A Promising Proof Point for System-Wide Change

A "Big Tent" Strategy for System-Wide Transformation.

Seeking Deep Learning in Ottawa

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It’s a splendid June morning in Ottawa and the grade four students at St. George School are buzzing with excitement. Today they will talk to a public audience about the learning journey that they have been on for the past year, and they are very proud of their work! The students gather in the Innovation Room, a high-ceilinged room with colorfully painted walls and shelves of enticingly arrayed books. They confer excitedly as their guests – a mix of school leaders, community members, and out-of-town visitors – get settled at the low tables and soft seating around the room.

The projects that these nine-year-olds are sharing were undertaken as part of the Social Entrepreneurs Program, an initiative developed by the Ottawa Catholic School Board as part of its effort to transform its 80+ public schools into spaces of deep learning. St. George School, which serves grades K-6, is one of the newer campuses to try out the program. From the outside, there is nothing remarkable about the school. The building is a plain brick edifice with sparse windows and a small playground surrounded by chain-link fencing. The presentations in the learning commons, however, tell a very different story. The Social Entrepreneurs Program might be partly about business, but this is not business as usual.

As groups of students share their artifacts and videos, the arc of their learning becomes clear. The experience, which they undertook in partnership with peers in grades five and six, began with an introduction of the United Nations Sustainable Development Goals and a class vote that identified clean drinking water as an issue about which the students wanted to take action. Throughout the fall, the class spent time learning about the biological functions that water serves, the history and current state of the Ottawa River, and the ongoing clean water challenges faced by those living in First Nations Reserves in northern Canada. The students met with an indigenous Knowledge Keeper who talked about the sacredness of water within tribal culture; later, they also met with the education team at Ottawa Riverkeeper, an organization devoted to preserving the health of the local river ecosystem. In order to understand the processes involved in water filtration, they designed wastewater treatment plants using Minecraft Education as a platform. Finally, they connected with a local University of Ottawa student – a young woman with first-hand experience growing up with limited access to clean drinking water – who at the time was leading Project Nibi, a university-based nonprofit organization which supports indigenous communities in implementing sustainable water filtration solutions. Through this encounter, the students connected with peers

attending an Inuit school in rural Labrador where access to potable water has been a chronic struggle.

With these many experiences creating a foundation of deep learning and engagement, the class then launched into the entrepreneurship portion of their learning journey. The class decided that they wanted to support their new friends in Labrador in finding permanent solutions to their water problem. In order to do so, they would attempt to raise as much money as possible for Project Nibi. With a social purpose and a charitable partner in place, the students broke into small groups, each of which was tasked with imagining, designing, and executing a business plan for a digital or physical game that would be part of a "community arcade" experience, to be held in May. All parts of the process, including market research, product development, graphic design, and event planning, were student-run. As one of the students described in her presentation, this was "*definitely* not as easy as it looks." As the students got deeper into the work, however, they got better at communicating, collaborating, thinking critically, and solving problems creatively – competencies that the project deliberately sought to develop.

By the time the community arcade day rolled around, the class had done some remarkable work. One group had created Minecraft worlds and YouTube commercials to get their peers invested in the issue of clean water.

Another group created water-themed games in Scratch and 3D-printed hand-designed joysticks – including adaptive joysticks designed for people with disabilities. Meanwhile, students in grades five and six had designed other water-related products to sell to the community, such as coasters made with recycled plastic and biodegradable pots planted with flourishing spearmint and tomato plants. By the end of the project, the students had raised nearly $8000, most of which was donated to Project Nibi. Just as important, they felt newly aware of their collective capacity to understand and act on pressing social issues. As one student said at the end of his presentation: "Even though we are kids, it doesn't mean we can't make a change in the world."

