

INNOVATION THAT **STICKS**
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CASE STUDY REPORT

Ottawa Catholic School Board

Leading and learning for innovation

A Framework for District-Wide Change
May 2016





**The CEA 'Innovation that Sticks' Case Study Report
Ottawa Catholic School Board
A Framework for District-Wide Change**

May 2016

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This initiative is generously funded by State Farm Canada, which shares CEA's commitment to supporting leaders who are transforming Canada's education system.

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Ottawa Catholic School Board
Un cadre de changement à l'échelle de la commission scolaire**

Mai 2016



Founded in 1891, the Canadian Education Association (CEA) is a network of passionate educators advancing ideas for greater student and teacher engagement in public education. CEA does this by conducting research and spreading useful ideas through its publications, website, workshops, symposia, blog, videos, and social media channels, and supporting education systems to be more adaptive to the rapidly changing needs of all learners in an effort to reverse the trend of students 'tuning out' of their learning opportunities.

FOREWORD

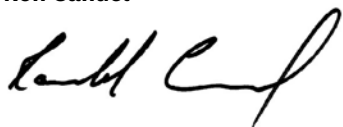
The Canadian Education Association (CEA) and State Farm Canada share a commitment to supporting leaders who are transforming Canada's education system and joined forces in 2015 to implement a case study program that articulates how a Canadian public School District has successfully implementing system-wide change.

The CEA knows that there are School Districts across Canada accomplishing this transformative work, yet few outside of those Districts know what is taking place. It's an enormous challenge for District leaders to transform their schools while managing so many of the day-to-day responsibilities of a deeply entrenched system. This is why CEA wanted to learn about and promote how the Ottawa Catholic School Board (OCSB) was so successful in scaling innovation throughout their schools to meet the needs of all 21st century learners.

The OCSB was selected out of 35 School Districts from across Canada to participate in the CEA's 'Innovation that Sticks' Case Study Program. The CEA is extremely pleased to share this case study research report, which details how the OCSB went from teaching with an overhead projector to creating a digital learning ecosystem within five years (2010-2015), which is a remarkable accomplishment.

We are very grateful to OCSB staff and volunteers for being so gracious with sharing their time and expertise, which underpins this report, and we hope that their accomplishments will inspire your own change strategies and help get your innovations to stick.

Ron Canuel



CEA President and CEO



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A CEA Selection Jury chose the Ottawa Catholic School Board (OCSB) out of 35 School District applicants from across Canada to participate in the 2015 ‘Innovation that Sticks’ Case Study Program. From September to December 2015 – through an Appreciative Inquiry interview process – the CEA researched how the OCSB has transformed its classrooms into 21st century environments that meet the needs of *all* learners.

The OCSB currently serves approximately 40,000 students in 83 schools across the City of Ottawa; a staff of more than 2,400 teachers and administrators, and 1,500 support staff, guide quality Catholic education.

With the conversion of libraries to Learning Commons, increasing broadband, universal Wi-Fi availability and equitable Bring-Your-Own-Device (BYOD) policies, the OCSB has created a digital learning ecosystem focusing on collaboration, creativity and critical thinking among all of its 83 schools.

The CEA Selection Jury of Canadian innovation leaders was most impressed with how the OCSB leads with a focus on learning and teacher support first, followed by the technology. This School Board has been implementing their innovative strategy over a number of years, incorporated all partners – including teacher unions and support staff – and built a budget in support of this collective vision, with ongoing parent and student voice that continue to inform these changes.

 The OCSB’s comprehensive ***Blueprint for Change — Towards 2020, Connecting with our Students*** provides a laptop to every teacher and principal. This 1:1 technology investment is complemented by a major professional learning focus that represents an important cultural shift across the Board to enable teachers to shift their practice to differentiated instruction, which has resulted in increased student achievement. Restrictive policies were removed to allow teachers to model digital citizenship by actively participating in social media. Every student in the Board receives yearly instruction on digital citizenship, integrated into the curriculum.

The OCSB’s leadership is very proud of how their staff has embraced technology to support student learning. They use social media and a variety of apps to share effective practice professionally and are connecting learning to students’ real lives, ensuring relevance to their interests and needs.

The OCSB received a \$10,000 contribution courtesy of initiative sponsors State Farm Canada to grow its promising programs and practice. Board representatives shared “lessons learned” with CEA researchers about the conditions and processes that led to the beginning of this expandable innovation throughout their classrooms and schools.

This case study report provides concrete guidance and information resources to support other School District leaders faced with the challenge of determining how they can get their own ‘innovations to stick’ and achieve their goals.

For more details about this program, please visit: cea-ace.ca/innovationthatsticks



EXECUTIVE SUMMARY

What were the conditions that enabled and encouraged innovation to take place within a system as large and complex as the Ottawa Catholic School Board?




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Recognizing Opportunity

Many factors converged to make this Board-wide transformation possible. Firstly, there was a change in leadership within departments – a new team was coming into place and discussions were held about the Board’s future direction. Secondly, many new technological devices were emerging in the marketplace, which raised several questions: Where and how does all this new technology fit in with learning? What are the tools to be privileged and can these tools help us give students 21st century skills?

Careful Planning

In 2010, the new Director of Education was reflecting with his senior team on the role of technology in student achievement. They were considering an interdepartmental approach to break the silos in the Board and have the whole OCSB family work towards student success and achievement. These discussions resulted in the development  of a plan they called ***Blueprint for Change — Towards 2020, Connecting with our Student.***

Establishing Buy-in and Financial Commitment for Change

The OCSB adopted a multi-tiered approach and gave people opportunities to decide where they fit in. They created collaborative spaces, professional development (PD) opportunities and support communities for every employee. They saved \$2 million dollars by moving funds – discontinuing certain projects like their robotics program and closing the central lending library, to name but a few. Resistance from the community to these changes was softened by the understanding that the funds were being prioritized and aligned to a more coherent vision of learning and teaching in a digital age. Open communication of their vision was instrumental in mitigating resistance from stakeholders.

Funds were pooled. They encouraged early adopters to become leaders in their schools and at the Board level to generate passion and lead their colleagues on the road to the future. They also realized very early on that one PD model does not fit everyone and the traditional lecture format PD model was ineffective – they needed to get teachers actively involved in their own learning. To keep stakeholders abreast of their progress, they brought students to Board meetings for demonstrations and to reward the innovators. The trustees saw the excitement in the students' eyes and asked how they could support and accelerate this process. The same can be said of parents who supported these initiatives whole-heartedly. The OCSB was on their way to creating a digital learning ecosystem. They felt they needed to improve communications to the community. Therefore, after a year, and training to principals, they hired a social media expert to get the message out even more effectively into the community.

Of course, it wasn't smooth sailing all the way. Not all 4,000 staff members were on board; there were resisters and the union was receiving phone calls about the changes taking place. Whenever there were obstacles, however, the OCSB would address the challenge head-on by differentiating their approach, providing additional time and support, and developing a Q&A documents, etc. Their stance was: "how can we help one another?" Adamant in their profound respect for all individuals learning at a different pace, they differentiated their PD offerings to accommodate all adult learners.

Encouraging Students to Lead the Change

Students were encouraged to do their part and prepare tutorials on how to use various technological devices. Those that had the expertise were put into leadership roles. No one was forced or pushed into these changes, but gently pulled forward. They created a culture where leaders with innovative ideas were told, "yes and how can we help you to make it happen?" They created new working spaces called the Learning Commons, previously known as libraries, which became dynamic learning areas for users to gather and access many resources and devices to work on their projects.



Leveraging Evidence and Partnerships

The OCSB culture of change was inspired by two publications from Michael Fullan about educational change (*Change Theory*¹ and *The Six Secrets of Change*²). IBM also worked with the School Board in focus groups to look at the barriers to the use of technology and how to get out of a state of apathy towards generating enthusiasm.

Courageous Leadership

There was strong and passionate leadership and a clear and shared vision. This School Board already had strong relationships and a strong sense of family. They also prided themselves in a continuous goal of improvement and innovation. They were all linked by their faith and took time to celebrate their successes together. All staff is invited to celebrate during Christian Community Day, a PD day where directional vision is shared with the entire staff.

