

Conseil scolaire de district catholique Centre-Sud: 2015 - 2016

Project Title	Technopedagogical Shift at CSDCCS
Description	<p>The primary goal of this project can be summed up in the theory of action that the Board developed for it:</p> <p><i>If we integrate inquiry-based learning into our instruction, supported by the integration of technology, our students will develop a 21st skill or skills that will enhance their learning and achievement.</i></p> <p>Eight schools in the Board are taking part in this project in 2015-2016. In order to increase opportunities for networking and sharing, the schools are paired up based on location and technopedagogical characteristics. The teachers have opportunities to share resources and products they create (e.g., a prototype for a digital portfolio) and to co-analyze a technology-pedagogy activity using the technology integration matrix (TIM) and the surveys found in the document entitled <i>Pédagogie numérique en action</i> [Digital Pedagogy in Action], in connection with the 21st skills that the school is targeting.</p> <p>The technology tools recommended by the Board (Virtual Learning Environment, Google Apps for Education, Chromebook) enable the students to collaborate on a single inquiry; communicate their findings efficiently; and learn from their peers. In addition, students have an opportunity to develop their critical thinking skills when they analyze the inquiry questions that are asked and the information in support of their inquiries and when they target evidence of learning that demonstrates their progress in the inquiry process.</p> <p>School principals participating in the project also receive support on an as-needed basis from the pedagogical leader from the TacTIC Team, Southern Region, to target specific objectives using the principals' technology integration matrix and the foundational document, <i>Pédagogie numérique en action</i> in connection with the technology-pedagogy transformation in their school. With the support of the regional Board leaders and the pedagogy coaches, the Board's digital age work cell supports the pedagogy coaches when they want to integrate technology tools that support pedagogy in the schools where they are providing coaching. The digital age work cell advocates the use of social media and technology tools to share project activities with the entire system, in order to encourage Board staff to network and create sustainable inter-school partnerships (Twitter account #edu4lite, G+ community, and VLE course).</p>
Context	<p><i>Number of students: 420</i></p> <p><i>Number of teachers: 17</i></p> <p><i>Number of schools: 8</i></p> <p><i>Grades/Program: K-8</i></p>
Impact on Learning	<p>After analyzing all of the data in connection with the project, the team saw a distinct improvement in participation in students who were using technology in the classroom. Several teachers noted that the work that students did using technology tools in the</p>

	<p>classroom was superior to their pre-technology work, due to the fact that the suite of Google apps enables the teacher to provide feedback on a more timely basis. This enables students to improve their work and better identify the next steps.</p> <p><u>Impact on student participation and learning:</u></p> <ul style="list-style-type: none"> • When a teacher gives feedback in a Google document using the <i>Comment</i> tool, the students are much more motivated because they know that their work will be read. The inquiry has an impact on their critical thinking, which in turn enriches their work. Students who are struggling no longer hesitate to use their technology tools because these tools are becoming the norm in the classroom. • Students are now scheduling mini-meetings so that they can work together online. • Often, boys don't like writing but, with technology, they spend hours on their text. They add colour. They are much more motivated to write. • We have noticed an impact on student motivation to complete activities into which technology tools have been integrated. Our parents have noticed that students with needs are much more motivated and likely to produce high-quality work. • Students do even better work when they know that it will be published using technology, like on Twitter or in a Google presentation. We can use technology to publish for an entire classroom or an entire school. With technology, students can organize their work in Google Drive and parents can access shared documents. <p><u>Impact on student learning and engagement:</u></p> <ul style="list-style-type: none"> • The Google tools allow the students to be creative. They allow teachers to support students remotely. Teachers' management styles are changing; there is a lot less paper because the students create folders and sub-folders in Google Drive. They can show their work to their parents and it's like having a student portfolio. With the Virtual Learning Environment (VLE), teachers can communicate with their students using the <i>News</i> tool and they can do flipped classes before introducing a new subject in the classroom. • Technology enables students to give each other better feedback more often; students are more accountable for their learning. • The technology tools help the students to make better choices from a range of formats for presenting their inquiry, based on their needs. The technology integration matrix is also useful when they need to ask themselves questions about the use of a specific technology tool. • The <i>Comments</i> tool in the Google document enables students to produce higher quality work because the teacher can provide feedback more frequently, from anywhere and at any time.
<p>Impact on Instruction</p>	<p><u>Impact on teachers' teaching and learning practices:</u></p> <p>We observed a high rate of responses demonstrating that technology tools have a</p>

significant impact on teachers' teaching and learning practices because they allow for more effective and timely sharing between colleagues and between teacher and student. Technology tools enable teachers to guide students more effectively, using evidence of learning that is more readily accessible via technology.

