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QUEEN'S FACULTY OF EDUCATION

FALL 2018



Social Justice Clubs

Student Mental Health and Well-Being

Reconciliation Literacy

Inequality and Student Outcomes

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Forum

Fall 2018

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Paper copies can be requested at knowledgeforum@queensu.ca.

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ISSN (print) 2561-8989 ISSN (digital) 2561-8997



The Education LetterA Brief History

BY REBECCA CARNEVALE



Dr. Rosa Bruno-Jofré

n the summer of 2017, the Queen's Faculty of Education released the final issue of its research publication the Education Letter in the form it had taken since its inception in 2005. Led by editor Dr. Rosa Bruno-Jofré, the Education Letter created space for an ongoing dialogue about the major issues facing education. Dr. Bruno-Jofré's vision integrated the ideas of a global community of educational researchers. The Knowledge Forum builds on the community and platform created by Dr. Bruno-Jofré and her collaborators. Our editorial team extends our appreciation and thanks for the excellent work of our predecessors.

This new iteration of the publication is primarily an online space for faculty, alumni, and teachers to consider themes relevant to public education. It is a space to inspire conversations about education, and share ideas, strategies, and best practices from our faculty, students, and alumni across the globe. We purposefully, and hopefully, use the word forum; we want to ignite discourse, to hear a diversity of voices, to understand other perspectives. To this end, we ask that you share your responses to the ideas expressed in this issue, concepts for future themes and articles, or simply your reflections on teaching and learning: knowledgeforum@queensu.ca.

In The Knowledge Forum's first issues, we will look back at themes from the Education Letter that help us historically situate in the present. In 2008, as governments around the world faced a continuing increase in oil prices, the fall/winter edition of the Education Letter explored the topic of environmental education. The discussion of environmental and ecological education was framed as a moral question, of citizenship, and the social implications of environmental problems. In this issue, Lorraine Kasprisin explored the ethical implications of education. She positioned morality and ethics as embedded in community and responsibility. Diane Lawrence's article also brought the reader back to this idea of interconnectedness, and shared responsibility, through the lens of ecological literacy. The emphasis of responsibility, community, and ethics in education are revisited in this inaugural issue of *The Knowledge* Forum. Whether we are exploring environmental education, teacher well-being, or social justice clubs, a holistic, ethical approach to learning and teaching is as critical now as it was a decade ago.

We invite everyone to revisit this issue of the *Education Letter* in our archive: educ.queensu.ca/education-letter.



A New Forum

Education, Schooling, Knowledge, and the Public Good

BY THEODORE CHRISTOU

ohn Dewey cautioned us not to conflate schools and education. Schools were an institution and education was a way of learning throughout life. Dewey's sentiments were distilled, or distorted, in the Marxist scholarship of Michael Katz, the sometimes anarchist work of Joel Spring, and the revolutionary thought of Ivan Illich, who argued that we ought to de-school society. Regardless, education is larger than schools. See Figure 1.

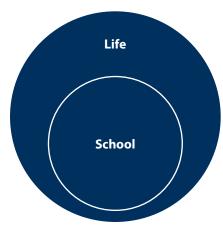


Figure 1: Life is Bigger than school

This is not meant to diminish the importance of school. Many of the contributions to this collection testify to this point. We spend many of our formative hours, days, and years within schools. Under typical circumstances, we will spend much more of our time outside of schools.

The theme of this issue is education and the public good. I see no difference between the two. Education *is* a public good.

As a public school teacher in Scarborough, Ontario, my educational philosophy could be distilled to a few basic precepts. Amongst these was the following: No matter what I teach, I want every learner to want to know more about the subject after I am done teaching. In other words, I saw school as a spark, not a flame.3 I always had relatively little time with my students. Following graduation from my classroom, some would stay in touch. Others would not. Still, I wonder: Do the 6th grade students that I taught in 2003 still care about baleen whales and the Yucatan Peninsula?4 When a news story about the population of humpbacks crosses their social media feed, do they click and care – even if they have forgotten me and their engagement with The Voyage of the Mimi, an educational resource developed in the 1980s that I was using in the early 2000s to integrate literacy, science, and social studies - or do they frown with disdain.5 If the former: I did my job adequately. If the latter: I hope it is not the latter.

