

Trillium Lakelands District School Board: 2015-2016

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| Project Title | Technology Enabled Learning at Trillium Lakelands District School Board |
| Description | <p>Earn a Device</p> <p>This will be the sixth year of our Earn a Device Program. This program involves teachers taking 8, 2 hour courses outside of the school day in order to earn a device of their choice to use in their classroom. The sessions D2L, Assistive Technology, and Built-In Features of the iPad are compulsory. Over the past 6 years, the total number of sessions attended has been 6202. This program has been completed by 628 teachers.</p> <p>Coding</p> <p>A new initiative in the 2015/2016 school year is the coding project. This project is engaging predominantly junior grade teachers and students in computer block-coding/programming. The job embedded professional development sessions provide teachers with teaching strategies, and develop teacher confidence to implement coding within curricular activities.</p> <p>Digital Learning Classroom (DLC)</p> <p>The Digital Learning Classroom program has evolved over the past 10 years in our elementary schools. These classroom teachers receive job embedded professional learning to embrace technology-enabled educational practices in their classrooms. This year we have added 10 Digital Learning Classrooms across our 7 secondary schools providing enough technology to support a 1:1 device ratio in these classrooms. Our focus in this program has been on the impact of readily available technology on student learning and achievement.</p> <p>Secondary Champions</p> <p>The Secondary Champion role is filled by one teacher from each of our secondary schools, one representative from our Alternative Education and Training Centres, and one representative from our Virtual Learning Centre. Secondary Champions use communication and collaboration to support their colleagues.</p> <p>Musical Futures</p> <p>Musical Futures allows students to explore different instruments over time. Classes follow a number of cooperative learning formats that allow students to collaborate in a meaningful way. The students are using drums, bass, guitars, keyboards and vocals at this early stage to create music. When the piece is ready they perform as amazing rock bands! They are still learning traditional skills like reading musical notation while integrating 21st Century learning skills and contemporary technology.</p> <p>Dedicated Early Childhood Educator (DECE) Pedagogical Documentation</p> <p>The DECE Pedagogical Documentation project will focus on supporting our DECE's</p> |

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| | <p>in documenting the learning in our FDK classrooms. Teachers will be provided with an iPad to use within the classroom. They will also be provided with a full day of Professional Learning focusing on the pedagogical documentary.</p> <p>Job Embedded Professional Learning</p> <p>Consultants are supporting teaching staff in their classrooms by providing job-embedded professional learning through co-planning and co-teaching with classroom teachers. We hired an additional full time consultant for the last three and one half months of the 2015-16 school year. Through this decision, the team was able to provide more opportunities for teacher-to-student and teacher-to-teacher learning.</p> |
| Context | <p><i>Number of students: 6,118</i></p> <p><i>Number of teachers: 180</i></p> <p><i>Number of schools: 48</i></p> <p><i>Grades/Program: K-12</i></p> |
| Impact on Students | <p>The following highlights the impact on students through some of the identified project elements:</p> <p>Junior Coding Project</p> <p>One of the goals of this project was to increase computational thinking skills. Since a huge part of computational thinking is being able to take large complex problems and break them down to smaller ‘solvable’ problems, we asked students specifically about their problem solving skills. Before learning how to code, only 55% of the students would rate themselves at level 3 & 4 on their ability to problem solve. After learning how to code, 87% of students rated themselves as level 3 & 4 on their ability to problem solve.</p> <p>Musical Futures</p> <p>Musical Futures has had a significant impact on student engagement, learning and achievement in its pilot year. Student engagement has risen significantly. Students feel empowered and in control of the music learning trajectory and multiple supports ensure that all students feel a sense of achievement and accomplishment. At the end of a teaching sequence, all students are able to perform pieces which “sound” like something to be proud of. Students are better able to apply knowledge and understandings to new and novel situations. They are developing self-regulation, collaboration and communication skills in tandem with music skills. There has been a significant reduction in discipline concerns from all music classes and no reluctance to attend class even from traditionally hard to serve students.</p> <p>Digital Learning Classrooms</p> <p>Teacher voice is essential when evaluating our work. Here is what some teachers</p> |

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| | <p>had to say about their Digital Learning Classroom.</p> <p><i>“My students have been able to research in real time events happening around the world involving the Syrian refugees and also geography topics affecting our world today.”</i></p> <p><i>“I feel that I have been learning as much from them [students] as they have from me. Their ability to explore various Google Chrome programs in a hands-on manner has yielded amazing results.”</i></p> <p><i>“Students taking more responsibility for their learning. Totally engaged in assignments through Google classroom and some of them are even working at home on their projects.”</i></p> |
| <p>Impact on Instruction</p> | <p>Junior Coding Project</p> <p>Pre and post data was collected at all four meetings of teachers who participated in the project. With one of the goals of the project being to increase the overall understanding of coding and confidence coding, it was a key measurement. The purpose of this collection of data was to observe over time the teachers’ perceived confidence and understanding of coding. At the start of the project, 50% of all teachers participating in the project reported that “I do not understand coding/programming”. By the fourth meeting, 3.8% of teachers reported that “I do not understand coding/programming”. Other significant gains in perceived comfort were made. When ranking comfort, a large shift can be seen with respondents moving from the ‘scared’ end of the scale at the first meeting, towards “confident” by the fourth meeting.</p> <p>Musical Futures</p> <p>Teacher practice has been significantly impacted by the Musical Futures pilot. The music program has shifted dramatically from traditional band instruments to technology-enabled instruments. While there is still a place for traditional instruments in universal design and balanced music programs, technology-enabled instruments and resources such as tablets, iPods and laptops have completely stretched the boundaries of teacher practice.</p> |
| <p>Impact on System</p> | <p>Junior Coding</p> <p>Research tells us that despite low employment rates in various fields, there is an increasing number of jobs in the field of technology. We are committed to helping our students achieve success. We feel that teaching students how to code and improve their computational thinking skills in one way of achieving this.</p> <p>Computational thinking can be summarized as the process of decomposing complex problems into smaller manageable problems. By teaching students to code, we are indirectly teaching them computational thinking. Our teachers had no problem making the curriculum connections. Our teachers were also making connections to the learning skills which are so essential for our students.</p> |

Digital Learning Classrooms

The scope of this initiative has been extended into each of our secondary schools. In our secondary sites we have increased technology to a 1:1 student to device ratio within the various DLC classrooms. Teachers chose their technology and ratio from Chromebooks and iPads or a combination of the two. This choice allowed teachers to address student needs by customizing their technology needs. This was accomplished by assessing the intended needs and outcomes based on the specific strengths of each device (for example touchscreen or keyboard).