

**EDUCATION**

- 2014 Credentialed Evaluator, Canadian Evaluation Society
- 2004 – 2009 Doctor of Philosophy (Measurement, Assessment, & Program Evaluation), Queen's University
- 2002 – 2004 Master of Education (Measurement, Assessment, & Program Evaluation), Queen's University
- 1986 – 1987 Bachelor of Education (Computer Science/Mathematics), University of Toronto
- 1982 – 1986 Bachelor of Science (Computer Science), York University

**SCHOLARLY ENDEAVOURS****▪ Articles in progress**

**Miller, T., & Yan, Y. (2019).** Exclusion Rates on Large-scale Assessments.

**Miller, T. (2019).** Using instructional mathematics videos to enhance teaching and learning mathematics.

**▪ Articles in Scholarly Refereed Journals**

- (R) **Miller, T., MacLaren, K., & Xu, H. (2019, submitted in February).** Online learning.
- (R) **Miller, T. (2019, to be submitted in February).** Large-scale Assessment and Exclusion Rates. *Practical Assessment, Research, and Evaluation, 15*(10).
- (R) **Miller, T. (2018).** Measures of Indigenous Achievement in Canada. *Diaspora, Indigenous, and Minority Education, 12*(4), 182-200. (International peer-reviewed journal)
- (R) Lahey, R., Chaytor, K., MacDonald, W., **Miller, T. (2018, submitted).** Evaluation in the provinces and territories: Challenges and opportunities – A cross-country check-up, *Canadian Journal of Program Evaluation*.
- (R) MacPhee, Turnbull, Cormier, & **Miller (2017).** The experience of non-Francophone parents in a French minority-language school, *Canadian Journal of Applied Linguistics, 20*(1), 115-134.
- (R) McRoberts, T., J., & **Miller, T. (2015).** Instrument development for examining student attrition. *Journal of Administration in Higher Education, 11*(2), 43-53. (International peer-reviewed journal)
- (R) Garland, L. M., & **Miller, T. (2015).** Factors influencing evidence-based practice for community nurses. *British Journal of Community Nursing, 20*(5), 233-242. (International peer-reviewed journal)
- (R) **Miller, T. (2013).** Using large-scale assessment results to determine student grades. *Canadian Journal of Education, 36*(3). (National peer-reviewed journal)
- (R) Dawson, S., **Miller, T.,** Goddard, S., & Maag-Miller, L. (2013). Impact of outcomes-based assessment on student learning and faculty instructional practices. *Journal of Veterinary Medical Education, 40*(2), 128 – 138. (International peer-reviewed journal)
- (R) **Miller, T.,** Chahine, S., & Childs, R. (2010). Detecting differential item functioning and differential step functioning due to differences that should matter. *Practical Assessment, Research, and Evaluation, 15*(10). [Available on-line: <http://pareonline.net>] (Online journal with an average of well over 10,000 downloads for every article)
- (R) **Miller, T. (2009).** Formative computer-based assessment in higher education. *Assessment and Evaluation in Higher Education, 34*(2), 181–192. (International peer-reviewed journal).

- (R) Klinger, D., DeLuca, C., & **Miller, T.** (2008). The evolving culture of large-scale assessments in Canadian education. *Canadian Journal of Educational Administration and Policy*, 76, 1-34. (National peer-reviewed online journal)
- (R) **Miller, T.** (2006). Behaviour assessment in Ontario mathematics classrooms: Learning skills. *Educational Research and Review*. April 2006. 1–6.

**▪ Other Refereed Contributions****Books (Co-Author – authors are listed in alphabetical order)**

- (R) Dearling, C., Erdman, W., McCudden, B., Meisel, R., **Miller, T.**, & Speijer, J. (2003). *Mathematics: Applying the Concepts 9*. Whitby, ON: McGraw Hill Ryerson. (Author for chapters 4, 5, and co-author for chapter 7).
- (R) Brosseau, J., Byers, P., Erdman, W., McCudden, B., Mehler, K., **Miller, T.**, Perivolaris, L., & Saarimaki, P. (2002). *Mathematics: Preparing for College and Apprenticeship 12*. Whitby, ON: McGraw Hill Ryerson. (Author for chapter 2).
- (R) Brosseau, J., Erdman, W., Irvine, J., McCudden, B., Mehler, K., **Miller, T.**, Perivolaris, L., & Saarimaki, P. (2001). *Mathematics: Making Financial Decisions 11*. Whitby, ON: McGraw Hill Ryerson. (Author for career profiles preceding each chapter and for chapter 10).
- (R) Erdman, W., Fawcett, G., Lim, L., Vincent, L., Love, B., **Miller, T.**, & Zolis, P. (2000). *Mathematics: Applying the Concepts 10*. Whitby, ON: McGraw Hill Ryerson. (Author for chapter 4)

**Books (Consultant/Advisor)**

- (R) Fournier, N., MacDonald, D., McIlreith, J., McKillop, D., Speijer, J., & Szeto, S. (2008). *Mathematics 8*, Halifax, NS: McGraw Hill Ryerson. (Assessment and Pedagogy Consultant: **Miller, T.**) (Co-wrote the assessment model for the program; co-wrote assessment tools and investigations for the student texts; co-wrote assessment support tools for the teachers' resource for all tools written such as rubrics, what to expect from students, and other support deemed necessary; advised on the pedagogical development of chapters 1, 2, 4, 5, 7, 8, & 10).
- (R) Calabrese, B., Fournier, N., & Speijer, J. (2007). *Mathematics 7*. Halifax, NS: McGraw Hill Ryerson. (Assessment Consultant: **Miller, T.**).
- (R) Canton, B., Dearling, C., Erdman, W., McCudden, B., McLearn, F., Meisel, R., & Speijer, J. (2007). *Principles of Mathematics 10*. Whitby, ON: McGraw Hill Ryerson. (Advisor: **Miller, T.**).
- (R) Ainslie, E., Forsythe, T., Fuller, J., Gilfof, D., & Speijer, J. (2006). *Mathematics 10*. Whitby, ON: McGraw Hill Ryerson. (Advisor: **Miller, T.**).
- (R) Ainslie, E., Forsythe, T., Fuller, J., Gilfof, D., & Speijer, J. (2005). *Mathematics 9, Focus on Understanding*. Whitby, ON: McGraw Hill Ryerson. (Advisor: **Miller, T.**).
- (R) Erdman, W., Gilfof, D., Lax, S., Ryan, K., Speijer, J., Szeto, S., & Webb, M. (2004). *Mathematics 8, Making Connections*. Whitby, ON: McGraw Hill Ryerson. (Advisor: **Miller, T.**).
- (R) Erdman, W., Gilfof, D., Lax, S., Ryan, K., Speijer, J., Szeto, S., & Webb, M. (2004). *Mathematics 7, Making Connections*. Whitby, ON: McGraw Hill Ryerson. (Advisor: **Miller, T.**).