What is the relationship between learning and goodness? Learning reveals how little we know. The more we learn, the more we realize how much more there is to learn. This basic precept is at the core of Platonic educational philosophy. Socrates, who was Plato's teacher and, later, mouthpiece in his writing, argued that he was the wisest man in Athens. He was the wisest because he was the only person in Greece who knew that he knew nothing (relative to what there was to know).⁷

If one presumes to know, one stops seeking to learn. Education is thus, according to Plato, the ongoing pursuit of knowledge. Further, education is accompanied by intellectual modesty and hospitality. Modesty is the antithesis, the presumption, as well as the conviction of knowledge. Wars, intellectual as well as military, are fought on the basis of presumptions and convictions. These are things that divide us. Modesty compels us to come together, to ask, to inquire, and to wonder. Hospitality permits us to entertain ideas without necessarily adopting them.8 It is vital to welcome ideas into your mind without fearing that they will corrupt your heart. There are many ideas, many of them good. Most of these we would never encounter unless we were hospitable towards them and not of the conviction that we already had all the knowledge we needed.



Raphael School of Athens

Welcome to the inaugural issue of The Knowledge Forum. This publication is intended as a space for intellectual modesty and hospitality. As an editorialist, I beg for your indulgence. Do not take any of the arguments made for granted. Do not take the contributing authors' words for granted either. Do entertain the thoughts presented here. A forum is a meeting space for public discussion and debate.9 Here, faculty, alumni, and students from Queen's University's Faculty of Education will converge, converse, and create new understandings by confronting new perspectives on old ideas.

Dr. Theodore Christou is a member of the Knowledge Forum editorial board and Associate Dean Graduate Studies and Research at Queen's Faculty of Education.

- 1 By my calculus, that would be approximately 22,000 hours and more than 900 days in public school alone, not accounting for homework and other school-related tasks. This would vary on how many years of kindergarten you attended and if you attended Grade 13, as I did. These figures do not account for any postsecondary schooling.
- 2 Teachers, administrators, and school staff may fairly refute this point.
- 3 This is to reframe the popular adage attributed to William Butler Yeats, that education is the lighting of fires and not the filling of buckets.
- 4 The question does presume that they cared at some point in time.
- 5 This series intermingled ten half-hour fictional episodes narrating the story of a young boy travelling with a group of marine biologists to the Mayan Riviera on his grandfather's boat, the Mimi, to track the migration of humpback whales. The series unpacked the historical, scientific, and cultural aspects of the story. The young boy was played by Ben Affleck. See youtube.com/watch?v=Kvz1EyzJipI.
- 6 Personally, I am enthralled when I encounter news stories or scientific studies of whales. When I was a 6th grade student in 1989, my teacher first introduced me to *The Voyage of the Mimi*. As a first-year teacher reflecting back on my own learning in seeking to plan instruction that would inspire awe while weaving together disparate subjects in a thoughtful manner, this unit of study stood out. Through the Toronto District School Board, I was able to recover a copy of the series in VHS, as well as the readers and workbooks. This is, perhaps, why I now work as an educational historian. Working with old materials, through archives, and finding meaning for these things that are buried by time gives me great joy. See mymodernmet.com/humpback-whale-protects-diver/.
- 7 This is made most clear in Plato's Apology where Socrates is depicted in court, judged by a jury of his peers, for corrupting the youth and preaching false gods. Both were crimes. Socrates was convicted to a penalty of death.
- 8 In Book 1, Chapter 3, of his *Nichomachean Ethics*, Aristotle equates this very idea to virtue. Aristotle, who would become the teacher of Alexander the Great, was the student of Plato.
- 9 The term forum emerges from the context of ancient Rome. It is the evolution of the ancient Greek agora, which was, likewise, a public meeting space where one could encounter both trade and discussion.

Blue Sky School

This Learning Centre is on a Learning Journey



Ten of the pioneer students at Blue Sky School

BY HELEN DANIELS

Learning is "a process that leads to change, which occurs as a result of experience and increases the potential for improved performance and future learning."