Deep Learning: An Old Goal at a New Scale

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Anyone who has completed thirteen years of primary and secondary education – or seen their children do the same – knows that each year is a roll of the dice. Some classrooms are places of deadening inertia; others are alive with curiosity and inspiration. Some learning experiences are instantly forgettable; others support students to develop transformative new relationships with themselves, each other, and the world. Indeed, research has confirmed that there tends to be more variation in quality across classrooms *within* schools than variation in quality *across* schools.[1] To make matters worse, research has also shown that four out of every five classrooms are dominated by unambitious, passive learning, with tasks that require more recall than analysis and creativity.[2] These patterns tend to be more extreme in schools and classrooms serving students from low-income and racially marginalized backgrounds.[3]

None of this is breaking news. The notion of deep learning dates back at least as far as Socrates, whose methods of eliciting insight through questioning and dialogue are well-documented. The idea that PK-12 schools should aspire to be places of inquiry, creativity, and shared sensemaking rather than of compliance and rote learning – an idea theorized by progressive educators such as Maria Montessori, John Dewey, and Paolo Freire – is more than a century old.[4] And education scholars have known for many years that opportunities to engage in complex thinking and academically rigorous work in school are heavily stratified by race, class, gender, home language, and perceived academic ability. For several decades beginning in the early 1990s, however, all of this faded into the backdrop as the entire field was swept up in a "back to basics" fever – an old obsession with a new focus on students from marginalized backgrounds. Deep learning took a backseat to the three R's: reading, writing, and 'rithmetic. Standardized testing reigned supreme. School and school-system improvement in this era meant raising test scores, especially for marginalized subgroups.[5]

But as the twenty-first century has progressed, the winds of change have shifted again. As educators, system leaders, policymakers, and parents look around at the rapidly-changing world – a world defined by economic uncertainty, geopolitical instability, and existential threats such as climate change – it has become obvious that young people, and the societies they will inhabit, will need much more than the three "Rs." Even a limited view that the job of schools is to prepare students for the workforce leads to this conclusion, given that many

living-wage jobs now require collaboration, cross-disciplinary problem-solving, and constant adjustment to new technologies. Thus, over the course of the past decade, the goal of deep learning has reemerged as a north star for educators. This time, however, there is an insistence on pursuing deep learning *for all*.

It's hard to overstate the importance of the shift implied by these last two words. Whereas there have been many efforts to spread deep learning in pockets – on teacher teams where there is already interest, within aligned courses and programs, in clubs and extracurriculars, and at "special" schools such as magnets – now the task requires system-wide transformation. And system-wide transformation in the world of PK-12 education is hard. It is hard even when it comes to goals like getting all kids to attend school regularly. It is much, much harder when the desired outcomes are as complex and ambitious as those connected to the goal of deep learning. Such efforts require clarity, strategy, and persistence that very few school boards can muster.

It is against this backdrop that what has been happening within the Ottawa Catholic School Board (OCSB) emerges as a distinctive case. The student learning presented last June at St. George School is not an idiosyncrasy or an outlier. It is the result of deliberate and sustained work on the part of OCSB leadership, school principals, teachers, and community members, with the partnership and support of a global team dedicated to systemic deep learning.

It involves the cultivation of shared vision, the development of supporting resources, and intensive efforts at every level of the system. It reflects the joint influences of a global network of educational changemakers, the values of modern Catholic education, the sociopolitical realities of eastern Ontario, and the specific needs of OCSB and the communities it serves. And it is a beacon for what the Board aspires for *every* classroom to become: a space where young people from a range of backgrounds explore big ideas from multiple perspectives, practice the "6 C's" -- character, citizenship, communication, collaboration, creativity, and critical thinking -- and become the changemakers that the world so desperately needs. What is impressive about OCSB is that Deep Learning—6cs and all—has become embedded across the whole system and its community. It has become widely owned. Its success is a shared enterprise.

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Deep Learning Meets Modern Canadian Catholic Education

Located on the border between Ontario and Quebec, The Ottawa Catholic School Board serves roughly 49,000 students in 87 schools across the Ottawa metropolitan area. It is one of four board options for Ottawa families; students can enroll in nondenominational English public schools, nondenominational French public schools, English Catholic public schools, or French Catholic public schools. Attendance is free for all enrolled families. According to a 2022 census survey, 30% of OCSB students identify as having a religious identity other than Catholic and/or Christian; 40% identify as having "racialized" identities; and 52% identify as coming from low- or middle-income families. In addition, a recent survey of grade 9-12 students, found that 13% identify as LGTBQIA.[6]

Catholic schools may not be the first place one might think to look for deep learning. A longstanding feature of education systems across former British and French colonies, they are known for providing a solid but conventional education where students learn reading, writing, and 'rithmetic in a traditional but rigorous enough way to prepare them for college and beyond. The largest ever study of Catholic schools by Anthony Bryk and colleagues confirmed these patterns, painting a picture of "formal" and "strict but caring" instructors running highly traditional teacher directed classrooms where students engaged in tasks such as reading and

discussing Western canonical literature (pp 85-91).[7] Overall, the picture is one of pedagogical effectiveness – but not necessarily one that includes much student agency or creativity.