Cultivating a Collaborative District-Wide Learning Culture

The OCSB had always been welcoming and had an open door policy. But above all, there is a strong sense of respect for the individual learning style and rhythm.

The OCSB was becoming “flatter” in its hierarchy, allowing people from all levels and departments to learn from one another. Their strong feeling of community and their quick response to addressing issues on-site were an asset. Staff was offered differentiated professional learning opportunities. Leaders modeled desired behaviours as lifelong learners, particularly with respect to mastering technology and social media.

They took the time to ensure every initiative was aligned with the Board vision and made sure everything was in place to actualize the vision. The staff was encouraged to embrace change, and was supported in their own learning and risk-taking. All key players wanted to be in a learning stance, highly encouraged networking and co-learning, and recommended enthusiastic staff members to share what they learned with their professional learning communities. They invested time, energy and money on the leaders, both formally and informally. It was clear that the OCSB had achieved “pragmatic buy-in” rather than the typical “philosophical buy-in” present in many School Districts across Canada.

Communicating Change Clearly and Consistently With the School Community

A massive communication strategy was undertaken using traditional methods and social media, phone messages, get-togethers etc. to get the message out. The leaders rarely said no and were all very supportive asking: “how can we help to make this happen?”

At first there was some level of apprehension and anxiety, but because trust had been established, the message was clear: risk-taking was exciting and it was okay to fail, learn from mistakes, and then move forward.

Doing what was best to meet the students’ needs was the guiding principle of this change process, which resulted in parents feeling good about putting their kids in the OCSB. This paradigm shift got students excited about learning again.

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¹ <http://www.michaelfullan.ca/media/13396072630.pdf>

² <http://www.michaelfullan.ca/images/handouts/2008SixSecretsofChangeKeynoteA4.pdf>



DEVELOPING INNOVATION THAT STICKS – THE OCSB’s LEARNING JOURNEY

Provoking Systemic Change in the OCSB

The OCSB’s move to a digital learning ecosystem began with some subtle changes to their organizational structure. In many School Districts across North America, the information technology department was acting as a silo in isolation from the academic side of the Board. This School Board was no different. Therefore, they intentionally changed the name of their Information Technology department to Learning Technologies and the title of the Supervisory Officer to Superintendent of Learning Technologies – Student Success. Consultants who once reported only to the Student Success (academic) Superintendent now also work closely with the Superintendent of Learning Technologies. They have since added a second Teacher Coordinator – Student Success Learning Technologies with a focus on system pedagogical change.

System-wide changes have occurred across this Board. The focus has shifted from how to use a device or how to use an “app” to how they can leverage technology to further their learning goals such as increased numeracy or literacy achievement. Beyond literacy and numeracy, a focus was placed on the design of deep authentic learning tasks that engage students in connecting to their local and global community.

The number of innovative leaders across the OCSB has increased significantly. No longer are they relying on the principal or central staff to be the purveyors of knowledge in traditional “sit’n’git” PD sessions. Instead, school teams of educators focus on their school innovation plan for student achievement and well-being, and many educators from within each school take the lead.

Another significant change in the last five years has been a move away from schools working in isolation, towards multiple schools and staff connecting, sharing, and learning. This includes face-to-face sessions and virtual collaboration via Skype, Google Hangouts, EdChats, and other online forums.

Principals take part in multi-school inquiry-based learning every year. This provides another avenue for the sharing of practices and learning from other schools.

Systemic change is evident in the year-over-year growth in the scope of OCSB staff involvement in the Learning Connections (LC)³ community of educators and in New Pedagogies for Deep Learning (NPDL)⁴.

One other piece of evidence of this Board’s systemic change is the increase in student voice across the system. Students are involved in the monitoring of change practices and provide input to this Board’s leadership team via surveys and focus groups. Students also take the lead in providing technological training and support to educators through Genius Bars and other initiatives (see Leveraging Student Voice section on pg. 17).

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³ Learning Connections (LC) supports educators across Ontario with access to applications, technology, professional learning, collaboration opportunities and a vast learning community. Available for educators in publicly funded schools across Ontario, LC is funded by a grant from the Literacy & Numeracy Secretariat (LNS) of the Ontario Ministry of Education (www.edu.gov.on.ca/eng/literacynumeracy). <http://abelearn.ca/learningconnections/lchome>

⁴ NPDL is a global organization that includes 1,000 schools in 10 countries that work with clusters and networks of schools to build knowledge and practices that develop deep learning and foster whole system change). Each of these communities now involve both intra-school initiatives and global connections. <http://npdl.global/>

Securing Financial Commitment to Sustain Innovation Across the System

The premise of this Board's transformation was that financial issues were not the driving force for change. As funding can be tiered, establishing a budget turned out to be one of the less significant challenges in moving to a digital learning ecosystem.

As part of the OCSB's overall vision, it no longer views technology as a line item that just appears in the Learning Technologies Department budget. An interdepartmental approach now ensures that technology requirements are budgeted throughout the system.

In addition to School Board budgets, financial support to leverage technology is supplemented by school councils and school-based fundraising, along with Ontario Ministry of Education and private grants. At a minimum, this Board allocates \$1 million dollars per fiscal year to ensure appropriate bandwidth to all 83 schools along with a minimum of \$4.5 million dollars allocated to all aspects of learning technologies.

Board transformation to a digital ecosystem required a strategic direction of funds as they implemented new policies and initiatives. For example, they intentionally didn't begin with a 1:1 device strategy for students, preferring to focus on collaboration and a hybrid model of Bring Your Own Device (BYOD) along with Board-provided devices to ensure equitable access.

One key implementation success was the fiscal constraint that this School Board faced throughout the digital transformation. Limited funds forced them to tier each of their implementation strategies. This tiered approach allowed time and multiple entry points for staff to embrace the major changes and initiatives that were being implemented.

Establishing “Across-the-Board” Buy-In for Change

The entire OCSB community's buy-in for change to a digital ecosystem has been an important component for this Board's system change success. Their approach was to begin with a focus on pedagogically-based professional learning and to develop champions and change agents throughout the system.

