

Directory of Non-Board-Initiated Research and Evaluation Projects

in the

Ottawa-Carleton District School Board
133 Greenbank Road • Nepean • Ontario • K2H 6L3

and the

Ottawa Catholic School Board
570 Hunt Club Road West • Nepean • Ontario • K2G 3R4

for

2015-2016



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INTRODUCTION

Purpose of the Directory

The Directory provides information about non-board-initiated research projects that were approved by the Ottawa-Carleton Research and Evaluation Advisory Committee during the 2015-2016 school year. The summaries of research are taken from the proposals submitted by researchers. Additional information about these projects may be obtained by contacting Dr. Tsala Mosimakoko at the Ottawa-Carleton District School Board or Dr. Lauren Figueredo at the Ottawa Catholic School Board.

Role of the Ottawa-Carleton Research and Evaluation Advisory Committee

The Ottawa-Carleton Research and Evaluation Advisory Committee is a joint committee of the Ottawa-Carleton District School Board and the Ottawa Catholic School Board which includes representatives from both boards. It was established in September 1994 to: eliminate the need for researchers to apply to each of the two school boards separately, standardize the approval process for research applicants, improve access to schools for researchers, and equalize the involvement of each board in research projects.

The primary functions of the Ottawa-Carleton Research and Evaluation Advisory Committee are to:

- support and encourage research and evaluation of programs that contributes to educational knowledge,
- review all requests for non-board-initiated research or evaluation to be conducted in the two school boards,
- determine the impact of each request on the school systems,
- measure the degree of involvement required by staff, students, and parents, and
- judge the relevance of each request to the educational objective and policies of the school board concerned.

Approval of a research/evaluation project by the Ottawa-Carleton Research and Evaluation Advisory Committee does not obligate any board, department, or school to participate in a study. The decision to participate in a project is always the prerogative of the school board and the participating school principal and/or teacher(s).

Research Guidelines and application forms are available on the web sites of the two boards to help researchers in the preparation of their research/evaluation proposals.

The Committee meets five times a year, approximately two weeks after each of the following deadlines:

August 31 • October 31 • January 9 • February 28 • April 30

Proposal Review Process

Prior to each meeting of the Research and Evaluation Advisory Committee, proposals are reviewed by Committee members. At the meeting, the Committee reaches one of five decisions on each proposal: approve, approve with minor revisions, revise and resubmit, not approved, and redirect. Researchers/evaluators are notified of the decision by letter and any revisions required are specified.

Approval by the Committee is the first of a series of approvals that applicants must have in order to conduct research and evaluation of programs in the schools. Researchers/evaluators must also seek approval from the school principal as well as from parents and students, as required. Principals are contacted by board staff to facilitate the placement of projects approved by the Committee.

Committee Members for 2015-2016

Ottawa-Carleton District School Board	Ottawa Catholic School Board
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Number of Projects Reviewed in 2015-2016

Table 1
 Number of (and Decisions Reached on) Non-Board-Initiated Research Proposals
 during the 2015-2016 School Year

	Approved	Not Approved	Redirected	Totals
September, 2015	4	7	0	11
November, 2015	4	7	0	11
February, 2016	6	3	0	9
March, 2016	2	5	0	7
June, 2016	6	3	0	9
Total for 2015- 2016	22	25	0	47

Note: Some projects that were not approved by the committee were reviewed at a subsequent meeting as a result of revisions being made by the researcher.

During the 2015-2016 school year, the Ottawa-Carleton Research and Evaluation Advisory Committee reviewed 47 proposals. In the end, a total of 22 research and evaluation projects were approved for implementation:

- 16 (73%) were approved for conduct in schools from both boards; and
- five (22%) were approved for conduct in the OCDSB *only*; and
- one (5%) was approved for conduct in the OCSB *only*.

Of the 22 research proposals approved for implementation:

- 11 (50%) of the approved studies were submitted by professors affiliated with universities;
- five (23%) were submitted by university students; and
- six (27%) were from other institutions including: Children's Hospital of Eastern Ontario Research Institute, Green Communities Canada, Institute for Research on Digital Learning, Propel Centre for Population Health Impact, Social Research and Demonstration Corporation, St. John Ambulance National Office.

In addition to the proposals reviewed by the Committee, individual Committee members addressed inquiries about research guidelines, review process, and other specific questions regarding the researchers' respective proposal. For many of these queries the applicant was informed about the Research and Evaluation Advisory Committee review process and that an application to the Committee would need to be prepared. Other inquiries included requests for using administrative data or information about recruitment and data collection procedures.

Proposals Approved by the Committee in 2015 - 2016

The following projects were approved during the 2015 – 2016 school year for implementation in the Ottawa Catholic School Board (OCSB) and Ottawa-Carleton District School Board (OCDSB), including two extensions from the previous year.

Proposal #: 1 (15-16)
Research Title: **Beyond Screening: Towards Understanding the Effects of Mild Bilateral and Unilateral Hearing Loss on Children in the Early School Years**
Researcher: Dr. Elizabeth Fitzpatrick & Linda Moran, University of Ottawa & Children’s Hospital of Eastern Ontario

Worldwide, there has been considerable investment in population-based newborn hearing screening to improve the development outcomes of children with hearing loss. Historically, considerable focus has been placed on severe and profound hearing loss. Recently, trends in epidemiological research indicate that less severe degrees of hearing loss, often described as “minimal hearing loss”, account for a substantial amount of childhood hearing disorders. Prior to screening, this degree of hearing loss was not identified until ages 5 or 6 years in children without risk factors for hearing loss. From this premise, the purpose of this study is to: 1) quantify the impact of mild bilateral or unilateral hearing loss on auditory, communication, early literacy and academic skills; and, 2) understand the impact of mild bilateral or unilateral hearing loss from the perspective of parents and identify parents’ service needs in the early years of identification of hearing loss. This research builds on a study funded by the Canadian Institute of Health Research (CIHR) that investigated the effects of mild bilateral and unilateral hearing loss on children’s development during pre-school years.

Data will be collected from children aged 5 to 8 years, followed at the Children’s Hospital of Eastern Ontario (CHEO), who have undergone hearing screening and have a confirmed diagnosis of unilateral and mild bilateral hearing loss. The teacher of each participating child will be contacted, with parental permission, by mail, and asked to complete two questionnaires commonly used for this population. Parent interviews will be held to determine their perspectives of the impact of hearing loss on their children’s development as well as to identify parents’ needs for support during the early years.

This research will provide important outcome data on a sample of the first children of school age to be identified with hearing loss through newborn screening in Ontario. This project was originally approved in May 2013 and has been granted an extension for data collection for the 2014-2015 school year.

