: Tools for Resiliency, A Resource for Grades 9-12***

- **Purpose:** The promotion of mental health and well-being for students remains a priority in Ontario. Recognizing that stress is an integral part of our lives, nurturing resiliency and positive coping mechanisms is an important aspect of education. A resource has been created with a series of lessons on the topic of stress and healthy stress management techniques. In collaboration with the TCDSB Mental Health Team, four schools will be invited to participate in the implementation of these resources (e.g., Stress Lessons). The purpose of the research is to learn about the effectiveness of these lessons in promoting healthy ways of perceiving stress and coping.
- **Method:** Surveys will be conducted of students in Grade 9 and 10 and their parents.

***11. Faith and Wellness: A Daily Mental Health Resource for Kindergarten to Gr 8***

- **Purpose:** The research is clear on the foundational role of social-emotional well-being and mental health for student wellness and success. The Ontario Ministry of Education has made mental health a priority. With support from TCDSB staff, university researchers have created a Faith and Wellness resource for potential use with students from Kindergarten to Grade 8. The study introduces the resource in a limited number of classes. It is designed to garner feedback from teachers to help refine the materials as tools to promote and teach social-emotional knowledge.
- **Method:** Teacher participation in online surveys, feedback forms regarding classroom participation and an online focus group.

***12. Bike to School week 2019***

- **Purpose:** Bike to School Week is a cycling promotion campaign through the city of Toronto to promote active, safe and sustainable transportation amongst students and teachers. The purpose of the research is to identify ways to continue to promote participation.
- **Method:** A registration survey is completed before the event and a reporting survey is completed after the event.

***13. Parks Canada Survey of Educational Technologies and Digital Media Use in Canadian Schools***

- **Purpose:** Engagement and coaching of teachers on the use of technology is critical to keep up with ongoing advances to maximize benefits for student learning. This national research study is designed to collect information from all school boards in Canada and to inform planning.

- **Method:** Interview one person from each Board who has a role related to advocating or coaching teachers on the use of technology in education.

#### ***14. The Impact of STEAM Industry Professional Facilitated Outreach Events on Student Perceptions of STEAM fields***

- **Purpose:** In recent years, there has been increased recognition of the important role of Science, Technology, Engineering, Arts and Mathematics (STEAM) in student learning. In collaboration with TCDSB, this initiative aims to connect STEAM industry professionals with students to facilitate hands-on learning especially in the area of mathematics. Teachers and students from Grades 5 to Grade 8 in three elementary schools were invited to participate. The research is designed to learn about the impact of the initiative and to inform improvements for the future.
- **Method:** Pre- and post-surveys with both teachers and students.

#### ***15. The 2019 Principal School Mental Health***

- **Purpose:** The School Mental Health Surveys (SMHS) project is a study of student mental health and the school environment. The first provincial SMHS (2014-2015) was part of the 2014 Ontario Child Health Study (OCHS) and included surveys of students, teachers and principals. In 2019, a new phase of the SMHS project was introduced, surveying principals, to document successes and needs for supporting student mental health at the school level.
- **Method:** All principals were invited to complete an online survey. (This is a provincial initiative with a representative sample from boards).

#### ***16. 2019 Digital Literacy Week Event***

- **Purpose:** Digital Literacy Week celebrates the way technology has changed the way we work, play, learn and teach. Through a series of events and workshops, these programs and services will showcase the digital and technology programs and services available across the city, libraries, and in our schools and online. This is a collaborative effort (City of Toronto, Toronto Public Library, TDSB and TCDSB) to provide opportunities to support the digital literacy of Torontonians. Approximately 1,000 TCDSB students (Grades 5 – 7) participated in the events during this week. The research component was designed to understand the impact on students and teachers by participating in this initiative.
- **Method:** Participating teachers were invited to complete two surveys; one about their own experiences and one about the impact on their students.