Conseil scolaire catholique Providence: 2015 - 2016

Project Title	Pedagogical Transformation for In-Depth Learning
Description	The technology integration project focusses on pedagogical transformation for in-depth learning. In order to facilitate this transformation, the Board created a conducive environment, with system-wide support, clear statements, ongoing IT support for staff, and the development of professional resources and system-wide tools for implementation and monitoring. Equipped with a team of "technology-pedagogy coaches", the Board is pursuing its entry into the digital age by embarking on a sustainable, permanent transformation of its pedagogical practices using programming and robotics. This project enables the Board to differentiate instruction and learning in core content subjects such as Mathematics, French, Social Studies, etc. What's different about this project for the 12 schools is the fact that there is technology-pedagogy support (coaching) that is targeted, ongoing, and adapted to the clientele at each school. Although the coaching project is a means of bringing the programming to life in pedagogical teaching activities, it is just one mechanism for transforming pedagogical practices. The first step is a planning session, with the school principal and the coach, in which the school's priorities and needs are identified. Members of the staff who are invited to join the coaching projects are also identified. Based on the intentions of the coaching project in the teacher's classroom, the coach and the teacher work together to plan, co-model the transformed instruction, co-teach, and co-objectify the learning activities. Coaching may include PLC work in the schools. Once again, this depends on the schools' initiatives and priorities. Put as simply as possible, the task of the technology-pedagogy coach is to "enhance the use of technology in the school's pedagogical activities" and, based on the project's preliminary results, the Board's approach is working. The coaches support the teachers in the targeted schools with the integration of programming and robotics in the various disciplines. Integration is based on challenges and problems. For example, in the elementary schools, students are asked to draw geometric shapes in their Mathematics course using Scratch and even using a robot. This brings an entirely new level of thinking and depth, because students are required to think about the characteristics of the shapes and to use "code" in order to reproduce them. Students are often required to work in pairs or small teams and often find the solution through iteration and exploration.

Context	*Number of students:* 1,759 *Number of teachers:* 56 *Number of schools:* 12 *Grades/Program:* K-12
Impact on Learning	The Board is pursuing its entry into the digital age through a sustainable, permanent transformation of its pedagogical practices, using programming and robotics. The coaches support the teachers in the targeted schools with the integration of programming and robotics in the various disciplines. Integration is based on challenges and problems and has the support of the Board's "Technological Continuum" and a few other pedagogical models / frameworks. The Board's Continuum tool guides the planning of pedagogical activities that will be supported by technology in order to include the development of skills for the digital age. 93% of respondents to a teacher survey reported a big to very big increase in student engagement. Students are more engaged in activities that incorporate technology. They ask more questions; participate more actively; and are more curious. They are more efficient and work more independently to complete tasks and deliver assignments with the help of blended learning tools. They correct their work using the integrated tools (checker). They go back to assignments they have delivered and read the feedback. According to the survey, 96% of respondents reported a big improvement in student motivation. They noted that their students were more self-critical, which further develops their judgment and, therefore, their self-regulation (habits and skills) in delivering assignments. In this same context, respondents observed this phenomenon when the students used their personal devices to document themselves and document a project, which encouraged them to reflect and led to further refinements of their work. This happened both individually and with peers.
Impact on Instruction	Collaborative work seems to come naturally to the students and, after a brief explanation of an activity, they get right down to work. It was quickly clear to teachers that classroom management was much easier because of the major increase in student engagement and student collaboration. Several teachers reported that integrating technology made it easier for them to reach students who were shy or uncomfortable with oral presentations or with situations involving failure. Technology made it easier for students to organize their work and find resources; it gave them a "voice" during collaborative activities; and it enabled them to demonstrate what they had learned in a variety of ways.

	Similarly, monitoring students as they work and monitoring their progress is easier and faster, and teachers even reported that some aspects of FSL are easier to implement (descriptive feedback, differentiation, etc.). They reported that their assessments were more accurate and fair, with pedagogical documentation. The use of video and photographs emerged as a very powerful and important element in teacher-student exchanges. In these situations, students were better able to express what they had learned and to see what the next steps were. The teachers also noted that activities with technology brought a depth to learning that didn't necessarily exist in traditional lessons. The teachers saw a greater difference between "knowledge" and "know-how" in pedagogical interventions that were supported by technology. In addition, the development of skills for the digital age became more intentional.
Impact on System	Thanks to the CODE funding, the Board was able to make great strides in its digital transformation. In light of the success it had experienced and the increased interest in technology-pedagogy initiatives, the Board wanted to build on elements of this success and formalize its intentions around instruction in the digital age, with the implementation of a sector dedicated to technology-pedagogy. This made it possible for the Board to maintain and even increase the speed at which it entered the digital age. With preparations to launch the new strategic plan, it is now understood that technology permeates the new orientations. Certain impacts of the CODE initiatives are very clear at the Board. This trend can even be seen in the framework documents coming out of the strategic plan, such as the Board improvement plan (BIP), the school improvement plans (SIPs), the service plans, and so forth. This year, the Board developed and launched a "technology road map" (TRM) to guide the planning and implementation of its technology initiatives and its technology-pedagogy initiatives. The TRM facilitates and ensures alignment of activities in the framework documents; coordinates and maximizes the resources that are available; and creates a climate conducive to progress that is healthy, manageable, and do-able. To conclude and talk specifically about the 2015-2016 initiative and its impact on the system, we need to talk about the pedagogical transformation and in-depth learning. The 2015-2016 initiative to provide technology-pedagogy coaching is grounded in IT programming and has a natural link to robotics. It is an excellent way to integrate the development of skills for the digital age, in particular critical thinking, communication and collaboration in a "traditional" pedagogical context. This gives us an opportunity to: • Align and integrate the various pedagogical models; • Support the implementation of FSL (e.g., differentiation, assessment,

	descriptive feedback, etc.); • Co-plan, co-teach, and co-objectify in a context of coaching; • Model innovative pedagogy, which is based on the research and on winning strategies; • Present related skills and technology tools for pedagogical transformation; • Create sustainable, lasting transformations in our pedagogical practices. For 2016-2017, we see an evolution in our IT labs and further work on the transformation of our pedagogical practices, in addition to a review of the facilities we need to support learning in the digital age. This will require an analysis and adaptation of our IT labs and classrooms to transform them into "exploration and innovation hubs" and "modern and innovative learning spaces".