At the same time, Catholic schools have some distinctive characteristics that can be mobilized towards deep learning.

In particular, Bryk et al's study revealed that Catholic schools see themselves as being responsible not only for teaching academic content but also for shaping the *character* of their young charges. The Catholic schools they studied had a communal ethos, grounded in a shared purpose, caring relationships, and a commitment—held by parents, students, and faculty alike—to enhancing students' academic and social development. Finally, Bryk et al's study emphasized that Catholic schools in the modern era have moved away from a strict faith-based agenda, opening their doors to students from a range of religious backgrounds and embracing racial and socioeconomic diversity.

Despite all of this, as we geared up to visit Ottawa for the first time, we were admittedly skeptical. We also knew through extensive experience that district-level change efforts are often all talk and little action: a revised strategic plan that only a few stakeholders understand, a temporary infusion of support for programs that launch but never scale, glossy new posters on the walls of classrooms where the status quo nevertheless prevails. What we encountered during our visits to Ottawa, however, gradually unwound this cynicism, replacing it with a sense of possibility and hope.

The first thing that struck us, as we talked with OCSB leaders, was the simple fact of how long, and how consistently, they had been at it. When we visited during the 2022-23 school year, OCSB had been pursuing the deep learning agenda for a decade. It had been championed by three consecutive Directors of Education and supported by ongoing guidance from Michael Fullan and Joanne Quinn's team at the New Pedagogies for Deep Learning (NPDL) global

network.[8] This stability of commitment is rare in the churning waters of public education, and it had permitted the work to become gradually sewn into the fabric of the work happening within schools, helping OCSB to prevent the "this too shall pass" ethos that frequently characterizes reform efforts.

Beyond the longevity factor, **if we had to describe what differentiated OCSB from other districts pursuing similar goals with less success, we would point to five factors: 1) a relentless commitment to pursuing deeper learning across every aspect of the Board's operations; 2) a set of structures and systems that evolved dynamically to support these goals; 3) a symmetrical culture that trusted schools, teachers, and students to take the broad umbrella of "deep learning" and own it in ways that made sense for them; 4) a skillful weaving of existing practices with novel practices in ways that made new goals seem achievable; 5) a personal and relational approach to change that suppressed ego at the top, empowered other actors in the system, and built the trust needed to sustain the work over the long haul.** In so doing, this strategy integrated a series of seemingly opposing qualities: stability and change, centralized direction and local innovation, external expertise and internal adaptations, honoring the past and embracing the future, strong leadership and significant humility. In turn, this allowed OCSB to create a whole that is more powerful than the sum of its parts – the opposite of what usually happens with large-scale educational change efforts.

OCSB's transformation efforts are neither complete nor perfect. We observed more movement towards deep learning in some classrooms and schools than others, as well as some instances of old wine being poured out of new bottles. In our judgement, however, OCSB does demonstrate the power of what a skillfully run district can accomplish in moving a whole set of schools down the path toward more ambitious and relevant student experiences.