Proposal #: 2 (15-16)
Research Title: **Teaching Grade 9 Applied Mathematics: A Collaborative Inquiry**
Researcher: Dr. Christine Suurtamm, University of Ottawa

The achievement of students in Grade 9 Applied Mathematics courses is of concern to the Ontario Ministry of Education. Provincial assessment data suggests that students in Grade 9 Applied Mathematics do not meet the curriculum expectations as well as their counterparts in Academic mathematics courses. Currently, there are a number of schools across the province involved in a Collaborative Inquiry (CI) project that seeks to establish ways to enhance teachers' understanding of the Grade 9 mathematics curriculum and support them in implementing the curriculum in ways that will best meet the needs of their students. The Ontario Ministry of Education has identified five goals:

- increase student achievement in Grade 9 Applied Mathematics;
- increase teacher knowledge of the curriculum, both in terms of mathematics content knowledge and knowledge for teaching;
- identify effective teaching and learning strategies;
- share implementation strategies with stakeholders; and
- foster teacher leadership in mathematics.

The research component of this initiative is anticipated to provide greater insight into the teaching and learning of Grade 9 Applied mathematics across Ontario by: understanding the role of teacher collaboration in professional learning; and, documenting how teachers enhance their understanding of the interactions between curriculum, pedagogy, and student needs.

Members of the school teams will be invited to take part in focus group interviews during each monthly team meeting. The teams will be asked to provide copies of artifacts, records of significant events, reflections and activities that are relevant to the focus of the school team initiative. An interview guide will be used to inform the questions during the focus group interviews, and a logbook will be used to collect school team members' reflections on their teaching practice, team meetings, future plans, areas that they are struggling with and resources needed. The meetings will be determined by the school team and will take place during the school day. The proposed project has the potential to contribute to research, policy and practice. It will enhance the teaching and learning experiences in the classrooms.

Proposal #: 3 (15-16)
Research Title: **iPad Point of Care Diagnostic Audiometry in Ottawa Elementary Schools.**
Researcher: David Chan Chun Kong, University of Ottawa & Children's Hospital of Eastern Ontario

The World Health Organization estimates that 32 million children live with disabling hearing loss and half of these cases could have been avoided by primary prevention.

Hearing plays an important role in the development of speech and communication skills in children and undiagnosed hearing loss in childhood interferes with normal, social, emotional, and cognitive development.

The purpose of this project is to determine the incidence of hearing loss in the sampled population and compare modes of hearing tests such as iPad vs standard sound booth audiometry. The researchers will perform a hearing test on 500 Grade 1 and 2 children in ten schools in an effort to detect hearing conditions in children at an earlier age. It is anticipated that this will allow for earlier treatment and less morbidity from hearing-related disorders. The screening for hearing impairments in children will be performed by iHEAR research group.

Children will be asked to wear headphones and play a game on an iPad that will take approximately 1-6 minutes to complete in order to test the child's hearing. If the child has difficulty hearing on the iPad, the child will be offered a further standard hearing test by a trained audiologist at the University of Ottawa Inter-Professional Clinic.

Proposal #: 4 (15-16)
Research Title: **Developing Mobile Media Spaces for Civic Engagement in Urban Schools**
Researcher: Dr. Ruth Kane, University of Ottawa

This is a five-year study that seeks to understand how teacher candidates are able to work within the classrooms to develop culturally responsive learning experiences for urban school students. The study focuses on the work of teacher candidates and pedagogical practices that engage urban students and enhance their civic engagement as active citizens in classrooms.

The methodology uses a staggered approach to establish the mobile media projects in schools in each of the five years. The project will run through three, two-year cycles within mobile media spaces being established with participating incoming Urban Education Cohort (UEC) teacher candidates. The research design is multilayered with each school site serving as a case study. In addition to the initial case study schools, participating UEC teacher candidates will be followed into different urban schools in their second year, thereby building capacity of teacher candidates and mentor teachers across all urban school partners and across curriculum areas. The teacher candidates will be introduced to ways of integrating digital literacies into their planning, teaching, and evaluation within and across the curriculum.

Data will be generated through interviews with teachers and teacher candidates, as well as focus group interviews with students. Artifacts of teacher candidates' planning and products of urban school students' civic action projects will form part of the data collection. They will be used to compile a case study of the impact of the learning experiences on teacher candidates, students and teachers within urban settings. Data analysis will be ongoing throughout the project and the findings gleaned from the study

will be used to improve the UEC courses each year. Data from UEC teacher candidates, students, and teachers in the case study schools will be analyzed both across-site and within-site during the five year period using NVivo software.

Proposal #: 9 (15-16)
Research Title: **Examining a New Lineup Procedure with Adolescent Eyewitness**
Researcher: Dr. Joanna Pozzulo, Carleton University

The purpose of this study is to examine different lineup procedures to better understand the adolescent's ability to provide information that could be used to develop new lineup procedures. Examining lineups will be more helpful at increasing identification accuracy rates among adolescent eyewitnesses.

The study will recruit adolescents in grades 10 through 12 and data will be collected through photographic lineups using the *Wildcard* and *Elimination with Wildcard* procedures. The students will be shown two videos and they will be asked to write everything they can remember about the video as well as identify the person who committed the crime. They will be invited to take part in the identification task which will be a one-on-one lineup activity with the researcher. Identification accuracy will be assessed using the results from the lineup identification task.

Students will learn how mistaken identification is the leading cause of wrongful conviction, and they will also learn that by examining different lineup procedures for different age groups, the legal system can be informed on which type of lineup to use for children, adolescent, adults, and the elderly. Students will be given the opportunity to learn about different areas of memory, criminal law and procedures, and the process of conducting a lineup.

Proposal #: 10 (15-16)
Research Title: **Perspectives on ESL Education for Deaf Immigrants**
Researchers: Ari Black, University of Ottawa

The purpose of the study is to explore the ideological positions of administrators involved with education for deaf immigrants. The study examines an educational context that rests between cultural and linguistic policies and local pedagogical practices. It requires access to multiple perspectives and compares them with the macro-level policies.

Data will be collected through interviews and document reviews; whereby national policies on multiculturalism, the language requirement policy for citizenship application will be reviewed and analyzed for inclusivity. Interviews will be conducted with hearing and deaf participants in different capacities such as, administrators, teachers, and assessors/placement officers. The participants will have the opportunity to explore a

complex area and work on some of their preoccupations around programming for a specific population.

Proposal #: 12 (15-16)
Research Title: **Active Transportation, Independent Mobility, and Physical Activity among School Children: A Multi-Site Study**
Researchers: Dr. Mark Tremblay, CHEO Research Institute

The main purpose of this project is to provide an improved understanding of: 1) the relationship between active transportation, independent mobility and the physical activity levels of children in grades 4 to 6; and 2) the correlates of active transportation, independent mobility and physical activity to inform the development of more effective interventions. The study will occur in phases. Phase 1 is a pilot, aimed to assess the test-retest reliability and convergent validity of measures of active transportation to/from non-school destinations and measures of independent mobility in a convenience sample of 90 children. The sample represents 45 Anglophone and 45 Francophone families. Phase 2 will be the main study and the research team plan to recruit a stratified sample of 360 students within 12 schools.