Here are a few findings:

- 43% of teachers/principals involved in the project reported that technology enabled them to share more fully with their colleagues in order to more fully understand how the technology tools (VLE, Google apps, Chromebook, Padlet) can support pedagogy, specifically, the inquiry process.
- 100% of teachers who took part in the workshop on the development of critical thinking skills, focusing on the use of technology tools to measure student progress on these skills, are going to try to change their teaching practices with respect to the inquiry process in order to enable their students to ask questions that will help them in this process and enable them to perform more in-depth analyses during their research, in order to find answers to the inquiry questions that they are asking themselves.
- 62% of teachers appreciated co-planning and co-teaching in the classroom as a means of observing and more fully understanding how technology tools can support pedagogy for the inquiry process in Social Studies and also as a means of understanding how to manage a classroom more effectively when students are using technology tools in the process of learning.

We noted that many teachers were using the space in their classroom differently after tools to support their pedagogy were integrated. There was a huge impact on the teachers' assessment practices and the creation of partnerships as a result of using technology tools in their daily practice. Lastly, the 21st skills that developed the most during the project were communication and creativity/innovation.

Teachers' teaching and learning practices:

- 80% of teachers who answered the survey reported that, following the integration of technology into their teaching, they were using the classroom space differently (classroom reconfigured to support collaboration; students given the opportunity to work anywhere in the classroom where they felt comfortable; the creation of technology stations with portable computers and Chromebooks).
- 80% of teachers reported using technology tools to support their students in the development of the spatial skills targeted at their grade level (e.g., the use of Google My Maps and Google Earth to create and analyze the paths taken by explorers and to make connections more easily).

Assessment practices:

- 100% of teachers reported that technology tools supported formative and summative assessment and had an impact on the assessment practices they had been using

	<p>before the project began.</p> <ul style="list-style-type: none"> • 70% of teachers indicated that technology tools enabled them to provide feedback more frequently, in real time, either orally or in writing, and that this had a great impact on student motivation and the quality of student work. • 80% of teachers reported that technology tools enabled them (and their students) to gather evidence of learning, using triangulation. <p><u>Creation of partnerships (student-student, student-teacher, teacher-teacher):</u></p> <p>100% agreed that technology tools allowed for better collaboration:</p> <ul style="list-style-type: none"> • Between students: students shared documents more frequently to obtain feedback from their classmates; they collaborated more frequently using Google Hangouts or Google Chat to complete group assignments). • Between students and teachers: particularly in terms of more frequent feedback, the fact that students ask more questions to guide them in their learning, the fact that students share their knowledge more often; the teacher can track the student’s line of reasoning and progress more frequently. • Between teachers: sharing ideas, lesson plans and event plans, resources and student progress, particularly with other teachers teaching the same group. This is much easier now with Google tools. <p><u>Development of 21st Century skills:</u></p> <ul style="list-style-type: none"> • 80% of teachers reported that students were able to more fully develop their creativity/innovation skills. • 70% of teachers reported that students were able to more fully develop their communication skills. • 60% of teachers reported that students were able to more fully develop their collaboration and critical thinking skills.
<p>Impact on System</p>	<p><u>Impact on development of the system, directives, and activities:</u></p> <p>Several actions were completed in order to ensure that support was provided on an as-needed basis. The Board team focused on training and coaching the system leaders in technology-pedagogy so that they could integrate their new learning into their coaching and share technology that had the potential to support pedagogy.</p> <p>The principals of all of the schools in the system took part in a Google summit that had been personalized for their role. The teacher-coaches received 2 training sessions (elementary level) and 1 training session (secondary level); this was followed by ad hoc support as needed. The pedagogy coaches (Programming Services and Student Services) received 3 training sessions with ad hoc support as needed (e.g., co-planning, the integration of technology tools in support of pedagogy when providing numeracy coaching in a school, support to create video clips for schools on a variety of topics for a pedagogy day).</p>

	<p>We noted that, in providing support to these system leaders, technology-pedagogy practices also spread to schools that had not been able to participate in the project this year. The Board team hosted monthly webinars on the use of VLE tools for all Board staff. Anyone who was interested could take part, become a learner, and hone their digital skills. All of the webinars were recorded so that staff who had seen them could watch them again and staff who had not been able to participate in real time could watch them as well.</p>
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