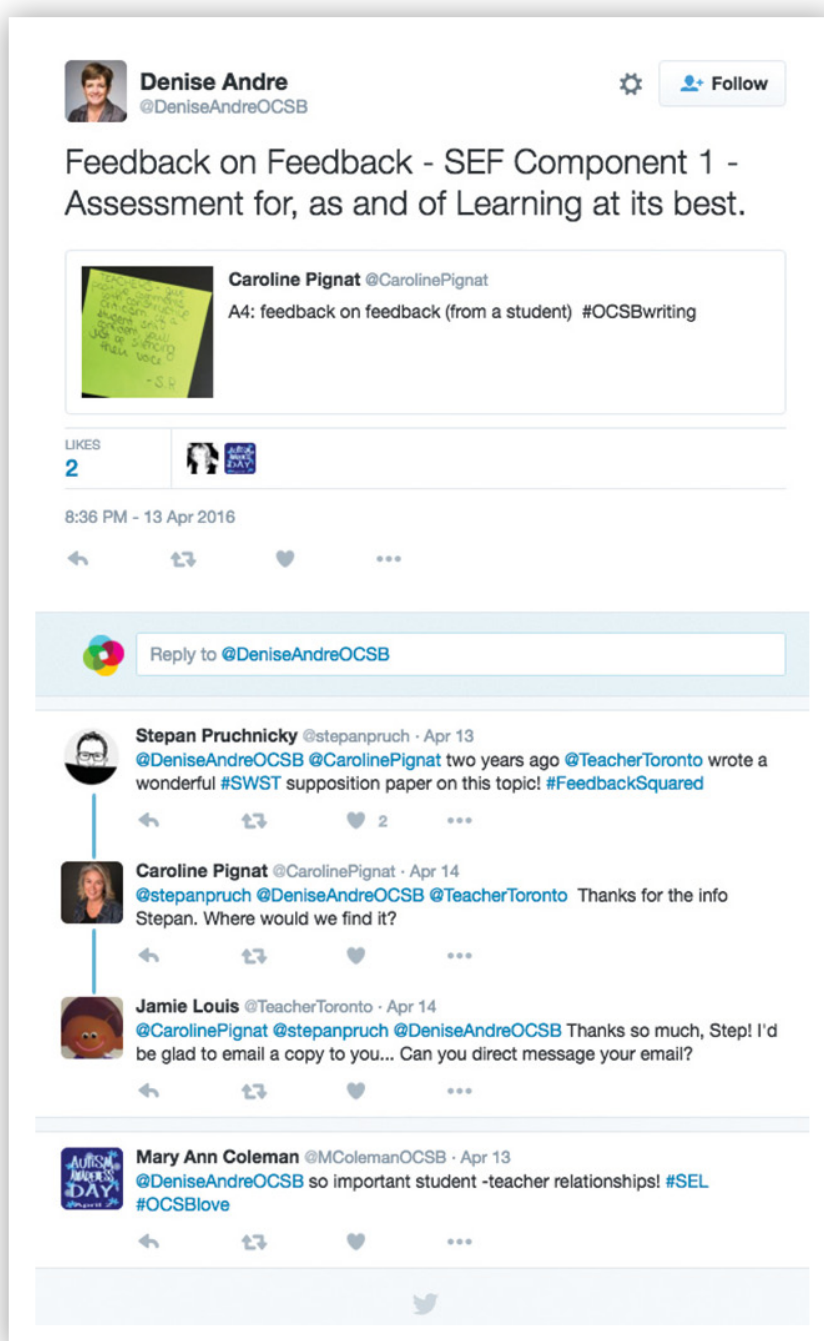
Senior Executive Team

Members of the OCSB Senior Executive Team have set the vision for the Board through a multi-year strategic plan, Board priorities, and the yearly *OCSB Innovation Plan for Student Achievement and Well-Being*. Each of these plans includes a direction to the system that reflects digital innovation. This provides coherence to ensure that school innovation plans also reflect the Board's vision for transformative change.

The Senior Executive Team models the use of technology through their active participation in online collaborative communities, through their use of mobile devices to capture evidence of student intellectual engagement, and through their use of social media to promote and scale the learning across and beyond the Board.

OCSB was the first host Board for the Canadian Academic Leadership Summit. This Summit, sponsored by Discovery Education, highlighted the digital transition that has taken place in the Board. Attendees included Superintendents and Associate Directors of Education from across Canada.

Members of the Senior Executive Team have an active presence in social media via blogs, Twitter, and many other online communities.



Trustees

Trustees have supported the creation of a digital learning ecosystem by approving budget requests that have allowed for:

- increased job-embedded professional learning opportunities with release time
- a robust infrastructure
 - reliable wireless connections
 - bandwidth enhancements
 - Interactive Whiteboards (IWBs) and LCD projectors in every classroom
 - a transition from libraries to Learning Commons
 - digital resources and licensing agreements
 - teacher and administrator laptops
 - mobile classroom devices (i.e.: Chromebooks, iPads, etc.)

During a time of fiscal constraint, trustees supported increases in staff to enable the leveraging of digital learning with a strong pedagogical approach.

In terms of governance, the Board of Trustees approved one of the first social media policies for Canadian K-12 schools in 2010. This policy gave permission for staff to use social media and to become online role models for students by modelling appropriate digital citizenship.

Principals

Early in the transformation process, principals were identified as key change agents to support scalable innovation. All principals and vice-principals were provided with mobile devices to begin modelling how to leverage technology for increased student achievement.

More important than the devices was the creation of learning networks and individualized professional learning opportunities. Principals took the lead amongst their peers to share their successes, challenges, and innovative approaches to educating and learning in a new digital era.

Principals are encouraged to be innovative within a culture that embraces and learns from failure. In order to foster creativity and innovation, the Board removed a previous requirement that initiatives needed to be system-wide in favour of allowing for the sharing of practices, and then encouraged principals to build upon and modify the practices to meet their unique school environments.

Principals are provided with a wide range of learning opportunities beyond the School Board, including attendance at international educational technology conferences (ISTE⁵, FETC⁶, TCEA⁷, GAFE⁸, etc.). Principals and other members of the leadership team have moved from attending educational conferences to presenting and sharing their knowledge at these conferences.

Principals' use of social media was shown to improve home-school communications and actively model appropriate use of technology through Twitter and other online communication tools.

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⁵ International Society for Technology in Education <http://www.iste.org>

⁶ Future of Education in Technology <http://fetc.org>

⁷ Texas Computer Education Association <http://www.tcea.org>

⁸ Google Apps for Education <https://www.gafesummit.com>

Teachers

The tipping point for scaling this Board's system change to a digital learning ecosystem came from the many collaborative communities of teachers that embraced the use of technology to enhance student learning and achievement. The OCSB was one of the first School Boards in Canada to migrate to Google Apps for Education (GAFE). The transition away from traditional supports was articulated to the system not based on financial savings, but rather on changing to tools that allowed for more innovation and increased collaboration. Principals and Superintendents now co-learn alongside innovative teachers on a regular basis in the system, both face-to-face and in online environments.

A sampling of the OCSB's online collaborative learning communities includes:

- OCSB Special Education
- Growth Mindset Community
- Learning Connections Community
- New Pedagogies for Deep Learning Community
- Cross-Curricular Literacy Community
- Pedagogical Documentation Community
- GAFE Certification Community
- Collaborative Math Inquiry Community
- Tech Triad Community
- Math Mindset Community
- Collaborative Inquiry in the Arts Community
- First Nations/Métis/Inuit Community
- Maker Community
- H.S. English Community
- Blended Learning Community
- Inclusion Coordinators Community
- Creative Arts Community
- Physical Education Community
- Religious Education Community
- Kindergarten Teachers Community
- Many school-based online learning communities

Early in the creation of a digital learning ecosystem, this Board offered teacher innovation grants. This created an initial base of early adopters and champions throughout the system. In the initial stages of change, many of the initiatives were focused on devices. As this transformation has progressed, frameworks such as SAMR⁹, TPACK¹⁰ and NPDL have been introduced and this transition scaled and succeeded because of a system-wide focus on pedagogy. Key drivers throughout this system were teachers focusing on differentiation and inquiry learning while leveraging technology.

⁹ **SAMR** is a model designed to help educators infuse technology into teaching and learning. Popularized by Dr. Ruben Puentedura, the model supports and enables teachers to design, develop, and infuse digital learning experiences that utilize technology.

¹⁰ Technological Pedagogical Content Knowledge (**TPACK**) is a framework to understand and describe the kinds of knowledge needed by a teacher for effective pedagogical practice in a technology enhanced learning environment.

Parent Community

The OCSB's Local School Councils and collective Catholic School Parents' Association have also been instrumental in this system change. Initially, presentations on the Board's vision for a digital learning ecosystem were shared with parents. Parent groups are active in organizing guest speakers, training sessions for parents, and helping to promote digital citizenship across the system.

Unions

The OCSB worked with its teacher union to create a joint PD program that allowed educators to work collaboratively for any pedagogical initiative of interest. The majority of the approved initiatives leveraged technology to improve both teacher practice and student achievement. Funds could not be used to purchase devices, but allocating release time for teacher collaboration proved to be a powerful model for building capacity throughout the system.