Data will be collected through surveys of students, parents and school administrators. Students will complete surveys on active transportation and independent mobility, and wear a pedometer for eight consecutive days. Parents will complete their survey approximately two weeks after the student survey has been completed. Stratified sampling will be used to recruit students from schools and data will be analyzed using a multi-level models approach.

Proposal #: 14 (2015-2016)
Research Title: **Children's Memory for Multiple Targets**
Researcher: Dr. Joanna Pozzulo, Carleton University

The purpose of this study is to examine children's identification accuracy when asked to identify a previously seen individual. The study is intended to determine the role of multiple targets, lineup procedure, and lineup type on children's identification accuracy. The study provides insight into the development of children's facial recognition memory and how memory can be improved under certain circumstances.

Data will be collected from 360 elementary students in JK - SK, and grade 1. Parents of the participating children will be asked to complete a demographic form asking for their child's age, gender, primary language, and ethnicity. Children will be shown a short video of a female playing with a teddy bear and then spilling juice on the teddy bear. The video is approximately one minute in length. After seeing the video, the children will be asked to tell the researcher everything they remember about the video. They will then be shown six photos and asked to pick out the person who spilled the juice on the teddy bear.

Proposal #: 19 (15-16)
Research Title: **Playing to Learn**
Researchers: Dr. Jennifer Jenson, Institute for Research on Digital Learning

Today's students tend to be far more fluent with, and far more attentive to, emerging media forms like digital games than the educators seeking to guide and support their learning. The purpose of this study is to explore the classroom ecologies (teachers, students, technologies) that best support and enable games for learning.

Data will be collected from teachers and students through interviews and questionnaires. Teachers will be asked to produce written, visual, video-blogs, and observation notes when using media resources. They will also take part in two sets of interviews (one before and one after using the resources and attending the workshop) and respond to a pre- and post- questionnaire. Students will be asked to respond to a questionnaire at the beginning of the study to establish their prior technological knowledge. They will also be interviewed at the end of the study to assess their engagement with the resources as well as the extent to which the video game enhanced their learning in the geography classroom.

Proposal #: 20 (15-16)
Research Title: **Examining the Impact of Ottawa Forest School and Mud Lake Project Nature-based Learning on Student Achievement and Wellness in Primary-aged students**
Researcher: Dr. Elizabeth Glithero, University of Ottawa

The health benefits of getting kids outside the classroom to learn and play have received a lot of attention in scholarly research and policy reviews in recent years. Lowered stress and anxiety levels, increased energy, fitness, self-esteem, and overall wellbeing represent some of the major findings demonstrated in recent research studies. The Ottawa Forest School (OFS) initiative is a result of a community partnership established in 2013-2014 between the OCDSB and Ottawa-based NGO Forest School Canada. The OFS serves as a service provider site for nature-based learning opportunities for primary/junior-aged students within the district. The purpose of this study is to examine the impact of learning in two nature-based projects (i.e., Ottawa Forest School Initiative and Mud Lake Project).

Data will be collected from participants already taking part in the project (i.e., 13 teachers, one librarian, and one principal). The 13 teachers include 10 classroom teachers visiting the Ottawa Forest School, three full time OCDSB teachers facilitating the on-site learning experiences with the visiting OCDSB classes. Data instruments include: two questionnaires (pre & post), face-to-face interviews, optional focus groups, optional journaling by participants, and optional sharing of samples of students' learning artifacts. Through a collaborative inquiry, the purposeful sampled participants will critically reflect on their own practices as teachers who are engaged with proponents of primary/junior place-based, play-based and inquiry-based learning in the outdoors.

Proposal #: 22 (15-16)
Research Title: **School Choices of French-speaking Young Immigrants**
Researcher: Julie Rodier, Social Research and Demonstration Corporation

The purpose of this project is to explore the school choices and educational trajectories of first and second generation youth of French-speaking immigration backgrounds in Ottawa. The project is funded by Ministry of Immigration, Refugees, and Citizenship Canada (IRCC).

Data will be collected through interviews with school representatives, focus groups with students and parents of high school-aged French-speaking immigrant backgrounds. Researchers will moderate three focus groups with parents of high school-aged immigrant students in grades 9 through 12. Criteria for recruiting students are: (1) the student is enrolled in a French-language high school, (2) students is enrolled in French as a second language program in an English-language high school, (3) students is enrolled in English-only program in an English-language school. Each focus group will have between six and 10 participants. Students in these grade levels will be asked to reflect on their experiences prior to high school and what may happen in the future in terms of their postsecondary education choices.

Data will be analyzed in an iterative process in order to establish themes that accurately describe the subjective perceptions and experiences reported by the participants. The study will provide school boards and schools with a better understanding of the factors that motivate youth of French-speaking backgrounds and their families to make choices of the school they go to and in which language they wish to study.

Proposal #: 23 (15-16)
Research Title: **A Comparison of Tests for Preschool Vision Screening and Analysis for their Cost-Effectiveness for Universal Use in Ontario**
Researcher: Dr. Daphne Maurer, McMaster University

Children who see poorly are at risk of having problems learning in school. Nearly 100,000 children in Canada are at risk of developing amblyopia (lazy eye), but only 50,000 will be identified prior to age 5. These children may suffer preventable vision loss simply due to lack of detection. For best success in detecting and treating amblyopia and refractive errors, screening should occur during ages 3-5 years (young enough to catch and effectively treat the disorder, but old enough to complete the necessary diagnostic vision testing). Uncorrected visual problems can cause children to struggle in school and lead to a diagnosis of learning disability or behaviour problems.

The purpose of this study is to develop and test a method for checking vision of preschool children. It also intends to identify children who may need treatment and treat those children by giving them eyeglasses before they start Grade 1. Data will be collected from junior and senior kindergarten children. The researchers will use five

different vision screening tests, all of which will be described to the children. The screeners are from the University of Ottawa medical program and are part of the iScreen voluntary program. Statistical analysis will be conducted to determine the most effective screening tool or combination of tools that detect eye problems in children.

Proposal #: 25 (15-16)
Research Title: **Collaborative Educator Professional Learning in Mathematics: Exploring Structures that Support Success**
Researcher: Dr. Don Klinger, Queen's University

Collaborative inquiry has been identified as a powerful approach to professional learning. This research study is aimed at developing a deeper understanding of the structures that support the success of collaborative educator learning initiatives in mathematics, where success is identified as the impact of the networked professional learning initiative on instructional practice, student learning, and achievement.