**▪ Dissertation**

- (R) **Miller, T.** (2009). Formative computer-based assessments: The potentials and pitfalls of two formative computer-based assessments used in professional learning programs. *Dissertation Abstracts International*. 70, 4, AATNR48227. [9780494482278]

**▪ Thesis**

- (R) **Miller, T.** (2004). *Assessment practices in grade 9 academic and applied stream mathematics*. Unpublished master's thesis, Queen's University, Canada.

**▪ Non-refereed Contributions****Journals**

- Miller, T.** (2014, Fall). Mathematics education affects growth, prosperity, and sustainability in Prince Edward Island. *Chamber Business Magazine*. Invited manuscript.

**Newspaper**

- Miller, T.** (2017, January). Pisa Results: A real improvement? *The Guardian*, A7.

- Miller, T.** (2015, April). Dropping assessments a mistake. *The Guardian*, A9.

**Newsletters**

- Miller, T.** (2017, December). Professor launches free math videos. *National Council of Teachers of Mathematics, Math Education Smart Brief*. December 5, 2017.

- Klinger, D., Rogers, W. T., **Miller, T.**, & DeLuca, C. (2008, October). Large-scale assessments in Canada. *NCME Newsletter*, 9-14.

**Magazines**

- Miller, T.** (2014, June). The quality of our education system impacts our labour force today into the future. *Chamber Business Magazine, Summer Edition*. 13-14.

**Technical Reports**

- Miller, T.** (2017). Measurement of Indigenous Achievement: An examination of how achievement was measured and what it tells about student persistence and success. (The purpose of this literature review is to firstly provide an overview of literature reporting on the different types of assessments and corresponding outcomes previously used to measure achievement of Indigenous children and secondly, to synthesis more recent documents reporting on student achievement. The outcome of this examination of literature will provide insight into how achievement was measured in the past and transition towards culturally responsive assessment for the future.)

- Miller, T.** (2014). Atlantic Veterinary College Admissions Evaluation. (The purpose of this program evaluation was to examine relationships between entrance variables used to determine acceptance into the AVC and variables representing student success within the program. Entrance variables included seven primary variables: admissions score, average of prerequisite courses, biology average, GRE percentile (composite of 3 measures: verbal reasoning, quantitative reasoning, analytical writing), interview score animal experience score, and extra curricular activities score. Findings were presented in a 55-page report).

- Miller, T.** (2010). *Grade 9 Assessment of Mathematics in PEI from 2007 to 2010*. PE: Department of Education and Early Childhood Development. (This evaluation examined the instrument used to assess grade 9 mathematics and student results over the past three to explore where students were experiencing difficulty. An item analysis was used to examine the large-scale assessment for poor performing items and secondly to identify curricular areas that PEI students have demonstrated an improvement or experienced difficulty with over the three-year period of implementation. Findings were presented in a 25-page report).

- Miller, T.** (2010). *Student Opinion of Teaching Survey: 5<sup>th</sup> Year Review of Questionnaire*. PE: University of Prince Edward Island. (The purpose of this 76-page technical report was to document the process the Questions Committee applied in their mandate to review the Student Opinion of Teaching Survey. This report was organized according to the four criteria stipulated in the Red Book: (a) review the current questionnaire, and make such revisions to the seven University-wide questions as it deems necessary and which are in agreement with the provisions of this Agreement; (b) give each Department, Faculty or School an opportunity to propose revisions to its additional

questions; (c) consider submissions from Departments, Faculties or Schools regarding alternative forms of evaluation in cases other than clinical rotations, where the Faculty Member teaches less than one-third (1/3) of the total hours in the course as per Article E1.3.1f; (d) consider submissions from Departments, Faculties or Schools regarding modifications to the procedures in E1.3.1 e), g) and h) above for electronic surveys or regular courses, courses delivered via the web, by correspondence, etc. (Red Book, E1.3.2, p. 61). Final section (e) was included that focused on recommendations from the Questions Committee.)

**Miller, T. (2009).** *Impact of PEI's provincial assessment working committee experience on teachers' professional development.* PE: Department of Education and Early Childhood Development. (The purpose of this study was to explore the impact of teachers' experience with the provincial assessments on their teaching practices. This study was presented in the format of a 22-page technical report for the Department of Education.)

#### ▪ **Provincial Keynote Invited Address**

**Miller, T. (May, 2013).** *Canada's Large-scale Assessment Program: What's it worth?* Presented at the Ontario Association for Mathematics Educators, Sheridan College, Toronto, ON.

#### ▪ **Provincial Keynote Address**

**Miller, T. (January, 2014).** *State of Mathematics Address.* Presented to the PEI community. (Findings from the PISA report and PEI's Common Assessment were drawn together to examine the impact of low mathematics achievement in the province. These statistical findings were contrasted with interviews from Faculty, Teachers, and a representative from the Bio-Technology sector. This open presentation attracted over 200 participants representing the full range of stakeholders: government, school boards, teachers, parents, business leaders, and politicians).

#### ▪ **Invited Provincial Presentations/Workshops**

**Miller, T. (2018, June).** Logic Models and Matrices. (Workshop for the Department of Agriculture & Fisheries).

**Miller, T., Bennett, P., & Jadis, A. (2018, February).** Let's Talk K-12 Education – A conversation challenging the status quo of P.E.I.'s education system. (Panel discussion organized by the PEI Chamber of Commerce to address issues with PEI's education system).

**Miller, T. (February, 2018).** *Qikiqtani Regional Teachers' Conference.* Presentation to mathematics teachers in the north and central Qikiqtani region of Nunavut. (Presented four workshops on Multiplication/Division, Fractions, Decimals, and Classroom Assessment).