It is a typical morning this spring day at Blue Sky School: students trickle in, greet each other amicably, and quietly gather around a large table in the middle of the open classroom. Each grabs a Chromebook to complete the daily "how do you feel" survey and then they begin planning their day and digging into independent projects.

A coach is available to support them as they work. One student is practicing her keyboarding, one dancing in the Health Lab, a couple are completing math activities, yet another heads to the Prototype Lab to attend to the circuit board he has been building – but only after making himself a snack in the kitchen. Apparently, he prefers to eat breakfast at school.

Meanwhile, Shauna Pollock, Blue Sky School co-founder and pedagogical advisor, calls Grace over to ask her about the spring clean-up she is hosting today. Grace shares the schedule of activities and surprises Shauna with the mention of the guests she's invited from their nearby buddy school especially since those guests will be arriving within the hour. Without missing a beat, Shauna efficiently assists Grace to streamline the order of activities. The day is rolling and the plans are shifting but that isn't a problem, because responding to change and learning by doing is the whole point of Blue Sky School.

Blue Sky School calls itself the experimental prototype school of the future: an inclusive and empowering learning centre. The doors opened in September 2017 in Ottawa, Canada, with a group of fourteen pioneer students aged eleven to fourteen years.

Co-founders Karen Hill and Shauna Pollock are both very experienced teachers who have worked for years in public schools. When envisioning Blue Sky School, they tore up the playbook of conventional school to re-imagine an inclusive community

Ambrose et al., 2010, p.3

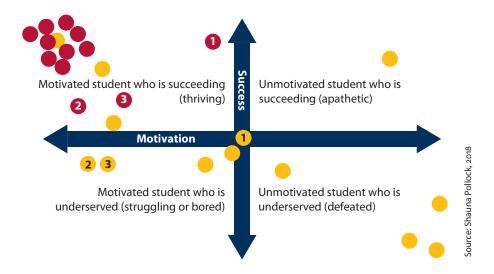
where students could complete their junior to high school years empowered and equipped to pursue their "wildest and most ambitious dreams" (Blue Sky School).

At Blue Sky School, students become a part of a multi-aged community of fourteen learners to one pedagogical coach. The students are inspired and supported by local volunteer subject matter expert coaches and mentors. Each student defines and refines their own learning goals to solve problems that are important and relevant to them. The students have ownership over every aspect of their learning – from the physical space, the schedule, and curriculum, to the ways they demonstrate their progress, achievements, and the manner in which they are assessed (Blue Sky School).

Of all the innovation and experimentation that takes place every day at Blue Sky School, one of the most compelling features may be how the entire approach and implementation is founded on a learning model. The co-founders are clear that the entire model is an experiment and that they will continue to adapt and change the model according to the failures and successes at every stage.

So far, the data and stories collected from the first seven months of this experiment show that the model has produced a warm and welcoming community of young people who are motivated, who have increased their confidence and willingness to try, and who love learning. One example of this can be seen in results from the students' self-assessed levels of motivation and success from their previous schooling experiences, as represented by the yellow dots in Figure 1.

After spending six months at Blue Sky School, the students completed the same self-assessment. Those results are represented by the red dots. In every case, the students reported experiencing more success and an increase in motivation since joining Blue Sky School.



Some of the lessons learned during this schooling experiment have been surprising. For instance, students requested longer school days and fewer field trips so that they could have more time to focus on their projects. They even requested that a March Break camp be created so they would not have to miss two weeks of school. In addition, together students discovered ways to manage digital devices as tools for learning and to avoid them as objects of distraction. They also created guidelines to enable food preparation and consumption in response to visceral hunger cues while respecting the community requirements for uninterrupted activities.

It is now afternoon in the classroom; they call this flow time. The pioneer students are wrapping up various group workshops and preparing to video chat with an educator in another city. For this model to influence system change the Blue Sky School stories must be told, so every month the community hosts a Think Tank for local educators, and the students share their experiences on their own VoicEd podcast. Everyone at Blue Sky School willingly imparts the successes and failures of this experiment so that others can benefit and test the results for themselves. The future of schooling is here and everyone is learning.