This research is a multi-phase explanatory mixed-methods design, being implemented over three school years (2013-2014, 2014-2015, and 2015-2016). The aim of the study is to explore four fixed-items: (a) impact of the collaborative professional learning network on mathematics teaching and learning; (b) structures that support educators' collaborative professional learning; (c) challenges that hinder educators' collaborative professional learning; and, (d) demographic characteristics (e.g., teaching and professional learning experience, and mathematics background). Phases one and two of the project have been completed. Phase three of the project will include participants from the Eastern Ontario Staff Development Network (EOSDN) Mathematics Project (i.e., school board facilitators, school administrators, and teachers).

Data will be collected through online surveys which take approximately 15 minutes to complete. Qualitative data will be collected at the project and school level. At the project level, 60-minute individual interviews will be conducted with EOSDN project leads, 60-minute focus group interviews with facilitators, and 15-minute interviews with District School Board Administrators serving the EOSDN Board of Directors. The multi-phase nature of this study will provide information about changes in structures that support educators' collaborative professional learning network. The use of a mixed method approach will provide a deep understanding of the structures that support success in collaborative educator learning initiatives.

Proposal #: 26 (15-16)
Research Title: **SJA Connect: St. John Ambulance Youth Health and Safety Leadership Certificate Program**
Researchers: Patricia Mahoney, St. John Ambulance National Office

St. John Ambulance has been providing first aid training and volunteer community services across the country for over 130 years. The Youth Health and Leadership

Certificate Program is new and its aim is to engage and enable young Canadians to improve their health, safety, confidence, and competence through health and safety oriented training, volunteering in community-based services and providing leadership opportunities. It also aims to get feedback from teachers, students, and youth regarding the quality of the activities offered by SJA Connect. The program intends to provide training to Specialist High Skills Major (SHSM) and youth 14 to 19 years of age in topics such as Public Speaking, Conflict Resolution, Risk Management, Emergency Preparedness, etc.

Data is collected through teacher and student surveys, observations and on-line blogs. Participating students will be asked to take part in learning activities based on a particular course being offered.

Proposal #: 28 (15-16)
Research Title: **Children's Well-Being and Attitudes in Different Environments**
Researcher: Raelyne Dopko, Carleton University

The study will examine the social and psychological benefits of nature to children's mood/happiness, attitudes towards nature, generosity, and pro-social behaviour. In order to measure these constructs, children will participate in two field trips (one at the Forest School of Canada and the other one at the Canada Aviation and Space Museum). Students in Grades 4, 5, and 6 classrooms will be randomly assigned to one of the field trip options. Approximately two weeks later, students will attend a field trip at the other location.

Data will be collected using self-reported questionnaires which will be completed by each child after each trip. Children will also be given activities to measure their generosity and their pro-social skills. The collected data will be analyzed using t-tests, which will allow the researchers to explore the differences in social and psychological benefits between the Forest School of Canada and the Canada Aviation and Space Museum.

Proposal #: 32 (15-16)
Research Title: **The Sustainability and Education Policy Network. Leading Through Multi-sector Learning**
Researcher: Dr. Marcia McKenzie, University of Saskatchewan

The Sustainability and Education Policy Network (SEPN) is a research based partnership between Canadian and international researchers and leading Canadian and North American policy and educational organizations that started in 2012. SEPN is a national research network examining the relationship between sustainability education policies and practice in K-12 and post-secondary education systems across Canada. The purpose of the research is to gain understanding of experiences with sustainability education policy and practice within the education sector in Canada.

Data will be collected from participants responsible for developing and implementing policies as well as those affected by policies and engaged in practice to better understand the relationship between sustainability policy and practice in formal education in Canada. Data will be collected using different data collection tools such as school-based inquiry, classroom focus groups, sidewalks interviews, and a talking wall within the participating school. SEPN's research results will allow the school board to learn from sustainability experiences in Ontario and across Canada.

Proposal #: 33 (15-16)
Research Title: **Event-based Prospective Memory and Executive Functioning: The Effects of Motivation and Goal Maintenance Support**
Researcher: Alicia Barlett, Carleton University

The purpose of this study is to examine task demands such as the placement of reminders and motivation that affect children's ability to form a prospective memory of future tasks and remember cues for them. The study is also aimed at exploring how children's growing ability to remember to complete some tasks in the future changes in early childhood.

The study employs a between-subject design in which students will be randomly assigned to different activities to play memory games. They will also be invited to participate in a 15-20 minute interview. During the interview, they will participate in a series of short tasks that will require them to respond to auditory and visual stimuli. They will also participate in a series of card games and would be asked to describe what is on each card (these will be images of common items such as food and vehicles).

Proposal #: 35 (15-16)
Research Title: **Knowledge of Number Integration**
Researcher: Chang Xu, University of Ottawa

The purpose of the project is to explore the representation of numbers concretely and to explore the development of integrated number knowledge with the goal of describing how to facilitate the mapping between concrete (non-symbols) to abstract (symbolic) representations of numbers for 5-7 year-old children. The present research will help researchers to gain a better understanding of how best to facilitate the inter-relations among different types of number representations (i.e., concrete and abstract) which is critical for designing appropriate instruction for both typically- and atypically- developing learners.

Data will be collected through surveys. Children will be asked to play games that are designed to measure their number knowledge and general cognitive skills. Some tasks

such as comparing symbolic numbers will be presented on an iPad whereas other tasks will use paper materials.

Proposal #: 37 (15-16)
Research Title: **Canadian Student Tobacco Alcohol and Drugs Survey**
Researcher: Dr. Steve Manske, Propel Centre for Population Health Impact

The Canadian Student Tobacco Alcohol and Drugs Survey (CSTADS), formerly known as Youth Smoking Survey, is a Health Canada sponsored survey of a representative sample of grades 7 to 12 students in over 250 schools in Canada. The objectives of the 2016-2017 CSTADS are as follows: to establish provincial and national tobacco, alcohol and drug use rates of children and youth in participating grades; to establish estimates for factors (including bullying, school connectedness and exposure to second-hand smoke) that are related to tobacco, alcohol and drug use, and that may inform national and provincial substance control policies and programs; and, to provide school-specific feedback to help schools inform their priorities to support student success and health.

CSTADS provides benchmark data on national and provincial prevalence rates, a detailed snapshot of tobacco, alcohol and drug use, smoking cessation, perception of peer substance use, exposure to tobacco smoke, and other environmental influences. The information gathered by CSTADS is critical to assessing the effectiveness of legislative controls on student tobacco, alcohol and drug use, and to bolster public support for these policy options. Data is collected through online students' surveys. The survey data will measure changes in youth tobacco, alcohol and drug use in Ontario and across Canada.

Proposal #: 38 (15-16)
Research Title: **Scrapbooks, Body Biographies, and Whirligigs**
Researcher: Dr. Cynthia Morawski, University of Ottawa

The purpose of this study is to collaborate on an action research project with two English teachers at a local school. Like students, teachers comprise a diverse group of individuals representing different ways of how to teach and learn as a result of factors such as pedagogical approaches, prior life experiences, and familial relationships. The teachers will be implementing several multimodal learning activities.