**Miller, T. (2017, February).** Essential Skills Series, Canadian Evaluation Society. (3-day workshop offered by the PEI Chapter of the Canadian Evaluation Society for provincial government employees).

**Miller, T. (2015, November).** Essential Skills Series, Canadian Evaluation Society. (3-day workshop offered by the PEI Chapter of the Canadian Evaluation Society for provincial government employees).

#### ▪ **Conference Presentations**

##### **International**

(R) **Miller, T. (2016, December).** Promising practices in the assessment of language, literacy, and numeracy in Inuit communities. ArcticNet Conference, Winnipeg, Manitoba.

**Miller, T. (2016).** Explain Everything – Using iPads as teaching, learning, and assessment tools. Massey University, New Zealand.

- (R) Dawson, S., & **Miller, T.** (2014, June). Providing effective feedback with rubrics. American Association of Veterinary Medicine Conference, Iowa City, Iowa.
- (R) Miller, T., & Dawson, S. (2014, June). Rubrics and rating scales to enhance student engagement. Society for Teaching and Learning. Kingston, ON.
- (R) Dawson, S., & **Miller, T.** (2014, March). Rating scales in clinical rotations: Why words are important. Poster presentation at the Association for Veterinary Medicine Conference, Alexandria, VA.
- (R) Dawson, S., & **Miller, T.** (2013, March). Using ePortfolios to Promote Student Engagement with Outcomes-based Assessment. Paper presented at the Association for Veterinary Medicine Conference, Alexandria, VA.
- (R) **Miller, T.** (2011, April). *Large-scale assessment results and final grades: The ten percent rule and other teacher practices*. **Invited** symposium (Teachers' use of large-scale assessment as part of students' grades: A Pan-Canadian perspective) conducted at the meeting of the American Educational Researchers Association, New Orleans, LA.
- Miller, T.** (2010, October). *Formative computer-based assessments: Potentials and pitfalls of items*. Paper presented at the EDGE, St. John's, NL.
- (R) **Miller, T.** & Shulha, L. M. (2008, April). Formative Computer-Based Assessment in Higher Education. In K. McFerrin et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference, 2008* (pp. 105-111). Chesapeake, VA: AACE.
- (R) **Miller, T.**, & Shulha, L. (2007). *Formative computer-based assessment in higher education: Evaluation of an e-learning instrument*. Paper presented at the annual meeting of the American Evaluation Association, Baltimore, MD.

**National**

- (R) Yan, Y., & Miller, T. (2016). The Evolving Culture of Large-scale Assessment on Prince Edward Island. Paper presented at the Canadian Society for Studies in Education, Calgary, AB.
- (R) Poth, C., **Miller, T.**, & Daniels, L., & Wagner, A. (2013, June). *Do students choose formative opportunities?* Paper presented at the Canadian Society for Studies in Education, Victoria, BC.
- (R) Turnbull, M., MacPhee, M., & **Miller, T.** (2013, June). L'expérience, l'engagement et les croyances des parents non-francophones qui ont choisi une école française pour leurs enfants. Paper presented at the Canadian Society for Studies in Education, Victoria, BC.
- (R) **Miller, T.**, & Dawson, S. (2013, June). *e-Portfolios without Grades: A focus on student engagement*. Paper presented at the Society for Teaching and Learning in Higher Education, Cape Breton, NS.
- (R) **Miller, T.**, Poth, C., & Daniels, L. (2012). *An experiential approach to learning about assessment theory and practice: An experimental study*. Paper presented at the Canadian Society for the Study in Education, Waterloo, ON.
- (R) **Miller, T.** (2011, May). *Consequential validity and PEI's large-scale assessment of Grade 9 mathematics*. Symposium conducted at the meeting of the Canadian Society for the Study in Education, Fredericton, NB.

- (R) **Miller, T.** (2010, May). *Provincial assessment in Prince Edward Island: Three years of Grade 9 mathematics assessment*. Paper presented at the Canadian Society for the Study in Education, Montreal, QE.
- (R) **Miller, T., & Chahine, S.** (2009, May). *Teachers' instructional practices and students' opportunity to learn: Differential item functioning in the Grade 9 assessment of mathematics*. Paper presented at the Annual Conference of the Canadian Society for the Study in Education, Vancouver, BC.
- (R) **Klinger, D. A., Rogers, W. T., & Miller, T.,** (2008, June). *Elementary teachers' perceptions regarding the purposes and issues of provincial testing in Ontario*. Paper presented at the Annual Conference of the Canadian Society for the Study of Education, Vancouver, Canada.
- (R) **Miller, T.** (2007). Large-scale assessment in Canada: The provincial perspectives. Phase II. Symposium, University of Ottawa, Ottawa, ON.
- (R) **Miller, T., & Klinger, D. A.** (2007, June). *The current assessment culture in Canadian education*: Paper presented at the Large-scale Assessments of Achievement and the Issue of Official Languages Conference, June 14-15. Ottawa, ON, Canada.
- (R) **Miller, T.** (2006). Learning skills: Behaviour assessment in Ontario schools. Paper presented at the Annual Conference of the Canadian Society for the Study of Education, North York, ON.
- (R) **Miller, T.** (2005). *Assessment practices in Grade 9 academic and applied stream mathematics*. Paper presented at the Annual Conference of the Canadian Society for the Study of Education, Waterloo, ON.
- (R) **Miller, T., & DeLuca, C.** (2005). *Large-scale assessment in Canada: The provincial perspectives. Phase I*. Paper presented at the Annual Conference of the Canadian Society for the Study in Education, Waterloo, ON.
- (R) **Miller, T., Klinger, D. A., & Shulha, L. A.** (2006, May). *Behaviour assessment in Ontario mathematics classrooms*. Paper presented at the annual meeting of the Canadian Society for the Study of Education, Toronto, ON, Canada.
- (R) **Miller, T.** (2003). *Instrumentation: The challenges of developing a valid and reliable questionnaire*. Paper presented at the Annual Conference of the Canadian Society for the Study in Education, Halifax, NS.