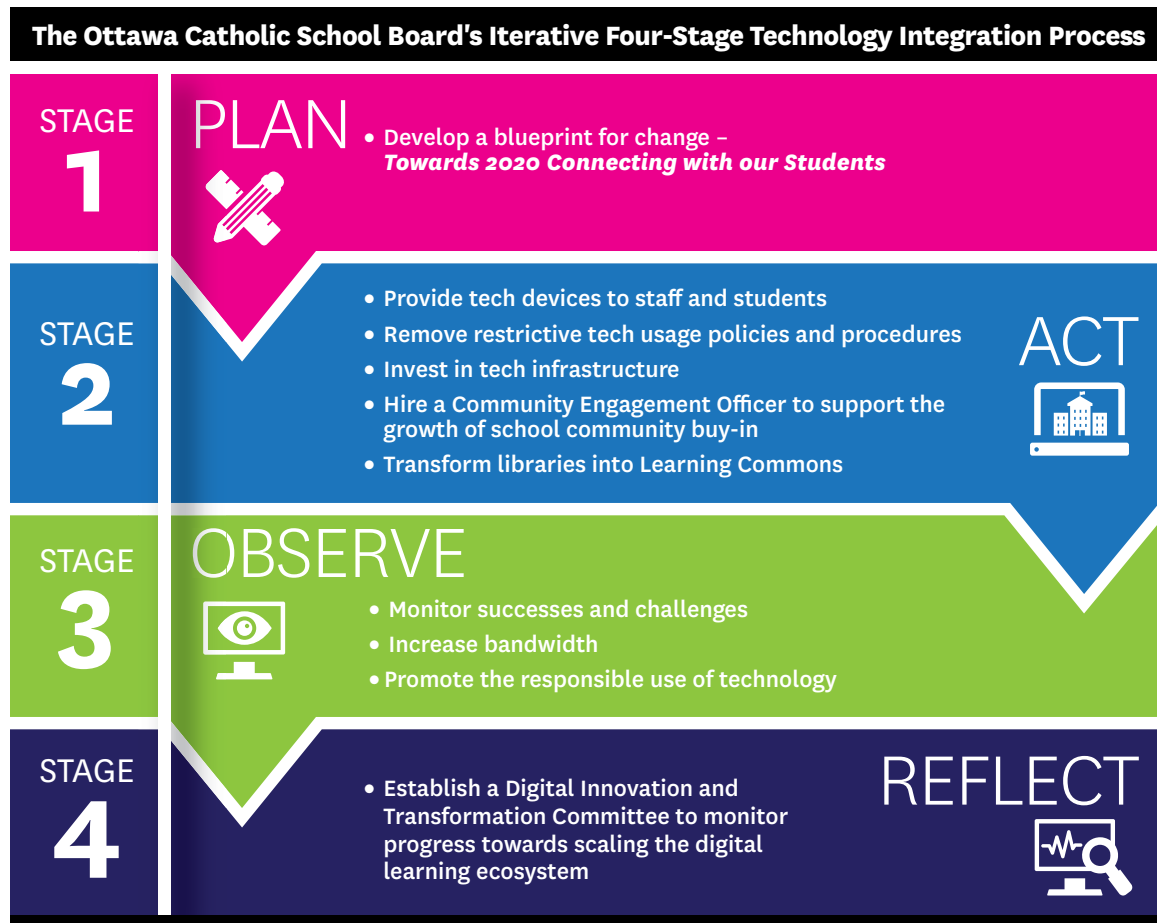
Support and Professional Staff

This system change includes improved workflow for all staff. Custodians, office administrators, educational assistants, early childhood educators, and other paraprofessionals all take part in professional learning opportunities to leverage technology to improve workflow and communication. These staff are also provided in-service on the pedagogical changes that are happening in the system (i.e.: why Interactive Whiteboards combined with LCDs and good pedagogy make a difference to learning outcomes).



The Key Stages of Building a District-wide Digital Learning Ecosystem

This process has been an iterative one, where various stages of implementation are monitored, then planned, acted upon and observed. The importance of an iterative process includes reflection on initiatives that can be stopped and adding new ones where needed. The following outline provides some of the key components at each stage:



Stage 1 – Plan

This stage, beginning in 2010, began with a needs assessment and included examining the data from surveys, learning walks, Board reviews, and other sources. It became very apparent that the Board had a “locked down” approach to technology, with sites such as YouTube blocked to both staff and students, computers congregated in labs, and few devices being used by educators and students for learning. The most common technology in the classroom was the overhead projector. The first step was engaging a wide range of stakeholders in crafting a vision paper entitled [*Blueprint for Change — Towards 2020, Connecting with our Students*](#). This paper provided the framework for transforming into an innovative School Board where educators are truly leading and learning

for innovation. The key to the success of this innovation was the collaborative approach to the development of the vision, and the buy-in at all levels of the Board. OCSB trustees enthusiastically embraced this vision, and have supported the implementation through the multi-year strategic plan, Board Priorities, and the annual budget. This necessitated making strategic decisions to cancel programs and initiatives that were not aligned to this vision while enabling the redirection of budgetary and human resources into this new digital learning ecosystem.

Stage 2 – Act

In this stage, this Board began by eliminating restrictive policies and practices by collaboratively developing revised policies and procedures. The OCSB was one of the first School Boards in Canada to adopt a BYOD practice and allow the use of social media by staff and students. They created a new position in their Communications Department entitled “Social Media and Community Engagement Officer” to support the growing buy-in from the school community. The OCSB then invested in robust technological infrastructure required to support ubiquitous Wi-Fi, bandwidth and enterprise network upgrades. Simultaneously, laptops were provided to all principals, vice-principals and teachers and a system-wide installation of Interactive Whiteboards (IWBs) and LCD projectors in every classroom began in all 15 secondary schools, two intermediate schools and 65 elementary schools. The key to the IWB implementation was a focus on the pedagogy and creating job-embedded learning opportunities for teams of educators. After the initial investment, this Board began implementing student devices, including Chromebooks and iPads. They then moved to the transition from library to Learning Commons. The use of devices not only for student collaborative learning, but also for pedagogical documentation has become a common practice in all classrooms across the Board.





Stage 3 – Observe

Throughout implementation, the OCSB has monitored the successes and challenges. The early adopters have moved the learning forward for all, and supported the spread through school-based professional learning communities (PLCs), networked learning, and online communities such as Google+, Twitter, etc. As more and more students and educators adopted the digital transformation, the network was taxed to the point where it could no longer meet demands in many of the schools. In the last two years, the Board had to invest heavily in increased bandwidth in all 83 schools to support the number of devices connecting to the network. In its *Blueprint for Change*, the new digital learning ecosystem was identified as “mission critical to be kept online with minimal disruption”. In order to ensure appropriate use by staff, the Board has continued to monitor and scale its bandwidth access and are currently providing 2 Gigabyte/second access to all of schools.

The OCSB recognized that its leaders needed to demonstrate the use of technology to document student learning by capturing student work, including student voice and thinking. Therefore, it provided mobile (smart) technology devices to all principals and vice-principals, in addition to their laptops. Additionally, it became evident that addressing the responsible use of technology was critical to the success of implementation. In 2012, a team of educators developed the Digital Citizenship resource, ***Samaritans on the Digital Road***, which now embeds responsible use of technology in the K-12 curriculum.

In terms of classroom resources, no single platform/device was adopted for student learning. For example, the Board invested initially in Netbooks, but discovered that the length of time required for network identification was impacting time on task. Therefore, the OCSB began investing in Chromebooks and iPads, which worked well in a Google Apps for Education environment. Being a “device agnostic” School Board allows more choice for students and staff. Additionally, students with special needs can access a range of devices and remain in the classroom, which supports the Board’s inclusive approach to learning for all.

The focus for this Board has always been pedagogy leading the implementation of technology. The movement to job- and practice-embedded learning communities, where educators use the collaborative inquiry cycle to deepen student learning and capture student thinking, has transformed teaching and learning in the OCSB. This learning is also captured and shared in multiple online communities, supporting system change.

Stage 4 – Reflect

Data collected by the Senior Executive Team through yearly committee reviews, surveys, and by monitoring Board reviews, learning walks and instructional rounds are reflected in the annual Board Innovation Plan for Student Achievement and Well-Being. A Digital Innovation and Transformation committee has been established with a mandate of monitoring the Board’s progress towards scaling-their digital ecosystem. This committee looks at the following four pillars: Innovation, Digital Transformation, eLearning/Blended Learning, and Digital resources. (see Framework for District-wide Change diagram on pg.29)



Leveraging Student Voice in the Change Process



Student voice and student leadership are key components of this Board's priority of Student Success and leveraging technology allows the OCSB to provide for both of these areas.

The following programs contribute to this Board's focus on deep learning and leveraging technologies resulting in engaged students and increased student achievement:



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OCSB – Student Portal Introduction

Connected Learning – Writing, Reading, and Engaged Students! and **The Collaborative Inquiry Cycle**

This video documents a rich learning task involving Grade 10 students creating and illustrating stories using technology and receiving feedback from Grade 1 and Grade 4 students.