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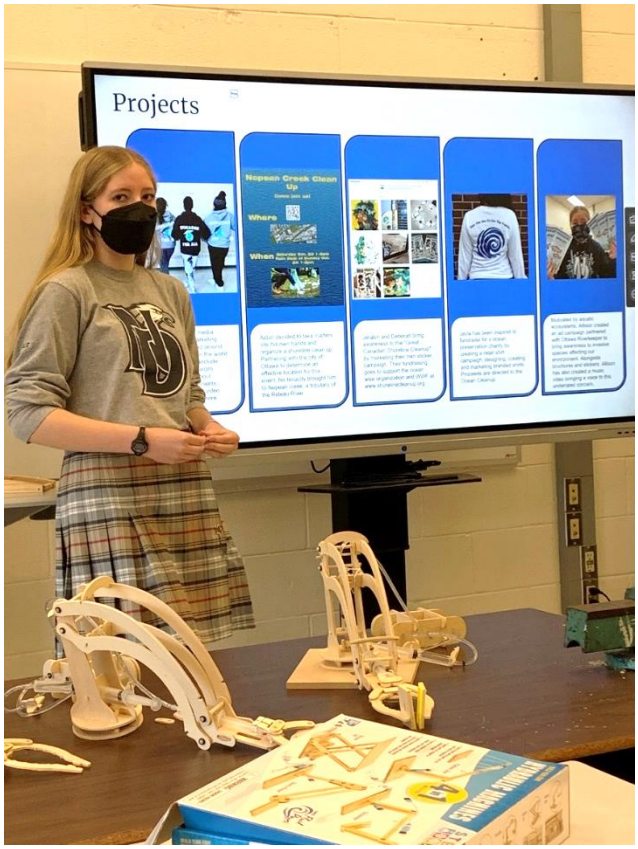
Picking a Direction and Sticking with It

It all began with a feeling. As far back as 2010, in line with the broader ideological sea-changes described above, there was growing sentiment among leadership at OCSB that the Board

needed to modernize, adopt 21st century competencies, and think more expansively about education and schooling. It was this sentiment that spurred the Board, in 2014, to join the New Pedagogies for Deep Learning (NPDL) global network. NPDL offered a set of frameworks and intellectual resources for organizing its work, including a "portrait of a graduate" organized around the 6 Cs as well as a set of four elements for making a shift towards deep learning: learning partnerships, pedagogical practices, learning environments, and leveraging digital. These interlocking frameworks proved very useful for OCSB's leaders, who saw them as giving a shape to their previously inchoate aspirations.

As Shelley Montgomery, OCSB's Superintendent for Elementary Student Success described it, she and her colleagues were already moving towards 21st century skills, but NPDL's integrated framework "made it so much simpler and more attainable." Thus, the origin story of deep learning in OCSB is not one in which a new priority was imposed top-down out of the blue, but one in which an organically developed commitment attached itself to an aligned framework.

A critical early decision that OCSB made was to adapt the NPDL framework to their setting. Drawing on the materials developed by the NPDL team, OCSB leaders created a "Portrait of an OCSB Graduate" – later adapted into "Portrait of an OCSB Learner" – which had the same 6Cs as the original framework but defined each of them in a way that integrated Catholic values. So, for example, citizenship was defined as "a responsible citizen who gives witness to Catholic social teaching by promoting peace, justice, and the sacredness of human life." This integration of the old with the new, of the familiar with the innovative, helped OCSB leaders to introduce educators and families to their new goals in a way that made the new goals feel more like an evolution than a radical departure. Box 1 shows OCSB's Portrait of a Learner.



An Ottawa Catholic learner is expected to be:

- A discerning believer formed in the Catholic Faith community who celebrates the signs and sacred mystery of God's presence through word, sacrament, prayer, forgiveness, reflection, and moral living.
- An effective communicator, who speaks, writes, and listens honestly and sensitively, responding critically in light of gospel values.
- A reflective, creative, and holistic thinker who solves problems and makes responsible decisions with an informed moral conscience for the common good.
- A self-directed, responsible, lifelong learner who develops and demonstrates their God-given potential.
- A collaborative contributor who finds meaning, dignity and vocation in work, which respects the rights of all and contributes to the common good.
- A caring family member who attends to family, school, parish and the wider community.
- A responsible citizen who gives witness to Catholic social teaching by promoting peace, justice and the sacredness of human life.