**Provincial**

**Miller, T.** (2017). *Mathematics Videos and Collaboration*. Ontario Mathematics Association, Kingston, ON.

**Miller, T.** (2015). *Rich Learning Tasks for Grades 7 to 9*. Nova Scotia Teachers Federation, Halifax, NS.

**Miller, T.** (2004). *Assessment practices in Grade 9 academic and applied mathematics program*. Round Table, Kelly Conference, Kingston, ON.

**Professional Consultation**

2018-2019 Veterans Affairs Canada, Business Intelligence Unit

Description:

2011 – 2015 Atlantic Veterinary College

Description: Under the direction of the Associate Dean of Academic and Student Affairs, Dr. Lisa Maag-Miller, I collaborate with their curriculum team on implementing outcomes-based

assessment. We are currently working on guidelines for exit portfolios for the fourth year students.

### ▪ Professional Workshop Presentations

**Miller, T., & Wiebe, S. (2018, March).** Academic CVs and other questions to launching your academic career.

Description: This workshop was presented as a panel discussion to highlight pertinent information included in CVs as well as to field other questions graduate students have about starting their careers.

**Miller, T. (2017, December).** *Math Made Easy*. Public Presentation, Charlottetown, PE.

Description: The workshop launched my new website containing a series of instructional mathematics videos designed to provide a foundation in mathematics.

**Miller, T., & Doran, T. (2015, November).** Using mathematical apps to teacher kindergarten mathematics. (Presenter). PEI Professional Development Training.

**Miller, T. (2015, April).** Multiplication Workshop. (Presenter). PEI.

Description: The workshop presented the basics of multiplication beginning with drawing pictures to model multiplication. Next, different ways and strategies to multiply were presented.

**Miller, T. (2015, February).** Decimals Workshop. (Presenter). PEI.

Description: The purpose of the workshop was to explore decimal concepts using pictorial representations – any easy hands-on approach.

**Miller, T. (2015, January).** Fractions Workshop. (Presenter). PEI.

Description: The purpose of the workshop was to remove the mystery of fractions by re-introducing fraction concepts in an easy and hands-on approach. The workshop was open to the public.

**Miller, T. (2011).** Questionnaire Design and Analysis Workshop Series. (Presenter). PEI.

Description: This workshop series was sponsored through the Canadian Evaluation Society (PEI Chapter) and the University of Prince Edward Island. The first workshop introduced participants to theories of questionnaire design. The second two workshops focused on (a) descriptive statistical analysis and (b) inferential questionnaire design. Eight participants from the Canadian Evaluation Society and the University of Prince Edward Island registered for the three workshops.

**Miller, T. (2011, June).** Think-tank on PEI's Large-scale Assessment, PEI Department of Education and Early Childhood Development. (Organizer and Presenter).

Description: Canada's leaders in measurement were invited to PEI (following the annual Canadian Society for Studies in Education conference in Fredericton, NB) to examine PEI's large-scale assessment program and provide directions for future growth. Psychometricians in attendance were: Dr. Todd Rogers (University of Alberta), Dr. Ruth Childs (University of Toronto), Dr. Don Klinger (Queen's University), Dr. Robert Crocker (University of Newfoundland & PISA representative, and myself. Attendees from the Department of Education included Cindy Wood (Assessment and Evaluation Manager) and five of her immediate staff. Assisting with the workshop was a UPEI research assistant, Melissa MacLean. A reception and working dinner was held on June 1, 2011. A full-day workshop and presentation dinner followed on the preceding day.

Budget: \$6500

**Miller, T.** (2011, June). Program Evaluation Standards Workshop, Canadian Evaluation Society. (Presenter).

Description: This workshop introduced participants ( $n=15$ ) from all employment sectors (i.e., private consultants, PEI Department of Tourism, PEI Department of Education, Veteran's Affairs) to a new resource for evaluators: The Program Evaluation Standards, 3rd Ed. (2010). This resource is a guide for quality decision-making when (a) designing and implementing the inquiry, (b) making dependable decisions about a program's merit, worth, or significance, and (c) communicating information and reporting findings. Participants had the opportunity to explore the complexity of evaluation practice and gain hands on experience in applying The Program Evaluation Standards in full-day workshop.

**Miller, T.** (2010, April). Essential Skills Workshop, Canadian Evaluation Society. (Presenter).

Description: The essential skills series consisted of a four-module workshop delivered over three intensive days. The workshop was designed to enhance program evaluation skills and promote the professional practice of evaluation across Canada. Twelve participants from Atlantic Canada (PEI, NS, NB) representing public and private sectors attended the workshop.

**Miller, T.** (2007). Improving Provincial Assessment Results. Ottawa District School Board. (Presenter).

**Miller, T.** (2005). Assessment Practices in Grade 9 Academic and Applied Stream Mathematics. Ontario Association for Mathematics Educators. (Presenter).

**Miller, T.** (2004). Teaching for Success in Applied Mathematics. Pine Ridge Math Association. (Presenter).

**Miller, T.** (2004). Applied Mathematics: What can be done to improve learning and test results? Ontario Association for Mathematics Educators. (Presenter).

**Miller, T.** (2004). Applied Mathematics: Putting Theory into Practice – Mind the Gap! Toronto Educators' Association for Mathematics. (Presenter).

**Miller, T.** (2003). Teaching Applied Stream Mathematics. Brock University, Additional Qualifications, Summer Program. (Invited Speaker).

**Miller, T.** (2003). Introduction to Fathom. Ontario Association for Mathematics Educators. (Presenter).

**Miller, T.** (2003). Teaching for Success in Grades 9 & 10 Applied Mathematics. Toronto Educators' Association for Mathematics. (Presenter).

#### ▪ Broadcast Interviews

**Miller, T.** (2019, February). After-School Math Program. Island Morning (Laura Chapin), CBC Radio.

**Miller, T.** (2019, February). UPEI math tutoring project draws interest from hundreds of Island students. Retrieved from <https://www.cbc.ca/news/canada/prince-edward-island/upei-math-tutor-1.5036064>

**Miller, T.** (2019, March). Hundreds line up for UPEI tutoring program. Academia, Top Ten. Retrieved from <https://www.academica.ca/topten/20190301>

**Miller, T.** (2018, March 8). *Standardized Testing that started over a decade ago still faces stiff criticism.* CBC Compass TV at 6 pm (Kerry Campbell).