Helen Daniels (B.Ed.'98-OEE) has worked for over twenty years as an experiential learning practitioner in the private, not-for-profit, and public sectors. Currently she is designing a learning and development program for the #FutureOfWork #GCAgents in the Federal Public Service. Helen remains fascinated by experiential education and the deschooling of learning, which is why her daughter is one of the pioneer students at Blue Sky School. She recommends that you follow this amazing learning experiment at @blueskyschoolca and blueskyschool.ca/.

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Reaching Our Sometimes Hardest-to-Reach Students:

A Suggestion for Improving the Mental Health and Well-Being of Secondary Students in Ontario

BY KATY ELDRIDGE



entors are found in many avenues of our lives. These guides become part of our path and it is likely as you are reading this you are able to recount a person in your life that has helped to advise and steer you in a positive direction. As educators, we are able to be these mentors and guides to the many students in our school systems. But, how do we go about doing that? How can we help improve the mental health and well-being of our students?

Many of our secondary schools are in dire need of assistance. We know that we have some of the best people on the front lines who are drained, overworked, and trying so hard to continue to make a difference in the lives of our young people. We know that educators have a great impact on student success (academically, socially, increased graduation rates), specifically with youth considered at-risk. Andy Hargreaves (2003) even states that one of the most commonly cited reasons for students dropping out of high school is that "no adult really knows or cares for them" (p.61). Research reinforces that the need for strong mentors is paramount in supporting the success and mental health of our youth in secondary schools.

Educators need to understand how to encourage and maintain positive relationships with their hardest to reach students. Not only will it lead to success, but it will promote better mental health, increase positivity, and ultimately contribute to the greater good. Teachers are no longer the vessel of knowledge at the front of the classroom, but the *guide* to the knowledge within the classroom. If we focus on the mentor/mentee relationship we may begin to have a better

understanding of how to go about supporting our youth. The more we understand what a positive student/teacher relationship looks like, the better we can equip our teachers, those very ones on the front lines, to assist and guide our youth. Thus there are two sides to this coin: mentoring youth and mental health.

There is a plethora of courses that support educators learning to mentor other educators. In Ontario specifically, the Ministry of Education funds the New Teacher Induction Program that provides learning opportunities for both mentor and mentee teachers. In 2016, the Ontario College of Teachers (OCT) developed an additional qualification in mentoring that is currently offered at four locations. This course is primarily aimed at mentoring staff and other teachers. I am suggesting that it is necessary that we go further and develop supports that teach teachers how to build a positive mentor relationship with students.

According to Statistics Canada, "suicide was the second leading cause of death for people aged 15-34" (Navaneelan, 2017). I strongly believe that positive relationships in the classroom with our sometimes hardest to reach students would have an impact on the mental health and well-being of our young people. This area needs to be further studied and educators need support, training, and funding in order to be able to mentor and guide students in the twenty-first century. The Government of Ontario has created a publication *Open Minds*, *Healthy Minds*: Ontario's Comprehensive Mental Health and Addictions Strategy (2011) addressing the issue of need for supports for those struggling with mental health issues. Open Minds, Healthy Minds states that one of its goals is to intervene early and to do this they, "...must be able to identify and reach out to people with problems, wherever they are: in school, at work, in their doctor's office or in the justice system" (p.8), because early identification can lead to "...better

health outcomes, improved school attendance and achievement, contributions to society and the workforce, and cost-savings to the health care, justice and social service systems" (p.20). This document has allowed school boards to begin to create a plan to support mental health strategies. Three major school boards in the Greater Toronto Area have mental health goals in place: The Toronto District School Board began their Mental Health Strategy in 2013 and it is central to their goals ("Mental Health Strategy", 2013); the Peel District School Board has implemented Mental Health and Well-Being as one of its four board goals into 2021 ("Plan for Student Success", 2016); and the York Region District School Board also has Mental Health as one of its goals ("Board Improvement", 2016). Not only are the large GTA boards focusing on the need for a Mental Health push, but smaller boards such as Limestone District School Board and Waterloo Region District School Board are as well ("Mental Health: Limestone" 2017; "Learning at WRDSB", 2016). Out of the thirty-four public secular boards in Ontario four do not mention mental health or wellbeing, twelve explicitly state mental health as a goal or initiative, and the remaining eighteen all speak to student well-being. While it is hard to address the complete impact of teachers forming positive relationships with students considered at-risk, this preventative

measure will no doubt lend to helping student success improving the mental health and well-being of our youth.

