

Greater Essex County District School Board: 2015 - 2016

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| Project Title | System-Wide Implementation of Technology-Enabled Pedagogy to Support Higher Order Thinking and 21st Century Competencies through Building Capacity of Formal and Informal Leaders and Connecting Board Improvements Priorities |
| Description | <p>We are focused on different approaches to supporting change through our formal and informal leaders including:</p> <p>Edsby: We are implementing the “Edsby” tool focused on our secondary panel. The first phase is to use it for electronic attendance a task that every teacher must complete and in turn will become comfortable with the navigation aspects. Teachers will then move towards using the assessments tools and online classroom/LMS features. We are working with every secondary department head assessment practices linked to this tool, and tracking changes in practice. Whereas in other years our focus has been on inspiring change through changes in pedagogy, this focus on assessment allows us to move through this process in reverse, where teachers are realizing the benefits of change through assessment practices and the student experience.</p> <p>System-Wide Professional Learning Support: We have replicated our “Digital Learning Team” model from last year and applied it to our math focus. Every elementary teacher will receive professional learning to support the GECD SB Math Vision (https://publicboard.ca/Staff/Teachers/Pages/GECD SB-Math-Vision.aspx) and to consider the role of technology in supporting math learning. The PD focuses on changes in pedagogy for deeper learning, connecting to real-world tasks and learning through problem solving. A team of OT’s will be delivering exciting math lessons and engaging the students in collaborative math learning while their teachers are in their sessions.</p> <p>Partnership Priorities:</p> <ol style="list-style-type: none"> 1. Our 5th “EdCamp” event involves a partnership among GECD SB, WECD SB, and LKDSB. This year linked to math learning with a technology focus. Marian Small is presenting a keynote address and breakout sessions. Relationships between educators from across boards are strengthened. It is a key to our knowledge mobilization efforts, and inspires our teachers to try new ideas in the classroom. 2. An established partnership with the University of Windsor to support teachers in collaborative inquiry projects. We have expanded the learning in this group to include teacher candidates, our occasional teachers, and our contract staff. During this work, teachers explore new pedagogies, changes in practice, and ideas such as the global competencies, social justice, and project-based approaches to learning. 3. A new partnership with the Royal Conservatory in an advisory and pilot capacity. They are interested in expanding their definition of, and supports for, |

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| | <p>arts in the curriculum to include media arts and media literacy. We will work with teams of teachers across several schools to contribute to the development of provincial and national supports for teachers and students.</p> <p>Coaching and Research: (This work has been impacted by the labour situation.) Relying on the expertise of a coach we are exploring the following inquiry questions:</p> <ol style="list-style-type: none"> 1. Where and how can we use technology to enhance mathematical literacy, specifically procedural knowledge, conceptual understanding, adaptive reasoning, strategic competence, and a positive disposition towards math learning? 2. How do we use technology to enhance the mathematical learning environment through the use of video creation and multimedia representations of mathematical thinking? 3. How does the use of technology support increased math discourse and further opportunities for metacognition? 4. How does the use of technology within a “Three-Act Math” structure contribute towards becoming mathematically literate? 5. What is the role of technology in supporting students creating their own mathematical models and representations and what impact does this have on their learning? 6. How is the instructional core in a mathematics class impacted by the implications of a SAMR approach to technology integration? 7. How does technology enhance mathematical learning for students with a traditional gap in achievement such as our English Language Learners, Mennonite and FNMI populations, and students with a learning disability? <p>Investment in Leadership:</p> <p>All Principals will the Connect Conference April 2016. This will be one component of a larger capacity building effort that will also include sessions with lead teachers in each school and the implementation of program reviews for technology and school walk-through/observation templates and protocols. All of the work we do will be linked to School Improvement Plans for Student Achievement and Well-Being, and will be based on the ideas that we are moving innovations to scale.</p> |
| Context | <p><i>Number of students:</i> 35,141</p> <p><i>Number of teachers:</i> 1,807</p> <p><i>Number of schools:</i> 72</p> <p><i>Grades/Program:</i> K-12, Mathematics and Assessment Practices</p> |
| Impact on Students | <p>There are a large number of factors which influence improvements in student achievement. ... to say the TLF alone has resulted in measurable, sustainable,</p> |

systemic improvements in student achievement might be a stretch. It has certainly contributed significantly, but in isolation there is a limit to the impact. [W]e do know that the TLF has contributed to refining the focus on the use of technology in our schools, to building the capacity of formal and informal leaders, to supporting evolutions in pedagogy, and to creating conditions for innovation to occur. Our classrooms look like they belong in the 21st Century because of this work.

We have some student achievement data to support these assertions ... using our most recent EQAO data (June 2014) as a starting point. We believe increases in student achievement occur when there is:

- Capacity built with the formal and informal leadership in the school
- Sufficient resources (including technology, infrastructure, and professional learning) are provided to support change
- A specific focus through the work of school improvement to address student learning needs
- A collaborative learning culture among staff
- A willingness and ability to evolve teaching and learning conditions, and a deepening of pedagogical understanding

For the time of the 2014 EQAO testing, these conditions were met in six of our schools. We anticipate eagerly the 2016 EQAO data, as we believe all of these conditions are now fully evident in 28 of our Elementary schools. We also believe that some of the conditions are evident in our remaining schools.