Box 1. OCSB's Portrait of a Learner

Another important decision was that OCSB leaders decided from the start to ensure that deep learning was going to be more than just a niche initiative. With an unwavering focus on the goal of making deep learning the focus in all OCSB educational spaces, their efforts began with seven schools in 2014-15, expanded to 20 schools the next year, and then included each of their 83 schools by 2016-2017. This strategy drew in part on the Fullan and Quinn playbook, as in their 2015 book *Coherence* they emphasized that moving whole systems is not only possible but necessary, and that such moves require working consistently and coherently across many different domains.[9]

During this rapid scale-up, OCSB leaders worked to create clear, focused, sustained messaging around the Board's new direction. The OCSB leadership team simplified "New Pedagogies for Deep Learning" into simply "Deep Learning" (no one knew what "NPDL" meant, said one official) and printed thousands of copies of a short spiral-bound deep learning reference guide that went to everyone in the district. They then made sure to treat this guide as a meaningful

living document, using it to anchor teacher professional learning sessions, leadership team meetings, and communication to parents and visitors. When new teachers were hired, they were asked how they were going to incorporate deep learning into their classrooms. When principals and other administrators were hired, they were asked how they would foster deep learning in their charges. Throughout, Board leaders insisted that deep learning was not an add-on to its previous focus areas, but rather an all-encompassing and durable direction for long-term change. As NPDL's Mag Gardner put it, "It's not, 'I have to do equity *and* I have to do deep learning'… everything is under one tent."

Over time, this effort resulted in powerful shared language. When we visited different schools and talked with teachers and principals, there was a remarkably common referencing of "deep learning" "the 6C's" and the "four elements." While the depth of understanding sidestep of those ideas varied, the Board had clearly succeeded in getting everyone to understand what direction they were heading and the key strategies they were using to get there.

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A final component of OCSB's early strategy was to require – and support – changes to each school's physical space. Prior to 2014, almost every OCSB building had a traditional library, Now, schools needed to convert their libraries into "learning commons" where students could not only conduct research but also connect informally, collaborate in small groups, and engage with community members. This entailed small but real transformations; schools had to select a subset of high-interest books to keep while donating or relocating the rest, replace study carols with beanbags and tables, help librarians reimagine themselves as facilitators rather than curators, and generally shift the culture of how students and educators moved through the space. As OCSB Director of Education Tom D'Amico put it, the learning commons strategy - tied to the learning environments element of the NPDL framework - provided an "easy, early win" as OCSB began its transformation journey. The new spaces, while they couldn't in and of themselves create changes to teaching and learning, provided a

constant visual reminder that well-being and collaboration were now central priorities.

Seeking Coherence in Practice

Of course, common language and consistent messaging are only as good as their mobilization into practice. Both Michael Fullan and Richard Elmore have emphasized that "practice makes practice" – in other words, it is through doing the work that people learn to do the work.[10] In particular, it was as schools and individual teachers tried to bring deep learning to life that they began to develop a more textured understanding of what the change might mean in practice. This process is not one that can be hurried; even with clarity about the direction of the directed change, the process of (un)learning practices entails an extended period of grappling, experimentation, and discussion.

To support this process, OCSB made a choice to gradually redirect many of its resources toward the change effort. Notice that the word here is redirect – OCSB's transformation efforts involved no major grant funding or fundraising, but rather involved strategic reallocations. To this end, shifting the use of *time* – perhaps the most precious resource of all – was just as important as allocating funds for aligned projects such as the learning commons and the development of web resources. For teachers and principals, time spent with their team or PLC became time to pick one of the 6 C's and one of the elements to work on intensively over the course of each academic year. For Board leaders, meetings gradually moved from having a portion of the time devoted to the deep learning initiative to being entirely about it, with each month's session connected to a specific part of the framework. OCSB also phased in a system of micro-credentialing tied to the new frameworks; teachers could enroll in after-school learning sessions, earn a badge in areas such as "leveraging digital," and then become coaches who helped their peers do the same. All of this was supported by a set of learning progressions, developed by Quinn and the team, which showed what better or worse work looked like on each of the framework's dimensions. It was also bolstered by regular engagement with the NPDL team and attendance at NPDL network convenings, which system-leaders and teachers alike reported to be moments to rejuvenate and continue to learn.