There is a necessity to explicitly teach educators how to mentor students and how to create positive relationships, especially with those considered at risk. Open Minds, Healthy Minds opens by stating, "The time to act is now" (p.4) and also reiterates that "we have the tools to do more" (p.6) and we indeed have the tools to do more for the youth in our province. While this piece has a specific focus in Ontario it is transferable to other communities worldwide. This may present more questions than answers, more ideas than concrete examples, but it demonstrates some of the reasons why we need to pursue the avenue of educators mentoring youth. How we can further help our youth in secondary schools, particularly those considered at risk, through mentorship and positive relationships is a necessary area to explore to support the greater good and our future leaders of tomorrow.

Katy Eldridge (OCT, BA Hons, B.Ed., M.Ed.) is a full time secondary teacher, PhD student at OISE, and a Queen's Faculty of Education alumna. She strives to find ways to support students considered at-risk (which has many meanings) and new ideas to support teachers in doing so. Katy is a new mom to Charlotte, born in November 2017, and is incredibly happy that naptime (and Daddy) have allowed her time to write!

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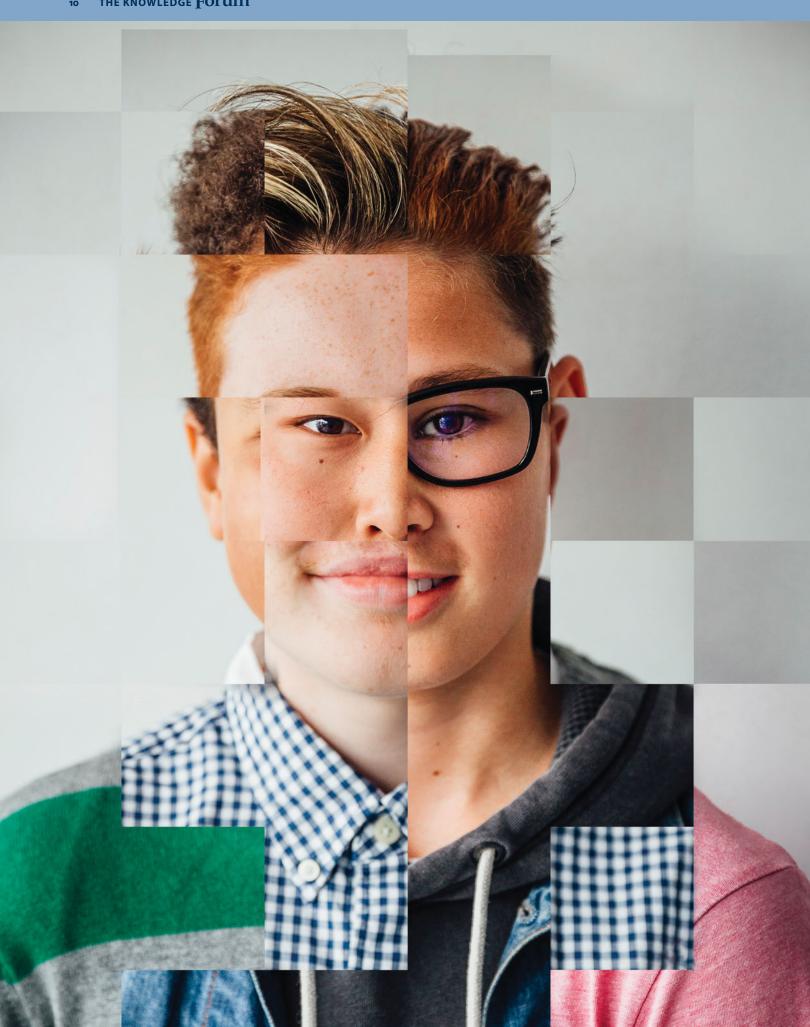
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Inequality and Student Outcomes in Canadian Schools

BY ALANA BUTLER

ince compulsory schooling became law in most economically developed countries, one of the most persistent educational "problems" has been the academic achievement gap between low and higher socio-economic status children. Socio-economic status is determined by a combination of one's income, education, and occupation relative to other societal members (Statistics Canada, 2008). According to the most recent Canadian census, 4.8 million Canadians live in poverty (Statistics Canada, 2016). Almost 1.2 million Canadians under the age of 18 live in low-income households (Statistics Canada, 2016).

