

Durham District School Board: 2014 - 2015

Project Title	Technology Integration & Teacher and Student Collaboration in Grades 5, 8 and 9 Mathematics Classrooms
Description	<p>The purpose of this project was to align our current multi-year embedded instructional technology plan with our desire to gain a better measure of student engagement and achievement in mathematics classrooms. We likewise wished to build on our past years' 21st Century Learning project work in order to further the momentum we'd acquired with past training.</p> <p>This year's focus was geared specifically to teachers in grades 5, 8 and 9 and with respect to the subject of mathematics instruction and student learning. Our project involved the following:</p> <ul style="list-style-type: none"> • Face-to-face training (full day training focused on integration of technology into mathematics instruction and to promote student learning) • Development of a web-based teacher instructional resource • Opportunities for collaborative lesson-planning (co-plan) both in a face-to-face and an online method of sharing lesson ideas between teachers • Provision of device bundles to each grade 5 & 8 classroom (6 devices per grade 5 classroom and 10 devices for each grade 8 classroom)
Context	<p><i>Number of students: 9475</i></p> <p><i>Number of teachers: 379</i></p> <p><i>Number of schools: 130</i></p> <p><i>Grades/Program: Grades 5, 8, and 9 mathematics teachers</i></p>
Impact on Students	<p>Data collection and project participation by teachers was halted in the DDSB in the spring of the 2014-2015 school year due to labour action on the part of both secondary and elementary teachers. This negatively impacted our ability to train teachers and for them to participate in project surveys and reviews.</p> <p>From the anecdotal data that was collected early on in the project, teachers reported improved student understanding and improved engagement.</p>
Impact on Instruction	<p>Teacher access of the 21st Century Math portal space was monitored in the first month of its use and showed significant increases weekly of individual teachers viewing resources. Likewise the grades 5 and 8 blog sites demonstrated a great deal of use with 100's of submissions prior to the work action.</p> <p>Early stage training surveys provided us with data suggesting that teachers ranked themselves 3.7 out of a possible 5 where 1 was weak and 5 was confident in terms of technology integration and use. It would have been our intention for further survey this population of teachers throughout the spring to gauge what we believe was an increase in their confidence and use of technologies in the classrooms. Teachers who participated in the training listed a variety of new strategies and activities that they were integrating into their classroom use of technology. Teachers also reported successfully using D2L and Gizmos activities</p>

	<p>for mathematics instruction and developing inquiry activities with a variety of applications.</p> <p>Key to our training this year was the fact that it was led by math specialists both at the K-6 and 7-12 level. These training initiatives were supported by Programs Technology Facilitators, however the “face” of the training was very much one of experienced classroom teachers in the area of mathematics. Our teachers reported feeling successfully supported, but most importantly, reported that the mathematics focus (unlike a technology focus), was directly related to their school’s improvement planning process.</p>
<p>Impact on System</p>	<p>Our district has built a transparent and step-by-step instructional plan for the implementation of training and provision of devices in the coming years. We have successfully scaled our cloud services product to all students and staff and will be applying its use to the areas of mathematics in the coming years.</p> <p>We have built a scaled PD model for technology integration which has allowed teachers to approach their training at a level that is appropriate to their needs. Teachers considering themselves new to technology integration take workshops at a “101” level after school earning credits towards receiving their own laptop for instructional purposes as well as accessories such as speakers, locks and laptop bag. Our technology leaders in each school (called Educational Technology Leaders – ETLs), attend a Sept. symposium which provides them with the needed knowledge to train and lead their own teachers in each year’s technology focus (this year’s CODE focus was grade 5, 8 and 9 math). This conference gathers more than 200 teachers from across the district and is teacher driven and supported by central staff. This scaffolded approach allows our teachers in the classroom to present directly to their colleagues.</p> <p>Parallel to these training activities, our “math focus group” also received face-to-face training in embedded technology initiatives and is asked to return to their schools to train like-grade and divisional colleagues. Grades 5 and 8 teachers were also provided opportunities to plan lessons together at training events in the spring.</p> <p>Our current Board Improvement Plan also reflects the current technology integration plan and directs schools to consider how technology integration will appear in their school planning process.</p>

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