**Miller, T.** (2018, February). *Views on Large-scale Assessment* (Matt Rainey), CBC Radio.

**Miller, T.** (2017, December). *Math Made Easy.* Island Morning (Matt Rainey), CBC Radio.

**Miller, T.** (2014, July). *Extent of social promotion in PEI.* Island Morning (Laura Chapin), CBC Radio.

**Miller, T.** (2014, January). *Response to PISA scores in PEI.* Island Morning (Matt Rainey), CBC Radio.

#### ▪ Text Interviews



- Miller, T.** (2019, February 26). *UPEI math tutoring project draws interest from hundreds of Island students*. Retrieved from <https://www.cbc.ca/news/canada/prince-edward-island/upei-math-tutor-1.5036064>
- Miller, T.** (2018, May 10). *Principals advised to reduce PISA exemptions* (Kerry Campbell), CBC News Online. Retrieved from <http://www.cbc.ca/news/canada/prince-edward-island/pisa-exemptions-pe-standardized-testing-1.4648062>
- Miller, T.** (2018, March 7). *PEI to Review Standardized Testing Used in Schools* (Kerry Campbell), CBC News Online. Retrieved from <http://www.cbc.ca/news/canada/prince-edward-island/pei-standardized-tests-1.4566036>
- Millert, T.** (2017, December). *Charlottetown chamber holds panel discussions on PEI's K-12 system*. The Guardian Newspaper, PEI (Dave Stewart).
- Miller, T.** (2017, December). *Parents and teachers invited to math made easy session at UPEI*. Guardian Newspaper, PEI (UPEI Press Release, Dave Atkinson).
- Miller, T.** (2017, September). *Are we prepared for the 21st century workplace: A look at K – 12 education*. Chamber of Commerce, PEI (Rose FitzPatrick).
- Miller, T.** (2014, January). *Poor math skills in PEI have reached a crisis point: UPEI Professor*. Guardian Newspaper, PEI (Teresa Wright).
- Miller, T.** (2014, May). *Poor math skills just don't add-up, opposition leader says*. Guardian Newspaper, PEI (Teresa Wright).
- **External Reviewer (International)**
- Miller, T.** (2017, July). *Innovation and quality assurance in digital assessment*. Doctoral Funding Scheme. **Fonds National de la Recherche, Luxembourg**.
- Miller, T.** (2015, July). *Process-based investigation of teachers' diagnostic competencies in assessing student performance and task difficulty (second submission)*. **Fonds National de la Recherche, Luxembourg**.
- Miller, T.** (2014, July). *Process-based investigation of teachers' diagnostic competences in assessing student performance and task difficulty*. **Fonds National de la Recherche, Luxembourg**.
- **Article Reviews**
- Canadian Journal of Education (2017, March). *And they still persisted: The stories of four women who navigated transitions in higher education*.
- Canadian Journal of Education (2017, January). *Imputed Meaning: An exploration of how teachers interpret grades*.
- Educational Studies in Mathematics (2013, March). *15 strategies, 1 Semester: A case study of cooperative learning in the college math classroom*.
- Canadian Journal of Education (2013, March). *Declining enrolment in Northern Ontario: What can history tell us and where do we go from here?*
- Journal of Youth Studies (2012, November). *Over-education in the early career of secondary education graduates: An analysis using sequence techniques*.
- Canadian Journal of Education (2012, July), *Canadian education embedded in globalized policy communities: OECD PISA effects on local educational policy and governance*.

Behavior Research Methods (2012, January). Computer-based assessment of student constructed responses.

Canadian Journal of Education (2011, September). Assessing the psychometric properties of achievement goals questionnaire across task contexts.

Canadian Journal of Education (2011, June). Formative assessment: There's nothing more practical than a good theory.

Canadian Journal of Education (2011, January). Turkish students' attitudes towards geometry.

Canadian Journal of Education (2010, September). What has experience got to do with it? An exploration of L1 and L2 Test takers' perceptions of test performance and alignment to classroom literacy activities.

Canadian Journal of Education (2010, September). High stakes standardized testing and marginalized youth: An examination of the impact on those who fail.

#### ▪ **Conference Proposal Reviewer**

Canadian Educational Researchers Association (2011, December). High school mathematics teaching practices and student motivation that influence student achievement.

Canadian Educational Researchers Association (2010, December). Effects and uses of large-scale assessments.

#### ▪ **Researcher**

Wolfe, R., Childs, & R., Elgie, S. (2004). Final report of the external review of EQAO's assessment process. Retrieved from: <https://www.researchgate.net/publication/307563038>.

My Role: This was a very large project that solicited experts throughout North America to examine EQAO's assessment processes. As a research assistant on this project, I focused on grade 9 mathematics. In particular, I conducted an item analysis and correlation analysis on the grade 9 mathematics large-scale assessment data.

#### ▪ **Research Grants**

##### **External**

2018 Skills PEI. A Multi-purpose Numeracy Platform. (Bid submitted for \$34,340).

2018 Skills PEI. Assessment of Continuing Education and Workforce Development Needs in the Souris Area. (\$32,301 Awarded April 6, 2018). As one of four sub-committee members for Education 20/20 we applied to Skills PEI to examine the Souris workforce needs in terms of educational opportunities given that Souris has the largest number of unemployment people in PEI. This study involved interviewing employers and surveying households regarding their educational needs.

**My Role:** As a co-principal investigator for this grant, my role involved preparing the funding proposal, meeting with Skills PEI to negotiate the proposal, and then overseeing the delivery of the proposal. Other members: Don Glendenning, Katherine McQuaid, and Bill Wheelan.