Video Game Design – Media Literacy

This slide deck documents a rich learning task involving Grade 4 students from two schools using technology and connecting with graduates from the OCSB working in the video game industry.

[!\[\]\(a3ea015cc5581cad732d1eb81613fe7b_img.jpg\) **Student Portal Grade 7-12 – Digital Resources 24/7 access portal**](#)

[!\[\]\(c8d96c8885d3000a912c2582004aed63_img.jpg\) **Student Portal Grade K-6 – Digital Resources 24/7 access portal**](#)

[!\[\]\(919a2cb85b99741a73c0c31a427236a8_img.jpg\) **Game Based Learning – Grade 10 Careers/Civics Course**](#)

All students must take Grade 10 Civics/Careers. The course is delivered in a game-based environment and all students are provided with a Chromebook for this blended learning course.

Student P.O.V. on the OCSB's Digital Learning Ecosystem

The two students interviewed for this case study mentioned that learning was more fun now. They noticed that not all teachers were computer savvy and found it quite amusing and empowering when they see certain teachers struggling with the new devices, which gave these students the opportunity to demonstrate their expertise and help their teachers learn. They also considered the new technology more efficient because they could share documents and not lose their work. They felt that these tools were much faster than searching in the dictionary for the meaning of a word and they also enjoyed being able to work on rich learning tasks where they have to use their critical thinking skills and their judgment using their phones, which also gives them access to more learning resources. These students definitely saw a difference in the way they are learning.

The students expected the schools to give them the following competencies: leadership, cooperation, initiatives, responsibility, organization and independent working skills. Overall, they felt more engaged in interactive learning, shared more of their learning and appreciated doing more problem solving. They especially appreciated the transition from library to Learning Commons where they have access to more resources like Chromebooks, iPads and IWBs.



Leveraging Teacher Voice in the Change Process



OCSB teachers have shifted their classroom practice from teacher-directed instruction to teachers as activators of learning and designers of rich learning tasks. A new partnership has developed between students and teachers where student voice and agency are integrated into the design of deep learning connected to real-world experiences through leveraging digital resources. Teaching staff use Google Hangouts, Skype and other educational tools to involve external partners, community and global resources to enhance real-life connections.

Teachers now use technology in some of the following ways as part of an iterative cycle to inform and accelerate the learning process:



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Pedagogical Documentation – Teacher learning/sharing

This video presentation demonstrates how OCSB teachers take advantage of the new digital ecosystem for pedagogical documentation.

OCSB collaborative learning fairs provide an opportunity for teachers to celebrate their deep learning tasks and to share with colleagues the appropriate pedagogical use of edTools within our digital ecosystem. The following two fairs provide examples of rich engaging learning activities:

- **New Pedagogies for Deep Learning Fair – Sample of school deep learning to engage students**
- **Collaborative Inquiry Learning Fair – Sample of learning activities to engage students**

A number of OCSB learning activities are offered on weekends or evenings and our educators attend these professional learning activities on a regular basis. **Here is a sample of a recent EdCamp session that attracted over 100 educators on a Saturday.**

Teacher Networking – Learning Connections teachers and New Pedagogies Teams

This selection of interviews looks at global connections and learning connections of over 100 teachers from 42 schools reflecting on their learning through a digital process.

Learning Connections Learning Fair – Collaborative Inquiry trailers and playlist creations

This slide deck highlights the collaborative inquiry initiatives shared by educators in the OCSB at a learning fair.

New Pedagogies for Deep Learning – Learning Fair

This slide deck highlights the collaborative inquiries that were shared as part of a network learning fair.

Learning Connections – Sample of Google Community educator sharing

The OCSB's digital ecosystem has been shaped by the sharing and reflecting that takes place in many online communities. This is a sample overview of one such Google+ Community. Here are **screenshots showing an active online community of over 340 educators.**

Grade 2 Connections – Sample of digital media to connect schools in the learning process and Collaborative Inquiry

Multi-classroom Connections – Video

This video highlights the work of a group of teachers connecting students between two schools in the OCSB and then connecting their work with others around the world.

Sample Staff Meeting Presentation – Digital Transformation Timelines

This sample staff meeting presentation highlights the continuing evolution of the digital learning ecosystem as staff leverage changing technologies to engage students and to focus on student achievement.

Director's Annual Report – Professional Learning – Focus on Technology

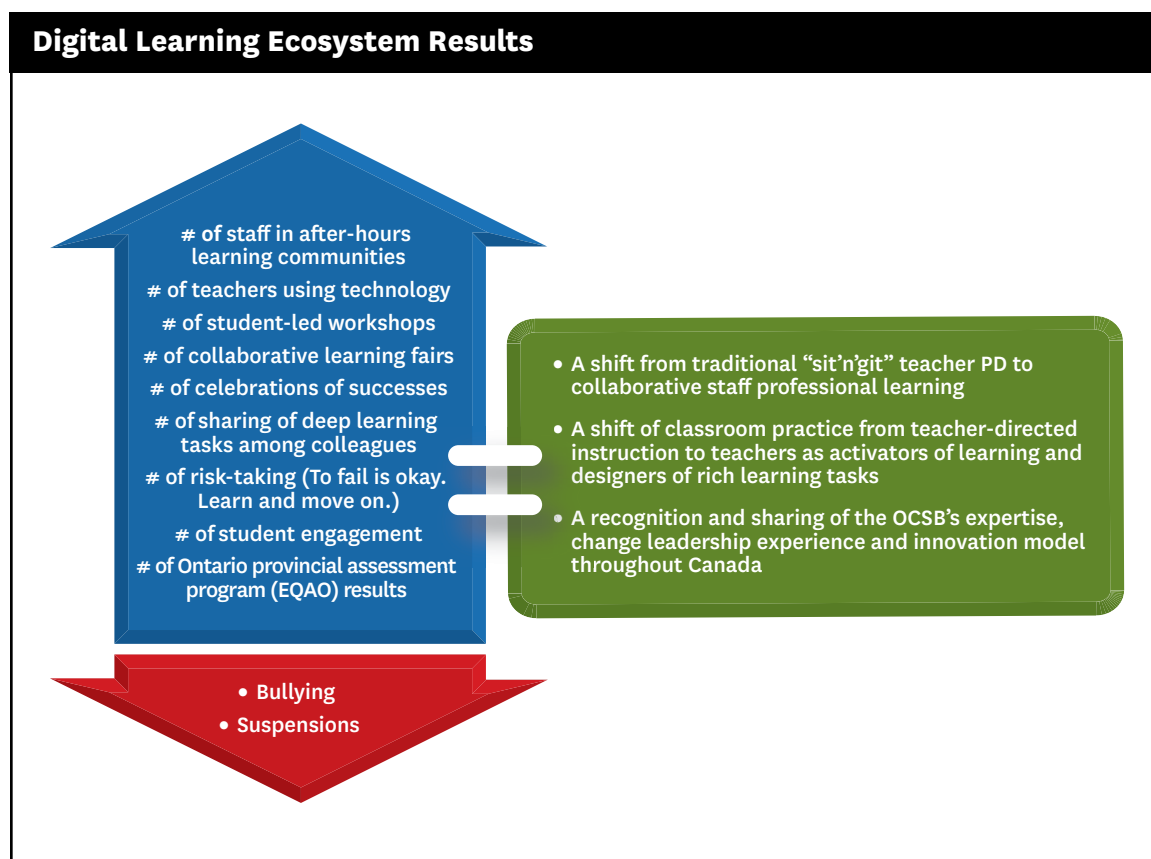
The most recent annual report highlights a focus on staff professional learning opportunities while leveraging technology and connecting with others across the School Board.

Learning Connections – Provincial website of resources

This site highlights the learning of a network of 100 connected educators in the OCSB. The blog outlines the success criteria created by the group, along with a slide deck and video of teacher collaboration.

Results to Date of the OCSB's Digital Learning Ecosystem Implementation

It has been difficult to attribute these innovations to student success. The OCSB has exceeded provincial norms in all areas of standardized testing, credit accumulation and graduation rates. However, the Grade 6 Math scores, while above the provincial levels, have been declining over the past few years, similar to the provincial experience. Moving away from lecture-based learning has, however, made learning a much more interesting and dynamic process.



