

## Toronto District School Board: 2014 - 2015

<b>Project Title</b>	<b>Learning Today for Tomorrow: Innovation in Teacher-Student Technology-based Learning</b>
<b>Description</b>	<p><i>Education for Social Innovation</i></p> <p>Using a Blended Professional Learning model, participating teachers design learning for their students where design and entrepreneurial thinking are combined with social innovation processes so that students will use e-technologies in challenge-based inquiry that address local and global issues. Central to the learning is the co-construction of learning between teachers and students using e-technology to collaborate, learn, and work. Apps and web 2.0 technologies used as learning tools to make students learning and thinking visible for documentation will naturally increase metacognition, in particular learning how to learn.</p> <p><i>Using Entrepreneurial Thinking to Establish New Generation Learning for Grade 7-12 Teachers and Students</i></p> <p>This teacher and Principal led initiative embeds the competency of entrepreneurial thinking into the professional work of intermediate and secondary teachers and into the curriculum for students in Grades 7-12. This is accomplished through co-creating entrepreneurial thinking challenges and tools which change the conditions of learning, leveraged by the use of e-technologies.</p> <p>The added intent of this initiative is organizational leadership at the school level and the capacity to deliver change through innovation, collaboration, design and systems thinking. It highlights opportunities for social innovation and global citizenship; and builds new pedagogies based on learning partnerships, deep learning tasks, and digital technologies and resources.</p>
<b>Context</b>	<p><i>Number of students: 2040</i></p> <p><i>Number of teachers: 118</i></p> <p><i>Number of schools: 37</i></p> <p><i>Grades/Program: Grades 1-12</i></p>
<b>Impact on Students</b>	<p>An in-depth evaluation of the impacts on participating students' learning and well-being will be conducted in the 2015-2016 school year as the student achievement and school engagement data becomes available. This area on overall impact on learning will be continue to be studied as in light of the TDSB K-12 STEM Strategy as outlined in the Technology and Learning Fund 2015-16 Action Plan</p>
<b>Impact on Instruction</b>	<p><i>Education for Social Innovation</i></p> <p>Guided by the Toronto District School Board's (TDSB) generic framework for evaluating the effectiveness of teacher professional learning, we found that after the professional learning, the vast majority of participants considered themselves as having "expert" or "competent" knowledge/skills for inquiry-based teaching and learning. Participants also improved the level of proficiency</p>

in their teaching practice for generic classroom teaching and significantly for inquiry-based classroom teaching and student learning. They also had very positive attitudes and beliefs about classroom teaching and student learning. In addition, the majority of participants were satisfied with the level of support they received from their schools or from the TDSB.

*Using Entrepreneurial Thinking to Establish New Generation Learning for Grade 7-12 Teachers and Students*

This research study focuses on evaluation of the first phase of this program through the analysis of surveys designed to elicit feedback on participants' perceptions, attitudes, knowledge and practices regarding Entrepreneurial Thinking (ET) teaching and learning, as well as the quality and effectiveness of the professional learning activities and resources offered in the program.

We identified an improvement in teachers' practices as a result of Professional Learning in the areas of inquiry based teaching and learning frameworks through the Technology and Learning Fund (TLF) research initiatives.

We present the key findings of the study below under the three major headings corresponding to the main survey sections:

*Entrepreneurial Thinking and Entrepreneurship Education Attitudes, Perceptions and Knowledge*

- The majority of participants agreed that entrepreneurship should be integrated into a wide range of school subjects.
- Teachers made rich connections between their own practice, current TDSB initiatives, and the new tools and strategies introduced in the ET program.

*Teaching Entrepreneurial Thinking Skills and Practices*

- The majority of teachers indicated high levels of self-efficacy with regard to teaching ET.
- Approximately half of all participants felt they were able to use effective assessment strategies, while the other half did not.

*Professional Learning and Organizational Support*

- ET modules were overwhelmingly perceived as informative, useful, and impactful.
- Approximately half of all participants believed that other teachers in their school were open to change, while the other half of participants did not.

*Policy Implications and Recommendations*

- Policies are needed to support sustained professional learning to enable effective spread and scale of ET throughout the school board.
- Strong school-community partnerships are a marker of countries demonstrating effective school-to-work transitions.

<b>Impact on System</b>	<p>Guided by our learnings from Technology and Learning Fund (TLF) that effective, high quality professional learning improve educators' knowledge, skills and practices as well as their self-efficacy in the teaching and learning with educational technology we identified STEM strategy as one of our system initiatives to:</p> <ul style="list-style-type: none"><li>• Move away from teaching subjects in silos and linking real world issues to classroom teaching and learning.</li><li>• Promote problem-based learning and STEM skills to allow students to stay current, explore, inquire and actively engage in relevant issues.</li><li>• Encourage scientific discovery and technological innovation to shape how future citizens work collaboratively to provide creative and viable solutions to today's and tomorrows' real-life problems.</li></ul>

*NOTE: Information in the summary is taken directly from the data contained in the final project report.*