2017 SSHRC Insight Grant – Stream A. Addressing the shortfall in mathematics achievement: Experimenting with multimedia. Proposal submitted October, 2017 (\$91,454)

**My Role:** Principal Investigator. **Unsuccessful bid.**

Other applicants: Kathy Snow (University of Cape Breton)

2017 SSHRC Insight Development Grant. (\$75,000 proposal submitted January 14, 2017).

**My Role:** As the principal investigator for this grant, my role includes communicating among researchers and ensuring the timely completion of each component of the study. Specifically, I will lead the

development of the instructional videos as well as oversee the development of data collection instruments and analysis of data. **Unsuccessful bid.**

- 2016 ArcticNet (\$200,000). Researcher. Foundations for student persistence and success in Inuit Nunangat. Successful Application (completed by January 2018).  
Principal Investigator: Dr. Melanie Gorman, University of Winnipeg  
My Role: Contribute expert knowledge to the environmental scan and statistical analysis, particularly in relation to measuring student success. I also anchored the team's critical literature review and analysis of how student success is measured, contextualizing Inuit-specific assessment practices (existing or to be developed) within academic theories of assessment and national/provincial practices. I wrote a short paper for the website, and co-authored a peer reviewed journal article with one of our PhD students (in progress).
- 2014 SSHRC Insight Development Grant. (\$70 950). Applicant. Pedagogy, curriculum, and assessment of critical thinking in higher education. **Eligible for funding but no funds.**
- 2012 SSHRC Insight Grant (\$104 821). Critical thinking in work-based learning environments. Applicant. **Unsuccessful bid.**
- 2011 SSHRC (\$24 322). Co-applicant.  
Title: Examining beginning teachers' orientations to assessment: A quasi-experimental mixed methods intervention study  
Rank: 32/121 applicants. The first 30 were funded and remaining funds were distributed to the next highest applicants which funded the first year of our study.  
Principal Investigator: Dr. Cheryl Poth, University of Alberta  
  
My Role: Administer pre- and post-questionnaires to Bachelor of Education students prior and following an intervention. The intervention at UPEI involves: (a) providing students with choice in deciding whether weekly quizzes are used as formative or summative instruments and (b) provide instruction in an experiential environment whereby students experience assessment practices that would ideally shape their understanding of assessment and impact their future practices. This research is to be conducted in the 2012 winter term. I am the lead researcher on this aspect of our research (focusing on experiential intervention) resulting in a paper presentation at CSSE in May 2012 and journal submission. Status: Completed.
- Internal**
- 2017 Faculty of Education Grant (\$2,500). Applicant.
- 2017 Internal Research Grant (\$5,000). Applicant. Instructional Video Research.
- 2015 Instructional Development Grant (\$1 000). Applicant.  
Description: The purpose of the grant is to develop an online self-assessment based on course readings for students enrolled in mathematics education.
- 2014 Joint Education Research Group (\$2 500). Applicant  
Description: The purpose of this research project is three fold: (a) to introduce interactive technology in the form of iPads to kindergarten children, (b) study the impact of the technology on their learning of number sense (mathematics), and (c) investigate the assessment of early years children using voice recording and interactive software (using the app Explain Everything). Status: Preparing paper for publication.
- 2014 Student As Scholar (\$1 000). Applicant. Investigating the use of iPads in assessing early learning of mathematics.

Description: The objective of this research project was to engage pre-service teachers in the early years assessment and evaluation class (ED482E), in the investigation of using technology (using the software Explain Everything) as instruments to assess early learning in mathematics. Status: Completed; conference presentation.

- 2012 Major Research Grant (\$6 929). Assessment of Critical Thinking in Professional Schools.  
Description: In response to the call for critical thinking skills in 21<sup>st</sup> century graduates, the primary objective of this study is to obtain a benchmark from which subsequent initiatives to promote, develop, and assess critical thinking can be built. A Major Research Grant will assist in launching the first stage of this research and aptly position the research team for a SSHRC Insight Grant Application (i.e., Innovation, Leadership, and Prosperity) on October 15, 2012. Research questions posed in this study are: (a) Is there an assumption that experiences create an opportunity for and the development of critical thinking? If so, how is critical thinking conceptualized in the place settings? (b) Under what conditions is critical thinking measured? (c) To what extent are students engaged in the assessment of their critical thinking? Status: SSHRC grant submitted and currently being revised for a re-submission. Status: Completed.
- 2009 Major Research Grant (\$2 565) Effective Use of Formative Computer-based Assessment  
Description: The objective of this research was to: (a) develop formative computer-based assessments for use in a compulsory course (i.e., ED482) focusing on classroom assessment in the Faculty of Education at UPEI and (b) explore the extent to which students use the formative computer-based assessments and the relationship between the use of formative computer-based assessments, degree of self-regulated learning, and other summative assessments presented in the course. Status: paper completed.
- 2009 Start-up Grant (\$2 500 – Three years of Grade 9 Mathematics Assessment)  
Description: PEI was the last jurisdiction in Canada to adopt large-scale assessments, hence the first purpose of this study was to present a summary of the large-scale assessments introduced in PEI over the preceding three years (i.e., 2007 to 2009). The second purpose of this study was to explore PEI's large-scale assessment of Grade 9 mathematics given that this assessment was one of the first assessments introduced. The questions posed in the second part of the study are: (a) To what extent do items on PEI's Grade 9 assessment of mathematics represent the content standards (strands) and process standards called for by the National Council of Teachers of Mathematics? (b) Using an item analysis, which items are difficulty/easy for PEI students? (c) To what extent has PEI mathematics teachers in Grades 8, 9, and 10 changed their curriculum and instructional practices to reflect large-scale assessment results? Status: technical report completed.
- 2008 New Scholar Grant (\$1 325 – Differential Item Functioning Study)  
Description: The purpose of this study was to examine the relationship between teachers' instructional practices and students' opportunity to learn. In particular, differential item functioning (DIF) analyses is used to explore the relationship between instructional practices as reported on the Teacher Questionnaire administered with the Ontario provincial assessment of Grade 9 Assessment Mathematics and the corresponding student achievement scores on the Grade 9 Assessment of Mathematics. Status: completed (this study has been published [see refereed journal publications]).

▪ **Travel Grants**

- 2014 SCENT Travel Grant (\$1 000) Attendance at STLHE, Kingston, ON.
- 2012 UPEI Travel Grant (\$1 500) Attendance at CSSE, Waterloo, ON  
Description: The paper presented at this conference focused on the outcome of a study examining a classroom-based learning environment that provided pre-service teachers with an experiential approach to learning. While attending the conference I was able to collaborate with the Principal Investigator from University

of Alberta on our year 1, SSHRC funded grant (funded for 1 year only) to prepare the grant application for year 2 and 3. The paper I presented at this conference will strengthen my profile on the SSHRC application as an expert in the field of assessment.