Data will be gathered qualitatively. Three teachers (1 university and 2 secondary teachers) will implement several multimodal learning activities, such as using body biographies to study characterization and resolution scrapbooks to study plot lines as part of the Ontario English curriculum. They will be keeping reflective journals and participating in several recorded group conversations. The researcher will be present in the classrooms during the implementation of the three modal activities. It is the responses to the implementation of the multimodal activities which will be the focus of the study.

Proposal #: 40 (15-16)
Research Title: **Ottawa School Travel Planning (STP) Project**
Researcher: Wallace Beaton, Green Communities Canada

Schools, school boards, municipal staff, and police all struggle with traffic issues created outside of schools twice daily as commuters compete for parking spaces and school buses. The Ottawa School Travel Planning project continues to enhance efforts to address school-based Transportation Demand Management (TDM) at selected elementary schools in Ottawa. The aim of the project is to positively influence the transportation decisions of children and parents/guardians through the implementation of Active and Safe Routes to Schools (ASRTS) strategies and the creation of a school travel plan. At the same time, the project encourages more individuals to choose active modes of transportation (e.g., walking, cycling, inline skating, etc.), or more environmentally friendly options such as carpooling or public transit.

The project will be extended to include 12 schools, eight of which began the project in 2014-2015 or 2015-2016 with four new schools being recruited in 2016-2017. The Ottawa STP Project is based on a model framework that was created and pilot tested between 2012-2014 in every province and territory. The model was further refined in 2014-2015 as a result of the STP feasibility study carried out in the City of Toronto and Wellington-Dufferin-Guelph. In Ottawa, STP was first introduced in 2012. Since then, 13 schools have graduated from the project.

Data will be collected through a hands-up survey of all students in each of the surveyed classes. The school's STP Committee members are invited to complete a short evaluation survey. The benefits of this project are expected to improve health and promote greater physical and emotional well-being that result from increased exercise and improved air quality in school zones. The project will also help by identifying potential cost-saving opportunities related to traffic and parking infrastructure on school sites.

Proposal #: 41 (15-16)
Research Title: **Prevention, Suspension, and Expulsion Program Evaluation**
Researcher: Dr. Katina Pollock, University of Western Ontario

The Ontario Ministry of Education's Safe and Accepting Schools Strategy is based on evidence that a safe and positive learning environment is essential for student success and promotes positive student behaviour. The Suspension and Expulsion Program is part of a progressive discipline approach to making schools safer. It combines discipline with opportunities for students to continue their education and to receive non-academic supports offered through professional and paraprofessional service practitioners, complemented by the services of community agencies.

This project aims to develop a better understanding of suspension and expulsion program implementation and determine the perceived effectiveness/impact of

programming used in the delivery of academic and non-academic support programs to students who have been expelled or suspended. Information will be gathered from a selection of boards (i.e., approaches being used, how is short and long term use of suspension strategies used, what do they do to avoid short and long term suspension/expulsion), as well as to review the services provided through the annual funding for professionals and paraprofessionals staff. There are two phases to this project: 1) survey of all teaching professionals and paraprofessional staff (i.e., social workers, child and youth workers, psychologists, attendance counsellors and educational assistants) who are directly involved in suspension and expulsion programs; 2) document analysis (suspension and expulsion policies in Ontario) and 12 interviews at eight different school boards will be conducted with administrators, teachers, paraprofessional, parents, and students.

Table 2

Summary List of Proposals Approved by the Ottawa-Carleton Research and Evaluation Advisory Committee in 2015-2016 and the School Board(s) involved in the Research or Evaluation of programs.

Proposal Number	Principal Researcher(s)	Affiliation(s)	Title of Research Proposal	School Boards Involved	
				OCDSB	OCSB
1	Dr. Elizabeth Fitzpatrick & Linda Moran	University of Ottawa	Beyond Screening: Towards Understanding the Effects of Mild Bilateral and Unilateral Hearing Loss on Children in the Early School Years	√	√
2	Dr. Christine Suurtamm	University of Ottawa	Teaching Grade 9 Applied Mathematics: A Collaborative Inquiry	√	
3	David Chan Chun Kong	University of Ottawa & CHEO	iPad point of care diagnostic audiometry in Ottawa elementary schools	√	√
4	Dr. Ruth Kane	University of Ottawa	Developing mobile media spaces for civic engagement in urban school	√	√
9	Dr. Joanna Pozzulo	Carleton University	Examining a New Lineup Procedure with Adolescent Eyewitness	√	√
10	Ari Black	University of Ottawa	Perspectives on ESL Education for Deaf Immigrants		√
12	Dr. Mark Tremblay	CHEO Research Institute	Active Transportation, Independent Mobility, and Physical Activity among School Children: A multi-Site Study	√	√
14	Dr. Joanna Pozzulo	Carleton University	Children's Memory for Multiple Targets	√	√
19	Dr. Jennifer Jenson	Institute for Research on Digital Learning	Playing to Learn	√	√
20	Dr. Elizabeth Glithero	University of Ottawa	Examining the Impact of Ottawa Forest School and Mud Lake Project Nature-based Learning on Student Achievement and Wellness in Primary-aged students	√	
22	Julie Rodier	Social Research and Demonstration Corporation Authority	School Choices of French speaking Young Immigrants	√	√
23	Dr. Daphne Maurer	McMaster University	A Comparison of Tests for Preschool Vision Screening and Analysis of their effectiveness for universal use in Ontario	√	

 Directory of Non-Board-Initiated Research Projects 2015-2016

Proposal Number	Principal Researcher(s)	Affiliation(s)	Title of Research Proposal	School Boards Involved	
				OCDSB	OCSB
25	Dr. Don Klinger	Queen's University	Collaborative educator professional learning in mathematics: Exploring structure that supports success	√	√
26	Patricia Mahoney	St. John Ambulance National Office	SJA Connect: St. John Ambulance Youth Health and Safety Leadership Certificate Program	√	√
28	Raelyne Dopko	Carleton University	Children's well-being and attitudes in different environment	√	√
32	Dr. Marcia McKenzie	University of Saskatchewan	The Sustainability and Education Policy Network. Leading Through Multi-sector Learning	√	
33	Alicia Barlett	Carleton University	Event-based Prospective Memory and Executive Functioning: The Effects of Motivation and Goal Maintenance Support	√	√
35	Chang Xu	University of Ottawa	Knowledge of number integration	√	√
37	Dr. Steve Manske	Propel Centre for Population Health Impact	Canadian Student Tobacco Alcohol and Drugs Survey	√	√
38	Dr. Cynthia Morawski	University of Ottawa	Scrapbooks, Body Biographies, and Whirligigs	√	
40	Wallace Beaton	Green Communities of Canada	Ottawa School Travel Planning (STP) Project	√	√
41	Dr. Katina Pollock	University of Western Ontario	Prevention, Suspension and Expulsion Program Evaluation	√	√

RESEARCH REPORTS RECEIVED

Researchers/evaluators are required to submit a final report when their projects are completed, or an annual progress report for multi-year projects. These reports are often difficult to obtain from researchers, due in part to the length of time required to complete projects.