In Canada, low socio-economic status is linked to poor academic achievement, behavioural problems, and dropping out of high school. Low socio-economic status is also related to lower self-esteem, higher rates of depression, and poor physical health. Socio-economic status confers cumulative disadvantages that may affect an individual's overall well-being. To understand the cumulative effects of childhood poverty, we need to examine the complex array of socio-cultural and environmental factors. This approach draws on an ecological framework where the child is embedded in social systems that include their family, school, community, and broader society (Bronfenbrenner, 1979). Lastly, we will review evidence-based interventions to support low-income children.

The socio-cultural factors that may influence socio-economic status in Canada are numerous and sometimes intersecting. These factors include but are not limited to gender, Indigeneity, race, immigrant status, and disability. In Canada, women generally earn less than men for the same or similar work and this wage gap contributes to women's overall risk of poverty. Women who are sole parents through divorce or separation are more likely to end up living in low-income households (Statistics Canada, 2016). For married couples, financial strain increases the likelihood of divorce or separation. Low socio-economic status decreases the possibility that couples marry at all, so many lowincome children are raised in single parent households.

Indigenous children are more likely to live in low socio-economic households and have lower academic achievement than non-Indigenous Canadians. The intergenerational trauma of residential schooling and de jure segregation on reserves has had a negative impact on Indigenous families and their relationship to formal schooling (Restoule, Mashford-Pringle, Chacaby, Smillie, Brunette & Russel, 2013). The aim of residential schooling was cultural genocide and Indigenous children still face education systems that devalue their cultural heritage, language, and intellectual contributions.

Certain racialized minority groups are at greater risk of poverty as a result of racism and discrimination. Dei (2008) and James and Turner (2017) found that African-Canadian students were twice as likely to drop out of high school. In another study, James (2017) found that African-Canadian students experienced negative stereotypes in schools and it affected their achievement. Refugees and recent immigrants face many barriers that place them at risk for poverty. They often lack the linguistic, social, and cultural capital that Canadian-born individuals possess. In addition, foreign-earned credentials are not recognized by many employers. Disability also has serious implications for socio-economic status. Families who have a child with a disability are more likely to be lowincome because of the financial burden that it may place on a family. Persons with disabilities also have lower rates of post-secondary degree attainment and are more likely to be under-employed or unemployed. All of these socio-cultural factors influence child rearing practices. The research shows that parents in lowincome families have less time to read to their children, participate in school or cultural activities, cook healthy meals, or provide their children with educational resources.

In keeping with the ecological framework, the effects of living in a low-income neighbourhood also influences educational achievement. In the Environment of Childhood Poverty, Gary Evans (2004) presented a comprehensive analysis of how the physical environment in low-income neighbourhoods creates challenges for children. Evans (2004) argued that the environmental issues in low-income areas such as noise, cramped living quarters, crime, pollution, garbage, lack of "green spaces", run-down infrastructure and buildings, lead exposure, missing or inadequate heating and cooling equipment, and food deserts (areas where it is difficult to purchase healthy food options) negatively affect a child's well-being in ways that contribute to poor academic performance.

The number of socio-cultural and environmental factors that impede a child's ability to succeed in school seems overwhelming. Researchers have been trying to develop interventions to address these problems for decades. The most promising evidencebased interventions are comprehensive approaches that address multiple risk factors simultaneously and promote a holistic approach to enhancing wellbeing for the child, their families, and their communities. The most popular evidence-based interventions are early years interventions, individual psycho-social interventions, whole school interventions, and whole community interventions.