The OCSB’s transition to a digital ecosystem has had positive results on student and teacher success including measurable results above the provincial average for all areas of the Ontario Provincial Assessment Program (EQAO).

Initial feedback from the Board’s involvement in New Pedagogies for Deep Learning (NPDL) has shown student growth in the NPDL 6 Cs - collaboration, creativity, critical thinking, communication, character, and citizenship.

Climate surveys conducted every two years have shown a decrease in the number of bullying (including online) incidents, and a decrease in the overall number of suspensions in the Board.

The Board's Leadership Journey Program has featured opportunities for all staff to explore leveraging digital devices for both teaching and non-teaching staff. As the Board implemented its transformation, programs were added to the Leadership Journey such as:

- "Getting Googly in your Pyjamas"
- "Google Educator Certification Support Course"
- "Directions in Technology"
- "Professional Learning for Administrative Assistants"
- "Generations in the Workplace"
- "21st Century Office Administrators! Having Fun with Google +1"
- "Technology - What you need to know"

Enrollment in these courses has increased significantly as more and more staff voluntarily participate in these after-hours learning communities. Through the School Board's learning walks and instructional rounds, they have seen dramatic increases in teacher's leveraging technology to both capture evidence of student learning and in their openness to share these resources. The learning walks have revealed that system change has spread well beyond the OCSB's original early adopters.

Student leadership has been developed through opportunities for teachers to learn from students. This has included the implementation of Maker Spaces, Genius Bars, and student-led workshops at student Google Apps for Education Summits. Students provide learning for adults at many of the Board's face-to-face networked learning sessions, such as Learning Connections, the Director's Forum, and NPDL.

Teacher PD has changed from traditional sessions led by outside presenters and system staff to staff-generated and -led professional learning. This includes EdCamp "unconference" learning sessions, learning fairs documented via edtools (such as QR codes, movie trailers, etc.), online community sharing, global Twitter chats, and webinar presentations.



Viewing Challenges as Opportunities When Scaling Innovation Throughout Classrooms and Schools

The OCSB has a very interesting stance when it comes to addressing challenges. They look at them as opportunities to improve. Although challenges were mentioned during the interviews, not one interviewee stated that they were difficult to address or overcome. Also, answers to this question were as varied as there were interviewees. Some said they should have moved more slowly to ensure that the infrastructure had time to keep up, while others stated it should have been implemented faster. What is important to retain is that leaders encouraged staff to speak up to help them deal with the issues.

OCSB Advice to Other Changemakers

The following advice was compiled from OCSB representatives about what they learned through implementing District-wide innovation so far:

More funding required to:

- release teachers to increase the PD opportunities and to allow for the sharing of information
- purchase more hardware and software

The first year of this initiative was a big financial investment because the Board wanted teachers and administrators to be comfortable with the technology. To this day, they maintain that the financing of this initiative was the easiest challenge.

Better Communications: Communicate the change better to the system using all communications tools at their disposal: social media, paper, phone messaging system, newsletters, the OCSB website, etc.

Celebrate Success: Recognize the big and small achievements made along the way in more public ways.

Relax: Have more fun along the way.

Differentiate PD: Differentiate the PD offerings earlier in the process; one size does not fit all.

Cultivate Divergent Thinking: The OCSB would have learned more by encouraging more diverse points of view early on in the change process.

Reflection: Take the time to reflect more and to build and learn from the previous year.

Feedback: Collect more data and ask for more user feedback.

Resistance to Change: How to address the resisters to change? The message was clear to all: “Move forward at your own pace, but move forward.” The administrators are very present in the schools and discuss the benefits of moving forward. They like to say that they gently pull forward instead of pushing the resistant staff. They also encouraged the early adopters to share their practice and passion, which generated momentum and enthusiasm within the schools.



Equity: Be equitable sooner in deploying the resources and the tools to schools with high poverty rates. Differentiated support, along with successful grant applications and school council fundraisers became revenue sources for these schools.

Confidence: Share ideas more frequently and have the confidence to do it. At first, the early adopters were reluctant to share the great things they had learned or experienced in their classrooms and were even scared of their colleagues' potential reactions, but as they grew more convinced of the importance of the paradigm shift, their confidence grew.

Inclusion of All: Never forget to invite and inform the Teachers' Union. In some instances, the union was receiving calls and was not aware of everything that was going on. Regular updates and a collaborative working relationship with the union executive helped to clarify Board initiatives.

And finally, one interviewee said:

"I would have done nothing differently; it was a no-brainer: it's awesome for kids and schools have to keep up with the times."

Beyond Policies, Procedures and Processes: the Human Factor in Systems Change

Beyond the policies, procedures and processes that were put in place – as is customary in all School Districts – why is it that the OCSB succeeded in creating and maintaining a digital learning ecosystem on such a large scale?

When asked who were the most significant people driving this change, the interviewees named individuals who assumed a strong leadership role at one time or another. This included the Director or Associate Director of Education, the Superintendents, the principals of the interdepartmental teams, the trustees, the parents, the staff in the Learning Technologies Department, and the teachers that led the early adopters. What was truly telling was why these people were significant. And it is here that we find the reason for their success.

These leaders and their human qualities inspired them. They were knowledgeable, highly intelligent, good communicators – passionate, humble, supportive risk-takers who believed in what they were doing. They were courageous and persevered through the issues. And finally, to ensure that these changes wouldn't disappear when a few leaders left, they put in place a succession plan to ensure the pursuit of the white paper that will lead them well "Beyond 2020".

OCSB educators have become a model for other School Districts in Canada and are often asked by the Ontario Ministry of Education to share their experience and knowledge. Educators from across Canada visit OCSB schools to witness first-hand the results of their efforts and to help inspire their own change strategies.





CASE STUDY 20/20/20 VISION – LESSONS LEARNED, KEY OBSERVATIONS AND RECOMMENDATIONS

Lessons Learned While Scaling District-Wide Innovation

The following list reflect some important lessons that the OCSB has learned from implementing scalable Board-wide innovation so far:

1. **Move away from the term “21st Century Learning”** – focus instead on innovation and the skills for teachers and students. (see OCSB [priorities here](#))
2. **Reflect on School Board Culture** – Caution and control vs. curiosity and innovation
3. **Environmental Scan and Generation Perspective** – Recognize how the world has changed outside of education and recognize the barriers to change based on generational perceptions
4. **Internet Safety** – Acknowledge and address any technology, Wi-Fi and social media apprehensions of educators and parents
5. **Digital Citizenship** – Recognize the need for adult role models and integrate digital citizenship learning into the curriculum on a yearly basis for all students
6. **Digital Readiness** – Recognize the need for differentiated learning among teachers, administrators and other staff as well as parents, students and trustees
7. **Focus on Skills** – The “4Cs/6Cs” for staff and students
8. **Pedagogical Priorities** – Moving beyond substitution and leveraging technology for inquiry-based learning and to differentiate both rich learning tasks and assessment tasks (e.g.: SAMR, TPACK)
9. **Empowering Educators to Focus on Relationships** – Rather than devices
10. **Focus on Equity for All** – 24/7 access, and support to students with special needs (necessary for some, good for all)
11. **Integrate Community Partners** – Leveraging knowledge outside of education (e.g.: IBM, Google, Discovery Education, etc.)
12. **Governance and Policies** – Need to decrease barriers and have support of Board of Trustees and employee groups (unions)
13. **Encourage Social Media Use Throughout the Board** – Communication, parental engagement, professional learning, crisis management, celebrations, etc.
14. **Infrastructure Stability** – Network, Wi-Fi, bandwidth
15. **Classroom and School Design** – That focuses on proper pedagogy and digital infrastructures
16. **Library to Learning Commons Transition** – For every school
17. **Blended, Online and Game-based Learning** – For all students prior to graduation
18. **Innovative Teaching Funding** – Promote innovation for early adopters/leaders/innovators
19. **Leadership and Capacity Building** – Throughout the system (scaling of networks – breadth and depth of initiatives)
20. **Internal and External Professional Learning Communities (PLCs)** – Focused on collaborative inquiry learning in the school and beyond the school and the Board to a global learning level