Seven final research reports were received during the 2015-2016 school year; summaries are provided below. The full reports are available from the Quality Assurance Division of the Ottawa-Carleton District School Board and the Student Success Department of the Ottawa Catholic School Board.

Proposal #: 9 (15-16)
Report Title: **Examining a New Lineup Procedure with Adolescent Eyewitnesses**
Researcher: Dr. Joanna Pozzulo, Carleton University

The focus of the study was on youth's memory for describing and identifying an unfamiliar person they only saw once. The aim of the research study was to better understand how well high school-aged youth (15-18 years old) can describe unfamiliar people and how well they would be able to recognize them from a set of photos.

Students watched a brief video of a purse being stolen with the purpose of exposing them to an event and an unfamiliar person (i.e., target). Students were asked to describe the target in the video and to pick the target out from a set of photos that may or may not have contained the picture of the target.

For the 2015-16 academic year, approximately 334 students between the ages of 15 and 18 years with an average age of 16.5 years from high schools in the Ottawa area participated in the study. When the target was present in the lineup shown to the students, 46% of students made an accurate identification. When the target was absent from the lineup (i.e., the target was replaced with a similar looking other), 53% of students identified an incorrect person. Data was also collected using adult participants in order to obtain a comparison sample with an average age of approximately 21 years. When the target was present in the lineup shown to the young adults, 47% made an accurate identification. Similarly, when the target was absent from the lineup, 47% identified an incorrect person. From an applied perspective, this research suggests that youth and young adults produce similar rates of identification, and consequently, their identification evidence should be viewed similarly in a court of law.

Proposal #: 39 (14-15)
Report Title: **Exploring Professional Development Opportunities for Associate Teachers**
Researcher: Dr. Glenda Black. Nipissing University, Schulich School of Education

Teacher preparation programs (TPP) across the country rely on classroom teachers to welcome teacher candidates into their classrooms. As they welcome the teacher candidates into their classrooms, they assume the role as *teachers of teaching*. Associate (mentor) teachers are essential partners in guiding teacher candidates into the profession, however; little training is offered for this critical role. This study explored, through the lens of self-determination theory, types of support and delivery that were perceived to be most useful for successful mentorship during a practicum. An online survey and invited interviews targeted associate teachers for one teacher training program (TPP) at Schulich School of Education, Nipissing University. Based on 281 survey respondents and 13 individual interviews, results highlighted specific TPP supports, including:

- TPP structure of the practicum;
- roles and responsibilities;
- faculty's evaluation form;
- sample feedback for TCs is difficult;
- time as a factor that influenced mentor effectiveness;
- impeding of feedback from TCs by collective bargaining units;
- changes to the delivery methods for professional development for associate;
- need for contact of the associate teacher in advance of the placement;
- communication during placement in the form of reminders, TPP focus and associate teachers desire to compliment teacher candidates learning on campus; and
- developing positive relationship with the teacher candidate before placement.

Results suggest providing varied training opportunities (online, print, and campus) for mentors. Associate teachers suggested specific support in the form of sample evaluation with comment banks and sample descriptive feedback for teacher candidates. It also suggests collective opportunity for associate teacher training whereby school districts and bargaining units could partner with the TPP to provide associate teacher support.

Proposal #: 16 (14-15)
Report Title: **The 2015 Mental Health and Well-Being and Drug Use of Ontario Student (OSDUHS)**
Researcher: Dr. Robert E. Mann. Centre for Addiction & Mental Health

The Centre for Addiction and Mental Health's (CAMH) conducted the Ontario Student Drug Use and Health Survey (OSDUHS). It is the longest ongoing school survey of

adolescents in Canada and one of the longest in the world. The purpose of the OSDUHS is to provide a snapshot of Ontario students' mental and physical well-being and to assess whether change has occurred over time. The study has been conducted every two years since 1977 and it is based on a large representative sample of the adolescent population. A total of 10,426 students; 595 of selected students in participating classes in grades 7 through 12 were drawn from 43 school boards, 220 schools, and 750 classes participated in the 2015 OSDUHS.

The report describes mental health, physical health, and risk behaviours among Ontario students in 2015 and changes since 1991 where available. Although the OSDUHS began in 1977, most physical health and mental health indicators were introduced in the survey in the early 1990s. In the report, trend results are provided for two groups of students: those in grades 7 through 12, and those in grades 7, 9, and 11 only. The first group is used to assess 2015 estimates and relatively recent trends (1999-2015), whereas the second is used to assess long-term trends (1991-2015). All data are based on self-reports derived from anonymous questionnaires administered in classrooms between November 2014 and June 2015. New indicators in the report include subjective social status at school, usual number of hours of sleep on a school night, going to school hungry, elevated stress, and symptoms of attention deficit/hyperactivity disorder (ADHD).

Some of the limitations of this study include the following:

- data are based on self-reports, which cannot be readily verified, and are not based on clinical assessment;
- self-reports of height and weight used to calculate the body mass index, is likely to undermine the true rate by some unknown magnitude as reflected in the reviewed literature, however the extent of underreporting is not likely to greatly vary over time;
- the bias caused by non-respondents could affect the estimates. Researchers did not know whether, or by how much, non-respondents differ from respondents. It is possible that absent students, suspended students, and those who were not allowed or refused to participate are more likely to have physical or mental health difficulties than those who participated;
- the findings cannot be generalized to adolescents who are not attending school (e.g., dropouts, street youth, those in the military or institutionalized health or correctional settings);
- the data reflect a snapshot in time and because researchers do not re-survey the same students across time, they cannot identify causes of individual change; and
- the findings in such a large study are numerous and complex, and some are more reliable than others.

Despite these limitations, population surveillance studies help to identify the extent of various health behaviours that have current and future implications for adolescent well-being. Population health surveys help identify which population groups are at the greatest risk for poor health outcomes, help to identify areas requiring more research,

and help to identify potential future trends that have implication for future services and programming needs.

Findings from OSDUHS indicate that a majority of Ontario students:

- like school and report a positive school climate;
- report their physical or mental health as excellent or very good;
- are neither overweight nor obese;
- are satisfied with their weight;
- do not report emotional problems (e.g., psychological distress, low self-esteem, elevated stress);
- are not being bullied;
- do not engage in antisocial behaviours or bullying;
- do not gamble; and
- do not experience coexisting problems such as psychological distress, antisocial behaviour, hazardous drinking, and drug use problems.

The findings are consistent with many expectations of the adolescent stage of development. While Ontario students are in good physical and mental health, a sizeable minority experience an array of functional impairments. Some mental health problem indicators, such as suicidal ideation and psychological distress remain high. One-in-eight Ontario students (an estimate of 113,500) report suicidal ideation and one-in-twenty-five report a suicide attempt in the past year.