In this, OCSB managed to sidestep two ways that systems change efforts often go wrong. First, leaders recognized that deep learning needed to be seen as "*the* thing," not a passing fad or an add-on to other priorities. Doing this consistently over the long term has served as an important way to reinforce the work, reassuring educators that the slow and uncomfortable process of taking up new practices wouldn't be for naught. Second, by transforming core Board- and site-level meetings into opportunities for stakeholders to share and grapple

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together around the new framework, OCSB helped to ensure that promising practices and stances could spread quickly rather than (as they often do) remaining confined to isolated pockets. The Social Entrepreneurship Program, for example, began with one teaching team at one school site experimenting with how to draw together current social issues, product development, and charitable giving into an authentic student-led project. The model they figured out was quickly taken up and iterated by peers and colleagues at other sites, and within a few years OCSB leaders helped to develop a program website with robust resources to help others more easily follow suit. In addition to digital resources, OCSB also hired some civic minded retired business leaders to serve as mentors, broker connections and help students think through the feasibility of their more entrepreneurial ideas. The Board also cultivated an unpaid partnership with Shopify, an e-commerce platform that allowed student-created products to be marketed and sold in a consistent way. OSCB Thus, what started as teacher-led experimentation in one corner of the ecosystem was quickly able to become a cornerstone of the system's transformation.

Deep Learning as a Big Tent

So far, we have explored the ways in which OCSB picked a clear direction, messaged it coherently, aligned resources to support it, and stuck with it over the long haul. Each one of these elements is an integral and interlocking part of how the Board was able to launch and spread a large-scale change effort. One thing that we haven't yet named, however, is the fact that the direction that the board picked was in some ways quite general. To this end, the phrase "deep learning" is not tied to a proscribed set of practices; it is an integrative term which first evokes what is it *not* (shallow, rote, authoritarian, teacher-centered) rather than immediately revealing what it *is*.[11] Even with the clarity added by supporting documents such as the 6 C's, taking a "deep learning approach" allows for connections to all kinds of related traditions and frameworks: constructivism, culturally responsive pedagogy, design thinking, social-emotional learning, land-based pedagogy, critical pedagogy, youth voice efforts, social entrepreneurship, and project-based learning.

This lack of specificity represents an important strategic choice. As the previous comment from Mag Gardner suggests, OCSB took a "big tent" approach, creating enough specificity and shared language to enable stakeholders across the system to understand the direction of the desired change and to see themselves as part of a system-wide effort, but also allowing for a wide range of access-points and localized areas of focus. If school A wanted to focus on ensuring that students had regular opportunities to work in groups, and school B wanted to focus on strengthening their culture of belongingness, and school C wanted to incorporate more outdoor play-based learning -- great. If the math department wanted to try out teaching with "vertical non-permanent surfaces" and the English department wanted to incorporate more indigenous authors and the Career and Technical Education department wanted to change the schedule to allow more students to try out courses -- great. It was all part of the deep learning teaching/learning framework; it would all help the system move in the right direction.

In many ways, this was a savvy choice. The range of possibilities attached to the umbrella goal of deep learning allowed site leaders and teachers to feel that they had a measure of agency to pursue innovations that made sense for their own communities, while still connecting their work to systemwide goals. It also allowed OCSB to dramatically reduce the resistance that often accompanies educational change efforts that are highly prescriptive. Instead of experiencing the Board's new focus area as a mandate from on high that negated their expertise and goals, educators had an expansive set of possibilities for layering innovative practices into their existing repertoire. The result, when we visited, was that many classrooms had combined elements of old and new.[12] In an 11th grade science course, students learned about the transmission of communicable disease – a longstanding component of a unit on public health -- but this time their experience began with a "body fluids exchange" simulation to bring the topic to life. In a Grade 5 literacy course, students shared their predictions about an upcoming read-aloud novel – but instead of doing so individually on a worksheet, they worked in small groups to record and share their thinking via a Flipgrid video. And in classes undertaking the Social Entrepreneurship curriculum described earlier, educators wove together an ethos of charitable giving – a timeless mainstay of Catholicism – with opportunities to learn about contemporary social issues.

The expansiveness of deep learning as a notion was also important for OCSB's executive leadership team. Whereas system-wide initiatives are often relegated to oblivion as soon as the "next big thing" comes along, deep learning could swell to encompass emerging areas of focus, such as the emphasis on wellness during the Covid-19 pandemic and the calls for antiracist pedagogy that accompanied the high-profile murders of George Floyd and others by police. Thus, when Tom D'Amico described the decision to spend funds in order to partner

with local elders in designing and building indigenous learning spaces adjacent to several OCSB school campuses – this could be connected to the goal of deep learning. Similarly, when the Board trustees approved flying the Progress flag at every school, it was seen as supporting learning partnerships between members of the 2SLGBTQ+ community and schools, which aligned with the Deep Learning model.