Key Observations of the OCSB's Transformation to Digital Learning Ecosystem

The following list reflects some important takeaways that the CEA learned from the information collected during the case study interviews:

1. The concept of “21st century learner” must be properly explained and defined.
2. There needs to be a clear vision shared by the School District leaders and a clear understanding of what needs to be adapted to the 21st century learner. These leaders must become the models of teamwork, risk-taking and digital learning.
3. Good communication with all stakeholders and teamwork is essential when undergoing such a major digital transformation. No one person can do it alone.
4. Leaders must be courageous, strong, passionate, believe in and fully understand what they are doing, persevere, be humble, respectful and excellent listeners.
5. Give leadership roles to those who have the expertise. A succession plan must be put in place for the continuation of the work.
6. Ensure the teacher union's buy-in from the beginning and keep them in the loop continuously.
7. Trustee and parent support is essential for voting on new policies, procedures, structures and budgets. These changes had to be financed by revisiting the Board's structure and making tough decisions.
8. Showcase the most successful initiatives: when the trustees saw demonstrations of the innovation that was taking place, and witnessed student engagement and passion, they asked how they could help to accelerate the implementation.
9. The message must be out there by all means necessary and needs to be continually repeated. All must “walk the talk.”
10. There must be a needs assessment conducted from the beginning that includes all schools.
11. Equitable access to technology for all children who don't own devices is an absolute must to support schools experiencing high poverty. A coordinated fundraising effort with community partners can help to meet this goal.
12. Once Internet filters are removed, the focus shifts to educating students on the responsible use of technology.
13. Work with early adopter champions first to build buy-in momentum. Early adopters don't convince Board-wide change – mid adopters do.
14. Encourage the sharing of best practices for integrating technology into learning and write learning guides for schools and Q&As on how best to address obstacles.
15. Provide learning summaries from conferences and learning communities.
16. Create student focus groups to track their opinions and reactions to educational changes.
17. Adapt the physical learning environments (e.g.: libraries to Learning Commons, IWBs, round tables, bean bags, Genius Bars, etc.) to create more dynamic places for students to learn, share, and collaborate with ready access to a variety of devices.
18. Organize a District-wide celebration to receive updates about the School District's priorities and generate excitement. At the OCSB, their Christian Community Day gave all staff the inspiration and the direction for the year to come.
19. Create a learning culture that supports new ideas and where it's okay to make mistakes.
20. Since not everyone is ready to learn at the same pace and at the same time, a differentiated PD program is a key to successful change.

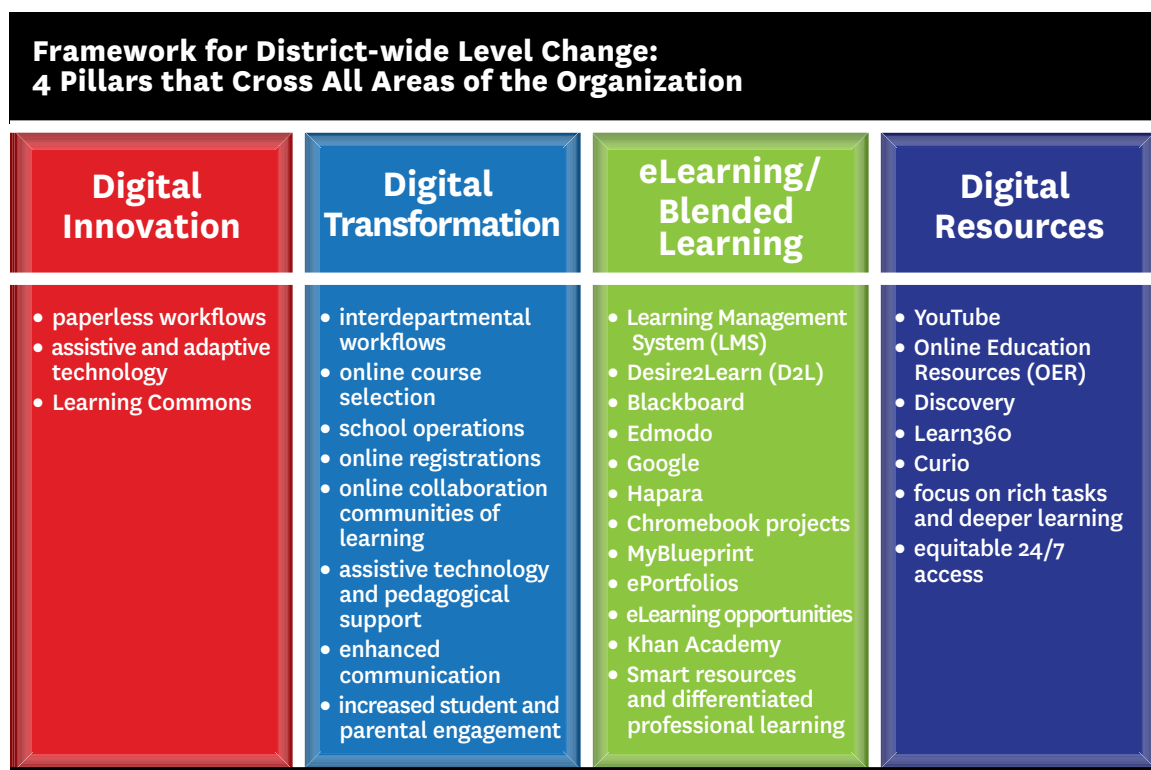
Recommendations for School District Leaders Seeking Scalable Innovation

1. Be courageous. Have a strong leadership team with a clear vision.
2. Align School District and school plans for coherence.
3. Administrators must model the desired behaviour.
4. Surround yourself with experts, early adopters and resisters.
5. Encourage early adopters to leverage technology for learning. Actions precede beliefs and represent an important step towards systemic buy-in. Innovation by nature is disruptive and happens before everyone agrees to it. Buy-in is truly established as a result of continued behaviour supporting the innovation. That is why early adopters exist – they try something new even if they know that it might not work.
6. Communicate continuously the progress of the endeavour.
7. Start slowly, learn and adjust as you go along; it can get messy.
8. Have a succession plan to ensure the pursuit of your change.
9. Encourage divergent opinions to broaden the possibilities.
10. Recognize resisters and gently pull them forward.
11. Use your early adopters to generate contagion, curiosity and excitement.
12. Get the trustees, the parents and the unions on board early on.
13. Inform all staff of what is happening.
14. Highlight, showcase and celebrate great new initiatives.
15. Differentiate your PD offerings as all do not learn at the same pace.
16. Ensure entire community buy-in.
17. Ensure that you have the appropriate funds.
18. Support risk-takers.
19. Monitor student achievement and engagement.
20. Be present in the schools and online communities.



How This Program Could Be Replicated in Other School Districts

While many School Districts across Canada have implemented similar systemic shifts, they will face their own unique challenges to creating a digital learning ecosystem. The multi-faceted approach that has influenced the OCSB can be modified by any School District looking to transition from a traditional teaching and learning environment to a digital learning ecosystem.



The OCSB's transformation model has already been shared with Districts from Newfoundland and Labrador to British Columbia. One key takeaway for other School Districts is that transformation is a dynamic process, not linear, and there is more than one path to creating a digital learning ecosystem.

This type of successful systemic innovation doesn't necessarily mean that other School Districts will follow the same approach, but the CEA will ensure they know that this valuable information is available to them as a learning resource.

This comment from one of OCSB teacher provides a succinct summary of this strategic implementation:

"The driving force behind our Board's success is the insight to lead with pedagogy and to support our pedagogical practices with technology. Our Board is able to leverage digital resources and technology with strong pedagogical alignment."

For more information:

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The OCSB is always happy to have visitors because it helps extend their network and learn about promising practices at other Boards as well.