2010 UPEI Travel Grant (\$1 500) Attendance at CSSE, Montreal, QC

Description: At this conference I presented a paper on PEI's Grade 9 assessment of mathematics results and the impact of this assessment on teachers' curriculum and instructional practices. During the conference I had an opportunity to meet with colleagues from the University of Alberta and Manitoba to work on a SSHRC project that was submitted for funding (fall, 2009). During the conference I also met with my special interest group, Canadian Educational Researchers Association where I held the position of editor for our newsletter.

▪ **Special Initiatives Funding**

2010 Students Come First Grant (\$5 000)

Title: Enhancing Leadership in Mathematics

Description: The goal of this initiative was to create future leaders in mathematics education by providing four mathematics students with the opportunity to attend Ontario's provincial mathematics conference (2010) organized through the Ontario Association for Mathematics Educators. These four students would then give back to the greater mathematics community in PEI by organizing workshops for incoming pre-service teachers and beginning teachers.

▪ **Other Grants / Funding**

2010 McGraw Hill Ryerson (\$200)

Sponsored the coffee break for the Mathematics & Assessment Conference (UPEI)

2010 Special Initiative Fund (\$500 Presidents Office – Mathematics & Assessment Conference)

Partial sponsor of the Mathematics & Assessment Conference (UPEI)

2010 Questions Committee Technical Report (\$1 500 – Vice President's Office)

Funds awarded (for research) to offset the time commitment to prepare the technical report.

## ▪ Awards & Distinctions

- 2008 Alice Corry Bursary (\$500)
- 2006 - 2007 Ontario Graduate Scholarship (\$15 000)
- 2005 Bateson New Scholar Award, CSSE (\$1 000)
- 2005 Martin Schiralli Fellowship, Queen's University (\$10 000)
- 2002 – 2008 Queen's Graduate Scholar (\$15 000)

## CONTRIBUTIONS TO TEACHING

### ▪ Award Nominations

- Graduate Instructor Nomination 2014

### ▪ Courses Taught

- ED486 Mathematics for Teachers
- ED423E Early Years Mathematics Methods I
- ED424E Early Years Mathematics Methods II
- ED423S Senior Years Mathematics Methods I
- ED482E Classroom Assessment
- ED482M Classroom Assessment
- ED482S Classroom Assessment
- ED612 Introduction to Quantitative Methods
- ED628 Introduction to Program Evaluation
- ED700 Quantitative Methods

### ▪ Graduate Supervision

- Loretta Gilbert – Supervisor: Start thesis May 2019
- Shanice Sproole – Supervisor: Will defend in May 2019
- Han Xu (MEd) – Supervisor: Will defend in December 2019
- Melissa McLean (MEd) – Supervisor: Successful defence in March 2017
- Yemi Olajide (MEd) – Supervisor: Successful defence in December 2015.
- Yan (Lizzie) Yan (MEd) – Supervisor: Defence scheduled for December 2015.
- Ryan Casey (MEd) – Committee Member: Successful defence in November 2015.
- Brenda Goodine (MEd) – Committee Member: Successful defence in October 2012.
- Christina Perry (MEd) – Committee Member: Successful defence in March 2011.

### ▪ Graduate Service

- Tim McRoberts – Chair of PhD Defense (January 2019)
- Charlene VanLeeuwen – Chair of PhD Defense (December 2018)
- Mary MacPhee -Chair of PhD Defense (February 22, 2018)
- Suha Alhothali – Chair of Comprehensive e-Portfolio Examination (January 2018)
- Bonnie Stewart – Chair of Portfolio Proposal (December 2012)

**▪ Involving Students in Research**

2019 – current	Yan (Lizzie) Yan – Research Assistant (Exclusion rate study)
2018 – current	Will Compton – Animator (Video Development)
2019 – current	Lumeng Wang – Research Assistant (After-School Math Program)
2017 – 2018	Thibaut Aubert – French Translator (Video Development)
2017 – 2018	Meng (Ceci) Ji – Research Assistant (Video Development)
2017	Grace Wenjohi – Research Assistant (Video Development)
2016 - 2017	Melissa MacLean – Research Assistant (Item development – mathematics)
2014 - 2015	Yemi Olajide – Research Assistant (Math Apps in Early Learning)
2014	Danielle Smith – Research Assistant (Math Apps in Early Learning)
2014	Freya Qi – Research Assistant (Math Apps in Early Learning)
2014	Gabriela Sanchez – Consultant (Early Childhood Education)
2012	Jackson Doughart – Research Assistant (Critical Thinking in Prof. Schools)
2011	Gaspard Chabillan – Research Assistant (Think-tank on Large-scale Assessment)
2010 - 2011	Melissa MacLean – Research Assistant (Think-tank on Large-scale Assessment)
2010	Katherine Robertson – Research Assistant (Inquiry-based Math)
2010	Leigh-Anne Gilroy – Research Assistant (Inquiry-based Math)
2010	Lauren Van Ekris – Research Assistant (Inquiry-based Math)

**CONTRIBUTION TO THE UNIVERSITY AND ACADEMIC COMMUNITY****▪ University Committees**

2018 – 2019	University Review Committee
2017 – 2018	Strategic Plan Committee
2014	Department Review Committee (Reviewer for two applications for promotion)
2014	Senate (1 replacement for Dr. MacDonald)
2013 – present	Dean’s Advisory Council
2013	Search Committee (1 Program Coordinator, Faculty Development Office) (1 Faculty Development Officer)
2010 – present	Graduate Studies Committee (Awards Sub-Committee)
2011	Department Review Committee (Reviewer for three applications for promotion)
2011	SSHRC Adjudication Committee (Adjudicated Master’s and PhD Student SSHRC applications)
2011	UPEI Faculty of Education, Search Committee (4 term contracts in Global Issues)
2010	UPEI Questions Committee (Student Opinion of Teaching Survey) (Committee was responsible for conducting the five-year review of the Student Opinion of Teaching Survey. My role involved preparing the report for the committee [cited below under technical reports])
2009	UPEI New Building Committee (Provided input on requirements for a new building for the Faculty of Education)
2009	UPEI Faculty of Education, Search Committee (Hiring of one tenure stream faculty in international education)
2008 - current	UPEI Senate Committee on Enhancement of Teaching (SCENT) (Attend monthly meetings to plan events and adjudicate grants sponsored through SCENT. In 2011, I became the chair of SCENT)