Pitching deep learning as a big tent, however, also sometimes had some corresponding drawbacks. To this end, during some of our visits to OCSB classrooms – especially at the secondary level – the lack of precision about what was meant by "deep learning" meant that we saw some instances of adopting new language without much underlying change in practice. In a high school geography class, students sat in groups and copied facts from the internet onto google slides that they then presented verbatim to the class; this version of collaboration and "leveraging digital" was neither deep nor deeper than what could have been done individually in rows with a textbook. In a middle-grade math classroom, students stood at vertical whiteboards and solved equations together, only to have the teacher read out the answer and move to the next task without discussion; this routine allowed for only a fraction of the collaboration and discourse that such an arrangement was intended to support. OCSB is certainly not the only context in which secondary schools and classrooms have proved the slowest and hardest to change. Research has long suggested that early childhood education and primary education are generally more learner-centered than those of the higher grades, where competition and sorting are harder to avoid and where classrooms tend to be more teacher-centered.[13] And there are certainly a number of promising deep-learning-related changes for OCSB's secondary students, for example the Board's decision to convert Grade 11 English into an indigenous literature course, Board-wide initiatives to promote and support wellness initiatives, and structures (such as the Black Student Advisory Council) which invited students to engage regularly and meaningfully with Board leaders. But the tradeoffs that accompany OCSB's big tent approach to change were especially apparent in upper-grade classrooms, where, as D'Amico put it: "Traditional subjects are leveraging tech and bringing in more guest speakers, but the core pedagogy hasn't changed as much as we'd like."

Conclusion: A Promising Proof Point for System-Wide Change

System-wide change has been an elusive goal in education. There are many inspiring classrooms and a smaller number of outstanding schools, but hardly any large systems that have consistently mobilized towards systemic change. To the degree that such examples exist in the literature, such as in Montgomery County, MD, and Long Beach, California, system-wide change has been mobilized around 20th century goals such as literacy, numeracy, and graduation rates. To mobilize a whole system towards 21st century competencies is a much more demanding challenge, both because the degree of change it asks of everyone involved is greater, and because you can't script "deep learning." You can't McDonalds or Starbucks your way to deeper learning – you have to mobilize the heads, hearts, and hands of all of your people in a way that creates coherence and movement in a shared direction.

Against this backdrop, there is much to admire about what has happened in Ottawa. Over the course of a decade, leaders moved a large district in the direction of more relevant, challenging, and engaged student experiences. They did so through an unwavering and purposeful approach that oriented everything around one core idea, drawing on resources provided by outside experts while also enabling considerable autonomy, agency, and ownership by local stakeholders. Managing this tricky balance gave the work both coherence and momentum. All of this was supported by deep relational work; as we traveled throughout Ottawa with D'Amico and members of his team, it was clear that there was mutual respect between OCSB administrators and local educators, with the former creating the conditions for deepening the learning and the latter doing the hard work of actually making it happen.*

Giving local educators some control over the ends as well as the means creates a different level of ownership, because it means that practitioners get to define their purposes as well as simply the strategies by which they will pursue those ends.

** There is some similarity to the popular business idea of "tight-loose" approaches to management, in which the central authority holds tight to the goals but allows local actors to innovate with respect to the means. What was interesting here was that localities had the advantage of setting some of the ends as well as the means—as we've suggested above, an English department might decide to foreground critical thinking through Socratic seminars while a vocational tech department might choose to focus on collaboration as they revamp their internships. Giving local educators some control over the ends as well as the means creates a different level of ownership, because it means that practitioners get to define their purposes as well as simply the strategies by which they will pursue those ends.