APPENDIX A – INFORMATION RESOURCES



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OCSB Blueprint for Board-Wide Change – *Blueprint for Change — Towards 2020, Connecting with our Students*

This Blueprint for Change was the result of interdepartmental visioning and stakeholder focus groups. This whitepaper became the strategic plan for the OCSB's transformation. Each year a committee reviewed the OCSB's progress towards creating a digital learning ecosystem. The link provided shows one such check-up in 2012. (See "traffic lights" and comments throughout the document).

Digital Citizenship Integrated in the K-12 Curriculum – *Samaritans on the Digital Road Resources*

A lesson learned during the OCSB's digital transition was the need to do more than assemblies to teach digital citizenship to students. A K-12 curriculum solution was created by OCSB teachers and is now embedded in the curriculum and taught on a yearly basis.

PRESENTATIONS

Board Transformation Presentation

This slide share presentation was shared with multiple School Boards highlighted in the OCSB's digital transition change process. This presentation highlights the connection between pedagogy, technology, and change knowledge along with the important role of leadership in the change process.

Library to Learning Commons Transformation

One component of the OCSB's overall digital ecosystem was the transition of 83 traditional school libraries to Learning Commons. This site was created to document this transition and to provide resources to other School Districts looking to transition traditional library spaces to Learning Commons. The original five-year plan to transition all libraries was accelerated to three years.

The Learning Partnership – *Presentation to other Districts on 21st Century Visioning and creation of social media policies*

This presentation delivered to School Districts across Canada outlined how social media was one important component of the OCSB's digital learning ecosystem.

ARTICLES

The Digital Classroom: Innovative design helps students relax and focus

(newspaper article and video)

This newspaper article and video from the Ottawa Citizen highlights the changes that have occurred at the OCSB with the opening of a new elementary school. The article also highlights the impacts that this digital learning ecosystem has had on a veteran teacher at a typical high school.

“A District-wide Blueprint for Change”

This brief article written for the CEA in 2012 highlights the OCSB’s belief that the most important factor in student success remains the classroom teacher. Drawing from the work of Michael Fullan, the combination of pedagogy, knowledge of the change process, and technology supported District-wide change rather than just pockets of innovation.

WEBINAR

“From TechEd to EdTech – Transforming Learning in the 21st Century”

This global webinar delivered in 2013 provided an overview of the OCSB journey in creating a digital learning ecosystem and outlined why technology should not be the focus of any District transformation.

SOCIAL MEDIA

Social Media at #OCSB – connecting and inspiring our community online

This presentation shows how the OCSB has progressed in its use of social media over the last five years and how social media is now used in a numerous ways to engage the OCSB community.

ENCOURAGING PARENT INVOLVEMENT

Parent Magazine Article – “5 ways technology is impacting education” (pages 42-44)

This 2015 article in *The Ottawa Parenting Times* Magazine outlined five ways technology is impacting education at the OCSB’s St. Andrew School.

Parent Presentations – Internet Safety and Digital Learning Resources

Parents are important partners in the OCSB’s digital learning ecosystem. The OCSB’s parent involvement committee, run by volunteers, regularly host information sessions for other parents to provide context for digital learning and safety in the home environment to complement what is happening in OCSB schools.



APPENDIX B – PROGRAM DESIGN AND ASSESSMENT RUBRICS

OCSB 2015 Director’s Annual Report

Link to learning environment updates

A comparison of the OCSB digital learning environment and initiatives from 2010 to 2015.

Link to OCSB Priorities – Focus on Innovation

A comparison of OCSB Priorities from 2010 to 2015 shows how the Board progressed in the creation of its digital learning ecosystem.

Change in Network infrastructure from 75 Mbps access in 2008 to 2 Gbps access in 2014 and from 11,000 devices on the network in 2011 to over 42,000 devices on the network three years later in 2014.

Learning Connections – Year Over Year Growth

A sample rubric being used to document our collaborative inquiry learning journey.



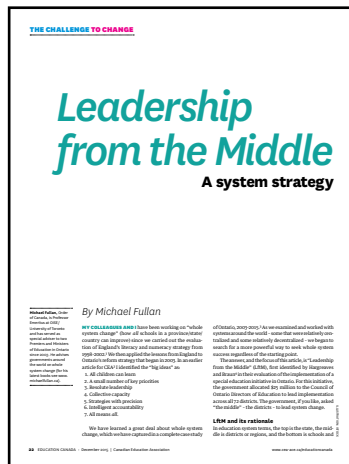
APPENDIX C – CEA INFORMATION AND ANALYSIS ABOUT INNOVATION IN EDUCATION




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EDUCATION CANADA MAGAZINE ARTICLES

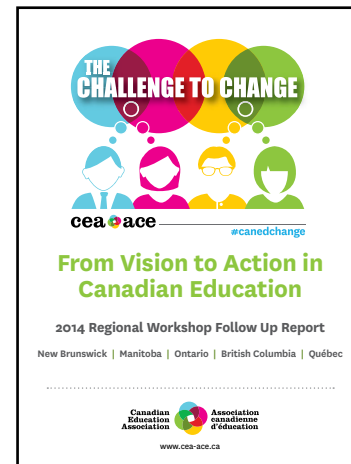



 **Leadership from the Middle**
A system strategy
By Michael Fullan



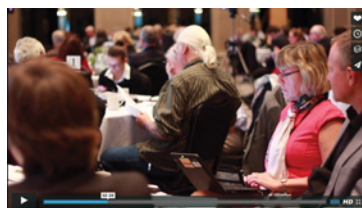
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RESEARCH REPORTS

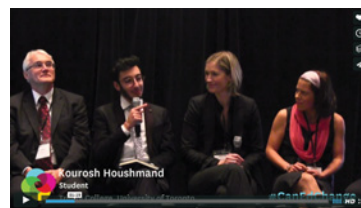


 **The Challenge to Change – From Vision to Action in Canadian Education**
2014 Regional Workshop Follow Up Report
October 2014
New Brunswick | Manitoba | Ontario | British Columbia | Québec

VIDEOS




 **The Barriers that Stand in the Way of Change in Education**
CEA 2014 Presentation



 **Getting to 'the how' of systemic change in education**
CEA 2014 Panel Discussion



 **How Change in Education Happens**
CEA 2014 Teacher Presentation

Visit www.cea-ace.ca to discover more useful information.



APPENDIX D – CASE STUDY RESEARCH METHODOLOGY

Twenty in-depth interviews were conducted with OCSB representatives from September to December 2015 to learn about and promote how this School Board has found success in scaling and transforming their schools to meet the needs of the 21st century learner. An Appreciative Inquiry (AI)¹¹ approach inspired the interview questions to help interviewees share their experiences with change based on what worked within their School Board.

The CEA engaged education consultant Lucie La Ferrière to conduct these 1-1.5-hour interviews with the following OCSB representatives:

- The Chairperson
- The Director of Education
- The Superintendent of Student Success and Learning Technologies
- A Superintendent of Student Success
- The Coordinator of Leading and Learning
- Two Coordinators of Learning Technologies
- The Coordinator of Elementary Student Success, Early Years
- The Leading and Learning Officer
- The Itinerant Resource Teacher, Assistive Technology
- The Board Website Administrator
- A representative from the Catholic School Council Parent Association (CSPA)
- An elementary school principal
- A high school principal
- A junior French immersion teacher
- An elementary school teacher
- A teacher/librarian
- The teacher union president (Ontario English Catholic Teachers' Association (OECTA))
- A Grade 8 student and a Grade 10 student

Interview data was analyzed and informed CEA's key observations and recommendations in this case study report. Several OCSB reports about their learning journey and supplementary analysis from OCSB staff further enhanced the foundation of this case study research.

¹¹ Appreciative Inquiry is "the cooperative search for the best in people, their organizations and the world around them. It involves systematic discovery of what gives a system "life" when it is most effective and capable in economic, ecological, and human terms. It is the art and practice of asking questions that strengthen a system's capacity to heighten positive potential. It mobilizes inquiry through crafting an "unconditional positive question" often involving hundreds or sometimes thousands of people." AI focuses on what is working well.

Cooperrider, D.L. Whitney, D. 2005. Appreciative Inquiry: A Positive Revolution in Change. In. P. Holwan and T. Devane (eds), The Change Handbook, Berrett-Koehler Publishers Inc., San Francisco.



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