The results also show that the level of bullying victimization at school has decreased during the past decade; this may be due to initiatives such as safe school policies implemented in Ontario, while the level of cyberbullying victimization shows no change. Cyberbullying is a growing concern as the electronic media becomes predominant in the lives of adolescents. The report shows that one-in-five (20%) students report being bullied over the internet in the past year. This estimate represents about 194,200 students. The percentage of students reporting cyberbullying has remained stable since 2011 (22%). According to some research conducted in this field, bullying and victimization is not only associated with immediate adverse results such as school problems, stress, alcohol, and drug use, it can also have serious, enduring effects on mental health.

The findings also showed some encouraging improvements in well-being during the past decade. In particular, there has been decline in antisocial behaviour, bullying, fighting at school, and gambling. It also presented some concerning findings about the physical health of Ontario students. For instance, the findings showed that almost half of Ontario students reported a treated injury in the past year. Other findings of concern include: one-in-four students report not always wearing a seat belt when riding in a vehicle, one-in-three drivers text while driving, and over three-quarters of cyclists do not always wear a bicycle helmet. The report also found a significant increase over the last decade in the proportion of Ontario students who are overweight.

Drug Use among Ontario Students

The report describes current use of alcohol, tobacco, illicit drugs, nonmedical use of prescriptions and other substances of concerns, and changes that have occurred since 1977. Findings included:

- drinking has declined over time reaching a historical low in 2013 and remaining stable in 2015. The current estimate shows that less than half of the student population drinks alcohol, with 45.8% of students in grades 7 through 12 reporting use (excluding just a sip to try it) during the 12 months before the survey;
- consumption of highly caffeinated energy drinks is also quite prevalent, followed by cannabis, with 21.3% reporting past year use; and
- the majority of students in Ontario do not smoke tobacco cigarettes. Cigarette smoking began to decline dramatically during the 2000s and reached its lowest point in 2011. However, about 11.7% reported using electronic cigarettes (with or without nicotine), which is a higher prevalence than regular tobacco cigarettes. About 14.3% of students have tried a water-pipe (hookah).

Questions about the use of certain illicit drugs were asked of secondary students only (grades 9-12). Ecstasy ranks highest with about 5.4% of secondary students reporting use in the past year. Three drugs have shown a significant decrease in use since 2013:

- opioid pain relievers (nonmedical use) decreased from 12.4% in 2013 to 10.0% in 2015;
- cough and cold medication (used to get high) decreased from 9.7% to 6.4%; and
- caffeine energy drinks decreased from 39.7% to 34.8%.

Estimates for lifetime use show that alcohol and cannabis are the most common drugs used by students in grades 7-12. Over three-quarters (67.9%) of students have tried alcohol and about one-quarter (23.9%) have used cannabis. Driving after drinking alcohol among licensed students was lower in 2015 compared to estimates from about a decade ago.

There is an overlap between alcohol and drug use problems and mental health among youth. The 2015 OSDUHS found that about 10% of students in grades 9-12 report both hazardous/harmful drinking and moderate-to-serious psychological distress. This percentage ranges from 2% among grade 9 students to 13% among grade 12 students, and it is more prevalent among females (14%) than males (6%). The overarching goal of this study is to inform and shape programs and policies that allow youth to experience optimal well-being.

The overarching goal of this study is to inform and shape programs and policies that allow youth to experience optimal well-being.

Proposal #: 16 (13-14)
Report Title: **Status of Daily Physical Activity (DPA) in Ontario elementary schools**
Researcher: Dr. Kenneth R. Allison. Public Health Ontario

In 2005, the Ontario Ministry of Education released Policy/Program Memorandum (PPM) No. 138: Daily Physical Activity (DPA) in elementary schools, grades 1-8. The policy requires boards to ensure that all elementary students, including students with special needs, receive a minimum of 20 minutes of sustained moderate to vigorous physical activity each day during instructional time. Since its release there has been no Ontario-wide evaluation of its implementation. Public Health Ontario conducted a study to examine the extent to which DPA is being implemented across Ontario elementary schools and explore the factors that may influence its implementation.

Two cross-sectional online surveys were administered during the 2013-2014 school year - one for elementary school administrators and one for elementary school teachers. The surveys focused on implementation fidelity of DPA.

Results:

Based on the findings from the teacher surveys, only half of the elementary school classrooms are currently meeting DPA policy requirements. Notably, a higher proportion of school administrators indicate that their schools are meeting the DPA policy requirements compared to teachers at the classroom level. These differences occur at both an overall level and for specific components of the policy. Teachers have a more specific understanding of the extent to which they are implementing the components of the policy in their classroom. Meanwhile, administrators provide a more general assessment of DPA implementation for the entire school.

Below are some of the survey results from the evaluation of the DPA program:

- 61.4% of schools were classified as meeting the policy requirements. Of the six individual policy requirements, implementation fidelity is lowest for the continuity component of the policy among schools;
- exactly 50% of classrooms were classified as meeting the policy requirements. Similar to school administrators, implementation fidelity is lowest for the continuity component of the policy among schools;
- 81.1% of school administrators are aware of four or more of the six policy requirements. However, awareness is lowest for the level of intensity at which DPA is to be conducted and whether it is to be conducted;
- at the classroom level, the majority of teachers (62.3%) are aware of four or more of the six policy requirements. Consistent with the administrators, less than half of teachers are aware of the intensity (44.7%) and less than one-third (31.5%) are aware of the continuity policy requirements;

- 66.5% of school administrators reported that DPA is scheduled within their teacher's timetable. However, the majority reported that their school lacks a monitoring procedure for implementing the policy, and
- the majority (69.9%) of teachers stated that there is no DPA monitoring procedure within their school.

Overall, the findings confirm that DPA is not being implemented uniformly in Ontario elementary schools. A number of factors related to implementation fidelity were also found, including: awareness of the policy requirements, scheduling, monitoring, teacher self-efficacy and barriers at both individual and system level.

Proposal #: 13 (13-14)
Report Title: **The Behaviour in School-aged Children (HBSC): A Mental Health Focus**
Researcher: Dr. John Freeman. Public Health Agency of Canada

The Health Behaviour in School-aged Children (HBSC) Study is a cross-national research study conducted in collaboration with the World Health Organization. HBSC aims to understand youth health and well-being and to inform education, health policies and health promotion programs. The 2014 HBSC survey was administered to 29,784 students in 377 Canadian schools.

The health of adolescents is influenced by various social contexts which include; home, school, friends, and community. The report has thematically examined how four specific contexts (i.e., physical, social, emotional, and spiritual) relate to a variety of adolescent health outcomes, both positive and negative.