OCSB's strategy also has significant advantages given the nature of the system they were trying to transform. Scholars have described the system of public education in North America as being both "loosely coupled"—meaning that the everyday work of teaching is not closely monitored—and "open"—meaning that schools are susceptible to changing developments in the broader culture.[14] In this kind of world, an approach to change that tries to specify an instructional model and make sure that all teachers learn and teach it is fighting against the basic organizational form of public schools; it is asking a loose system to be a tight one, and it is asking an open system to be a closed one. By contrast, OCSB treated the loose coupling of the system as a feature rather than a bug, enabling different parts of the system to make changes in ways that were consistent with their context.[15] OCSB's approach also allowed schooling to be dynamic in the ways that deep learning itself requires, incorporating issues connected to racial justice, LGTBQ+ rights, and First Nations people, as these things became more salient and center to public discourse. Finally, OCSB was able to draw in developments that were happening in the broader educational field, such as the idea of having math students collaborate and make their mathematical thinking visible on vertical whiteboards.

This "big tent with local flexibility" approach also had political advantages. It enabled the work to grow organically, accelerating in the places where the ground was most fertile—elementary schools, interdisciplinary social justice-oriented projects, and the peripheral areas of schools such as electives and vocational education—while moving more slowly in some of the spaces that are hardest to change, such as core classes in secondary schools. While the absence of deeper changes in many core secondary classes was pedagogically frustrating for district leaders, from a political point of view it may have been wise because it allowed the district to make progress on many other fronts without directly engendering resistance from the system's most pedagogically conservative stakeholders.

We also do not want to leave the impression that board leaders set the course and then left it entirely to localities to innovate their way forward. Quite to the contrary, OCSB leaders provided both pressure and support for schools to align their work with the goals of deep learning. While there was little 'specific' top-down imposition, the system produced plenty of specificity on the ground-- a phenomenon that was further refined by the countless presentations and interactions by students, teachers and administrators both internally, and with external groups. They leveraged their partnership with NPDL to develop common OCSB-specific language anchored in the six C's and four elements; they helped to transform libraries into learning commons; they offered a credentialing program whereby teachers could become "deeper learning certified"; they required that all primary schools do a project around UN Sustainability goals; and they supported these projects by establishing partnerships with

retired business leaders and also with Shopify, an e-commerce platform which in turn allowed students to sell products and raise money. In short, they drew on virtually every lever that a district has at its disposal.

What's next for OCSB? What would it take to ensure that the experiences of learners in virtually every classroom—including secondary classrooms—were transformed in the direction of deep learning? We believe that this entails a next level of investment—one that goes subject by subject and grade by grade, with teams of teachers and teacher-leaders going through the curriculum and thinking about how to thin it in ways that would continue to advance core skills while creating space for choice and depth. Simultaneous to this work on the "what" of secondary subjects, there would need to be an effort to support teachers in learning a new "how," which would require sustained support from knowledgeable others with specific knowledge of more constructivist and student-centered pedagogy in their areas.[16] This is human work, and it will never be finished—but the process of trying to make these changes will itself be a powerful learning experience for all of those involved.

OCSB's work around deep learning is and will always remain grounded in a commitment to the local community. Over time, however, the Board also has become a beacon for others who seek to enact similar work in their contexts. Today, OCSB plays an important role as a "proof point" for Canadian and international visitors associated with NPDL, who visit Ottawa in order to find inspiration, energy, and strategic clarity. Thus, in an example of reciprocity, OCSB is now giving back to the NPDL network even as it continues to rely on the support that the network provides. Catalyzing, supporting, and sustaining system change is an extraordinarily difficult task, but the ground is more fertile than it ever has been – and OCSB offers an illustration of the possibilities that can emerge from cultivating it.

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New Pedagogies for Deep Learning (NPDL), is a global innovation partnership committed to transforming learning so that **all** students flourish by developing the Global Competencies they need to navigate our complex, ever changing world.

Deep Learning is the process of developing the six Global Competencies: citizenship, character, communication, critical thinking, collaboration and creativity. Teachers enable this by designing authentic learning experiences that activate engagement and enable students to create and use new knowledge in real contexts.

The Deep Learning approach includes a framework, set of tools and collaborative learning processes that transform teachers into activators and architects of learnin. Tools and resources support all levels of leadership to create contextualized conditions and a culture that supports Deep Learning for all.

The approach and resources have been developed and tested through a decade of practice with more than 20 partner countries. The focus on whole child learning with whole system change is transformative.

Connect with the Deep Learning Community at www.deep-learning.global
Learn more about getting started or deepening the work in ***Dive into Deep Learning; Tools for Engagement*** (2020) Quinn et al.,Corwin

Notes

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