- 2008 – 2009 Classroom Audit Committee, University of Prince Edward Island  
(Committee responsible for evaluating the conditions of classrooms throughout the university)
- 2007 – 2008 Queen’s University Appointments Committee  
(Hiring of one tenure stream faculty in policy studies)
- 2003 – 2004 Queen’s University, Faculty of Education Research in Progress Seminar Series  
(Co-Chair responsible for planning, organizing, and hosting monthly seminars that involved sharing of research by faculty and students)
- 2004 Queen’s University, Faculty of Education Kelly Conference,  
(Program Developer responsible for timetabling presentations and preparing conference program)
- 2004 - 2006 Queen’s University, Faculty of Education B.Ed. Selection Committee,  
(Reader for students’ letters of application)

**Faculty of Education (UPEI) Committees**

- 2009 – current Graduate Studies Committee
- 2012 – present UPEI Faculty of Education Search Committee  
(1 two-year term – 2019)  
(1 tenure stream Global Education – 2019)  
(Indigenous Education and Arts – 2018)  
(1 tenure stream Leadership – 2018)  
(2 tenure stream contracts in Leadership and Early Years Literacies 2016)  
(1 lecturer for Global Issues) – Chair  
(2 one-year contracts, 1 three-year contract 2010)
- 2014 – 2018 BEd Awards Committee
- 2018 Community and Culture Building Committee
- 2018 Global Pathways Committee

**■ Provincial Committees**

- 2009 – current Canadian Evaluation Society, PEI Chapter, Board of Directors  
(Chair of Professional Development, Secretary, VP)

**■ National Committees**

- 2008 – 2009 Canadian Educational Researchers’ Association, Board of Directors  
(Chair of Newsletter)

**■ University Presentations/Workshops**

- Senate Committee for the Enhancement of Teaching (SCENT): Brown Bag Lunch Presentation (2013, Nov).  
Rating Scales and Rubrics: What’s the difference?
- Centre for Educational Research (CER) Presentation (2011, May). Three Years of Grade 9 Mathematics  
Assessment: Factors influencing student achievement
- Senate Committee for the Enhancement of Teaching (SCENT): Brown Bag Lunch Presentation (2010, April).  
Effective Use of Rubrics.
- Centre for Educational Research (CER) Presentation (2009, Oct). Formative Computer-based Assessment.

**CONTRIBUTIONS TO THE COMMUNITY****2019 Introduction to Program Evaluation**

Description: I created and delivered a 2-day workshop on the introduction to program evaluation. This workshop was part of UPEI’s professional development series organized by Charlene Miller (no relation).



**2018 Program Evaluation Conference: Performance Measurement and Evaluation Workshop**

Description: I assisted in the planning and organizing of this workshop.

**2017 Program Evaluation Conference: Essential Skills Series**

Description: As the professional development representative for our local chapter of the Canadian Evaluation Society, I led the planning, organizing, and soliciting of speakers for the conference.

**2016 Truth and Reconciliation**

Description: I plan, organized, and delivered a symposium on Truth and Reconciliation in celebration of Dr. Fiona Walton's retirement. Speakers were solicited from Nova Scotia, Nunavut, and PEI. I applied for funds (\$2500 from CSSE and private sponsors who donated their airmiles to cover the travel expenses of speakers from the north.

**2013 Program Evaluation Conference**

Description: As the professional development representative for our local chapter of the Canadian Evaluation Society, I led the planning, organizing, and soliciting of speakers for the conference.

**2010 Mathematics and Assessment Seminar Series**

Description: This second seminar series was organized by my senior years mathematics students (BEd) as an after school/work workshop. Students presented various hands-on workshops that were offered to PEI teachers and BEd students.

**2009 Mathematics and Assessment Seminar Series**

Description: This seminar series was primarily sponsored through the PEI Department of Education and the UPEI President's Office and McGraw Hill Ryerson provided additional funding. Teachers of grades 7, 8, and 9 mathematics were invited to participate ( $n = 87$ ). Experts in mathematics education were invited to present (Wayne Erdman and Rolley Meisel – from ON). All handouts were translated into French to support teachers from French language schools. In addition to organizing the event, I provided the opening address and, with students in my senior mathematics class, presented 2 workshops (i.e., Furniture and the Fibonacci Gauge, The Coffee Challenge). Dr. Khym Goslin provided the closing address that focused on how changing how mathematics is taught.

**2008 – 2009 Official Proctor, PEI Department of Education**

Description: This position involved overseeing the scoring of PEI's large-scale assessment. Responsibilities included ensuring procedures for ensuring test security and scoring were followed.

**▪ Professional Memberships**

Ontario Association for Mathematics Educators

Canadian Evaluation Society (PEI Chapter)

Canadian Educational Researchers Association (Canadian Society for Studies in Education)

American Educators Research Association

**EMPLOYMENT HISTORY**

2018 – current Graduate Coordinator, Faculty of Education, UPEI

2016 Visiting Professor, Massey University, New Zealand (February 8 – March 11)

2016 Consultant, St. George's University, Veterinary Program, Grenada, West Indies

2014 - Associate Professor, University of Prince Edward Island (July 1, 2014)

2011 Interim Coordinator, Bachelor of Education Program, Kindergarten Cohort

2008 – 2014 Assistant Professor, University of Prince Edward Island

# TESS MILLER, PHD

UNIVERSITY OF PRINCE EDWARD ISLAND, CANADA

[TMILLER@UPEI.CA](mailto:TMILLER@UPEI.CA)

- 2005 – 2008 Teaching Fellow (Classroom Assessment), Queen’s University
- 2003 – 2008 Research Assistant, Queen’s University
- 2003 Teaching Assistant, Queen’s University
- 1992 - 2002 Teacher/Department Head (Mathematics/Computer Science), Durham District School Board
- 1991 - 1993 Teacher (Mathematics/Computer Studies), Chinese/Canadian International School
- 1987 - 1991 Teacher (Business Studies/Computer Science), Durham District School Board