The findings were remarkable for their consistency in that positive social context were protective of health, while negative social contexts related to negative health behaviours and experiences. For example:

- students with the highest reported levels of family support were most likely to report the most positive health outcomes. Positive school climates were similarly related to almost all of the health outcomes examined;
- the relationship between supportive friendships and adolescent health were mixed and complicated. Specifically, positive friend support related directly to most positive health behaviours, but less consistently to protection from negative health behaviours. The nature of friend support may be more important than the exact level of friend support;
- community support was related to positive health outcomes in a consistent way;
- home and family: Grade 6 (77% of boys and 74% of girls) stated that they have a family member who could provide emotional help and support when needed;
- sixty percent or more of students agreed that their school was a nice place to be, regardless of grade or gender. The proportion of students who indicated

agreement decreased from grade 6 to grade 9 and remained relatively stable thereafter;

- students reported daily contact with friends using texting. For both genders, frequency of contact using texting increased across each grade. By grade 10 half of the boys and over two thirds of the girls reported texting daily. Girls consistently reported higher frequency of contact compared to boys; and
- between 22% and 31% of boys reported participating in at least 60 minutes moderate to vigorous physical activity on a daily basis, compared to only 10% to 22% of girls.

Overall, the report also provides insights about prevalence of important health outcomes and behaviours in young Canadians. HBSC has for the first time reported on the sleeping patterns of young people and spiritual health and most young people reported sufficient levels of sleep, as well as their perspectives on spiritual aspects of health. The epidemic of obesity and physical inactivity continues, with 1 in 3 boys and 1 in 4 girls reporting being overweight or obese, and only the minority of young people meeting the Canadian guidelines for physical and sedentary behaviours. Girls continue to report more negatively on mental and emotional health outcomes. Reports in health risk behaviours such as smoking, cannabis use, problem drinking, bullying and physical fighting declined. However, there is still work to be done in decreasing levels of engagement in these behaviours among high risk groups.

Proposal #: 39 (12-13)
Report Title: **Healthy Transitions Program Evaluation (2013-2014)**
Researcher: Darcie Taing & Robin Ray. Ottawa Public Health

Healthy Transitions is an evidence-based mental health promotion program that was developed in 2004 by the Child and Youth Health Network of Eastern Ontario. It is for students in grades 7 and 8, their teachers and their parents. It is designed to promote knowledge, skills and attitudes important for resilience and mental health in youth. It also aims to promote environments at home and school that support healthy adolescent development. The program was piloted in three schools in Ottawa in 2005-2006 and demonstrated a positive impact on the mental health of participating youth.

In 2012, Ottawa Public Health (OPH), local school boards and community partners began to implement an adapted version of the program among grade 7 and 8 students, their teachers and parents in the community. The program has been delivered by public health nurses and youth facilitators and it has three components:

- five in-class sessions for youth;
- teacher in-service training; and
- community-based information sessions for parents.

From 2012-2015, the program has been provided to over 13,500 grade 7 and 8 students and 600 teachers across Ottawa's four local school boards.

In 2013-2014, an outcome evaluation of the program was completed to determine if the adapted program led to improved knowledge, attitudes and coping behaviours that are supportive of mental health among participating youth, teachers and parents.

The following results were established from both students and parents:

- 82% of in-service training teachers agreed that they found the information on mental health useful, 66% agreed that they now have a better understanding of what supports good mental health, and 73% agreed that they would recommend the in-service program to other teachers. Teachers also provided several ideas for improvement, primarily that they wanted more information about the program and supporting youth mental health; and
- over 1,100 students participated in the evaluation. Results suggest improvement in how youth respond to stress, worries and problems and the ability to identify warning signs in themselves and friends. Comments provided by the youth generally support the findings, and they also provide ideas for program modifications to further engage students and help make the program more relevant to their needs. Teachers who participated in the evaluation indicated that the student classroom sessions raised awareness of issues and generated discussions among students, and a few noticed changes in the way students treated others.

Overall, the results from the evaluation indicate that students who participated in the program reported changes consistent with the program goals. Additional recommendations coming from the report include modifying the student and teacher component to make it more relevant and relatable.

Proposal #: 27 (09-10)
Report Title: **Mathematics in a Multilingual World: The Socialisation of Second Language Learners of Mathematics**
Researcher: Dr. Richard Barwell, University of Ottawa

There is a small but growing area of inquiry which has examined various facets of mathematics learning and teaching in a French immersion context. Bilingualism, especially in a French immersion setting, is a unique and complex reality for a growing number of students in Canada, including students in the Ottawa area (Statistics Canada 2010; Ottawa-Carleton District School Board, 2011). A French immersion program impacts all aspects of a student's school experience, yet many stakeholders, such as teachers, parents, and students, often express specific concerns about mathematics education. Mathematics enjoys the privilege and the burden of being viewed as an essential yet challenging academic subject, and so a closer examination of mathematics in a French immersion context is essential.

The researchers proposed to fill a gap in the literature by doing a qualitative study of student and teacher language in a French immersion mathematics classroom setting both before and after the transition from French to English language instruction.

In the extension to the original study, the researchers built on data that was collected in the same school in 2012 in order to gain a more complete picture of language employed during mathematics lessons of a French immersion class, both before and after the transition to English as a language of instruction. In order to do so, the researchers used a framework designed by Sfard (2007). This framework has been specifically developed to describe a wide variety of aspects of mathematical discourse in the classroom. The objectives of the additional research were:

- to use Sfard's framework to describe the characteristics of teacher and student discourse in an elementary French immersion mathematics classroom; and
- to examine the similarities and differences between the discourses when the instruction is in French as opposed to when the same students are taught mathematics in English.

Audio recordings of three separate lessons in each language setting were completed and transcribed. Analysis of the data led to the classroom discourse being organized into various categories. Data was divided into two types of discourse, as well as two discursive routines, all of which were found in both the French-language and the English-language mathematics classrooms. The two types of discourse are teacher-led and student-led, which are self-explanatory and useful when describing discourse. The two routines were dubbed the Question Response-Endorsement (QRE) routine and the exploratory routine. The QRE routine is a simple and typical classroom routine, consisting of a question, an answer, and an endorsement of the answer. It is broadly similar in both language settings in teacher-led discourse, but is not found in student-led discourse in either language. In the exploratory routine, once an initial question has been posed, participants engage in an extended discussion in search of an answer. This routine was found in both student-led and in teacher-led discourse, and although it was found in both language settings, there were differences between the exploratory routines in the French-language and the English-language classrooms. For example, teacher-led exploratory discourse in the French-language mathematics classroom was characterized by more closed repeated questions, more use of visual mediators, and less endorsement of a specific answer. Student-led discourse was more similar than expected in the two classrooms, yet there is evidence of extensive switching between French and English in the French-language classroom and of the use of more non-standard mathematical language in the English-language classroom. These findings could have valuable applications in the areas of pre-service and in-service teacher training and resource development and selection, as well as in the area of consequences of policy decisions on language of instruction.