We have spent this year trying to focus on changing assessment practices to reach more consistent and valid measures of student learning. Because valid benchmarks don't exist due to the changing expectations of the teacher, quantitative measures that support this work are hard to ascertain. What we do know, through surveys, observations, and teacher reports, is that the following things are making a difference:

- Use of mobile technology (iPads) to support students with creative process and multimedia, specifically in early years and primary.
- Use of iPads screen-recording tools such as Explain Everything to encourage student conversations and reflections, and apply the creative process to their work.
- Use and adoption of specific board supported platforms to create consistent practices for communication and collaboration and to support students in their personal organization.
- Use of games to support students in developing problem solving habits of mind.

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| | <ul style="list-style-type: none"> • Use of some digital manipulatives to support math learning. • Use of blogging platforms, including micro-blogging and social media, or places for students to publically share their work with the class and beyond. This is impactful K-12. • Use of YouTube to share video creations, including with family and the community. • Access to information and the ability to make connections locally and globally, through communication tools. • In our secondary schools, use of a “Flipped Classroom” approach using technology. • Use of interactive technology in Early Years and primary to support small group instruction and students working in independent centres. <p>We have also determined that significant numbers of students in both the elementary and secondary panel have been using the tools regularly. Across the system, 75% of grade 7 and 8 students are regular users of their accounts, with over 80% in grade 9 and 10 also using regularly to enhance their learning. The usage data also showed the students and classes as young as grade 2 are using the tools to enhance their learning.</p> |
| <p>Impact on Instruction</p> | <p>An important note is that two factors have contributed to less change in teacher practice this year than previous rounds of TLF funding. Firstly, the union sanctions and subsequent impact on professional learning significantly delayed our work this year. The second is that we were looking less at changing practice and more at spreading the changes from the previous four years of this work. This has meant more indications of changes or challenges to student learning, and less changes to teacher practice as the focus has been on fully implementing previous or emerging practices. Many schools who had previously had a focus on technology as part of the SIPSA now feel that technology-enhanced pedagogy is understood and implemented. The use of Board purchased tools and overall bandwidth has become a better indicator of technology-linked instructional change.</p> <p>Using tracking statistics from our system, we have been able to ascertain both student and teacher use of our current Office 365 tools. We have found that 100% of teachers have used the tool for email in the last 30 days, while a significant number have used tools within the cloud suite, indicative of, or a precursor to, changing practices in the classroom.</p> <p>A significant number of teachers engaged in the EdCamp learning with a view to changing practice. As well, the Connect conference gave our principals considerable new thinking and ideas, which we expect to see reflected in the next SIPSA cycle. We are through the learning about technology phase of this spread of</p> |

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| | <p>implementation and are now looking at the application to change learning.</p> <p>We needed a concerted, organized approach to reach every teacher in the system and build a foundation level of knowledge and understanding of new digital tools and their impact on teaching and learning. With this as the background, our “Digital Learning Team” was created. This team consisted of: 1 Vice-Principal Lead Facilitator, 1 Teacher Leader Facilitator, 16 Elementary Occasional Teachers, 10 Secondary Occasional Teachers. The aim of this project was to spend a half day providing professional learning for every teacher in our system from Kindergarten to Grade 12, focused on the digital learning tools available through our board. For the half day that the teachers are engaged in their professional learning, they are covered by a member of the occasional teacher team, who collaboratively planned a half day of learning for students in every grade to explore digital citizenship and responsibility, as well as implement the themes of the boards new “Digital Responsibility” policy.</p> <p>We have invested in the Edsby Learning Engagement System. Our implementation began in January 2016 with a focus on our secondary panel. Initially the board has mandated the use of Edsby just as a tool for taking electronic attendance, but has allowed teachers to explore and use any features they wish beyond this, leading to an unprecedented level of innovation and self-directed educator learning. There is significant evidence of the changing nature of teacher-student communication and collaboration, teacher-teacher communication and collaboration, and student-student communication and collaboration.</p> <p>Technology enhances the math environment when the teacher has sufficient math content knowledge, sufficient pedagogical understandings, and sufficient pedagogical understandings related specifically to the domain of mathematics. These conditions were not frequently evident. We supported a math learning model that involved two administrators leading a half day learning for every elementary teacher in their own school, to begin to articulate our board vision for math learning... the use of digital cameras and recording devices, and the availability of screen capture tools such as Explain Everything, have been a major contributor to new pedagogies in the math classroom. The use of digital cameras and recording devices, and the availability of screen capture tools such as Explain Everything, have been a major contributor to new pedagogies in the math classroom.</p> |
| <p>Impact on System</p> | <p>Our intent through the course of the TLF projects has been to create the conditions where every classroom can be innovative, as we have the tools and infrastructure in place, the support and guidance of knowledgeable formal and informal leaders, and the freedom to explore based on the needs and interests of</p> |

students. We have tried to understand and provoke innovations, and then bring them to scale through increasing the capacity of formal and informal leaders to influence and change pedagogy in all of our schools.

We have committed to, and will continue to, align the work to the BIPSA and priorities of the board. The work of the CODE/TLF has led to a review of our current board governance structures for Information Technology. In order to leverage the learning from the work, a broader stakeholder base is needed in system decision making, and a more refined focus on the use of technology to support teaching and learning will be developed.

We have had a prolonged, sustained focus on building the capacity of formal and informal leaders to support the evolution of technology-enabled teaching and learning in their schools. This has included ongoing school-based supports, central offices support, and opportunities to attend conferences and learning sessions such as the Connect 2016 conference.

We have had several different learning models for educators in our system. The model that we used for Digital Learning during 2014-2015, where a team of occasional teachers works with a facilitator to provide learning for educators and students has been adopted this year as a structure to support math learning, once again allowing us the chance, through collaboration and intentional alignment, to provide consistent messaging and learning opportunities to every teacher in the system.