James Bay Lowlands Secondary School Board: 2014 - 2015

Project Title	**Going Deeper: Striving Towards Dynamic Technology Enabled Learning Experiences**
Description	Here in this small, rural northern community, we'd like to push our teaching and learning strategies further into the 21st Century. We wish to embrace new pedagogies that involve deep learning activities, enabled and accelerated by exciting new technologies, so that our students can increase their learning, and be ready life in the 21st Century. Our flexible research question is this: What possibilities will open up if we remove the current barriers to technology enabled learning in our school? These barriers include, but are not necessarily limited to, internet infrastructure limitations, availability of mobile teaching devices, and teacher professional learning in new pedagogies. Our research team will examine the current state of deep learning activities in classrooms. Using surveys and discussions with classroom teachers, we will determine what the specific needs and barriers are, and how our teachers can be best supported in moving towards technology enabled deep learning activities. We learned from our last round of research that the students' engagement was increased when using the online cloud services and the Chromebook mobile devices, but we encountered some significant infrastructure challenges which we plan to upgrade. We will scale up the usage of the devices in the school to include more classes and additional devices.
Context	*Number of students*: 32 *Number of teachers*: 2 *Number of schools*: 1 *Grades/Program*: Grade 11/12 English classrooms
Impact on Students	Teachers found that the use of the Macbooks purchased through TLF funding opened up greater opportunities for project-based learning. As students created small videos together, they worked together to meet the learning goals in a way that would have otherwise been more challenging. Students were given in a choice of research topics (though one class all shared the same topic) and followed their own inquiry questions to dig deeper into the topic. In contrast to a group live presentation where each member can independently be responsible for their part of the presentation, the creation of a short video requires a much higher level of collaboration, communication and teamwork by all team members. The student to student relationship involved far more learning from each other as co-learners. They learned from each other's ideas about content they were presenting, but also about effective methods of communicating, and about the best usage of the tool and editing system. The teachers found that, for most students, there was a deeper level of buy-in and engagement from traditional learning tasks. In one task, students created short educational videos about Residential Schools in Canada. Since the project involved making a video, it opened up possibilities for exploration and depth that

	would be difficult by other means. Students were able to interview senior citizens and have more intimate conversations about the issue than would be possible in a presentation or essay. Students reported feeling more emotionally involved in the project than they expected. One teacher remarked that some students became very interested in the topic intrinsically and no longer were just working for the marks. Students reported enjoying the process of demonstrating their learning through video technology. They felt the more interactive, creative elements in the project helped them become more immersed in the activity when compared to paper tasks. 92% of students reported preferring doing such projects on the laptops rather than creating paper or presentation assignments. The technology accommodated real-time collaboration and teamwork in ways that paper assessments could never. Students were able to work simultaneously on planning the document, took different roles in the filming, and worked together through the editing process. One teacher noticed a change in the power-structures in learning, that the practice of sharing learning through the development of a video "changed who holds the keys." Since this evidence mainly comes from interviews with the two teachers involved, there isn't additional data to attach to demonstrate the effectiveness of the technology. We had prepared a pre and post survey about the internet infrastructure to gauge how such improvements would change student learning and teacher practice, however, these improvements were not finished at the time of the writing of this document, and unfortunately had little impact on learning.
Impact on Instruction	Teachers reported an easier shift to project-based learning with the technology. Since students were empowered to explore their question, … and had enough motivation to self-initiate, teachers found that a lot less instruction depended on them. They were able to become active change-agents from the middle, without guiding precisely where the learning was going. All teachers also reported learning from the students throughout the project. They learned about the tool, the content of the videos, concepts and principles of editing and also received feedback about how to improve the learning activity going forward. Teachers reported a doubling (100%) increase in confidence with using the technology in their classrooms and 100% of the teachers involved will continue to use the technology in their classrooms going forward.
Impact on System	We anticipate that the network improvements will have a significant impact on the scale of the usage of technology in classrooms. The use of the Macbooks will continue and will be scaled up to other classrooms and teachers going forward. We will explore the purchase of additional devices to support the scaling up of this type of activity in classrooms.

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