Research in human development studies show that the early years are the most important ones for several life outcomes. Early years interventions such as Head Start programs focus on school readiness, nutrition, and parent involvement. The evidence shows that initially the children meet or exceed the achievement of their non-Head Start peers, but that the gains begin to decline once they enter second or third grade. This has been referred to as the "Head Start fade." The long-term evidence shows that Head Start does benefit children's positive life outcomes (Deming, 2009). Evidencebased individual psycho-social interventions promote resilience, emotional/behavioural regulation, trust, cognitive development, and self-esteem (O'Dougherty and Masten, 2013; Sagor and Cox, 2013). Whole school interventions focus on creating an environment that positively supports the same factors promoted in individual psycho-social interventions. The interventions are delivered to small or larger groups of children in a way that fosters peer support and positive group socialization. Lastly, whole community interventions may encompass an entire geographical area and target preschool to post-secondary. The most famous example is Geoffrey Canada's Harlem Children's Zone which supports children and their families from preschool to college (Tough, 2009). A corporate sponsored initiative, it offers services from pre-natal care, parent education,

a K-12 charter school, after-school programs, a college preparatory academy, health services, and community housing assistance.

Evidence-based interventions prove that one must offer an integrated approach that addresses the holistic needs of the child. Educators must also be advocates and engage in the fight for affordable, quality daycare. Many of the issues faced by low-income families are connected to structural inequality. Educators need to take political action to reduce income inequality so that all children have an equal chance to succeed in school. When children fail, society fails and we all lose out.

Dr. Alana Butler is an Assistant Professor in the Faculty of Education at Queen's University. In 2015, she completed a PhD in Education from Cornell University with a specialization in Learning, Teaching, and Social Policy. She has 15 years of teaching experience in a range of settings that includes preschool, ESL, secondary school, adult literacy, and university. Her current research agenda focuses on at-risk children and their families in elementary and secondary school settings.

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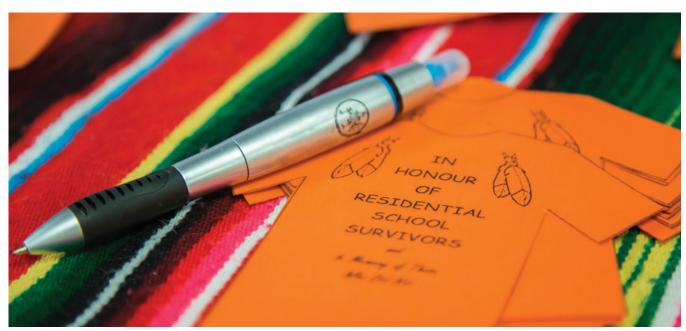
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The Fourth "R"

The Case for Reconciliation Literacy in Our Classrooms



Students from the Upper Canada District School Board create an Orange Shirt Garden in May 2018, to remember survivors of Residential Schools

BY STEPHEN SLIWA

ith the publication of the Final Report of the Federal Truth and Reconciliation Commission (TRC) in June 2015, we should come to expect that a K-12 education program that contributes to the public good must include an authentic focus on truth and reconciliation as part of our students' learning. Arguably, what fulfills this expectation is that students will acquire literacy for reconciliation, on par with other forms of literacy (reading, writing, computational, financial, physical, cultural, civic, digital) that students learn during the kindergarten to grade 12 programs in Ontario schools.

In Ontario schools, civics education is embedded in the curricula for social studies, history, geography, and Canadian and world studies, where "... students are given opportunities to learn about what it means to be a responsible, active citizen in the community of the classroom and the diverse communities to which they belong within and outside the school" (Ontario, 2013, p.9). If we want to see progress in our relationship between Indigenous and non-Indigenous peoples in Canada, then we must commit to the concept of reconciliation literacy as part of a broader view of civics education in our classrooms for our students. In this post-TRC era in which we live, responsible and active citizenship will equip students for engaging in dialogues about new truths - such as the destructive impact of residential

schools or, that we are all treaty people with specific obligations for attending to and honouring treaty relationships. These truths were absent from the national narratives that inform earlier versions of teaching and learning in our schools. Métis author Chelsea Vowel draws a similar connection: "Remember the TRC did not call for only the residential school legacy to be taught to all people in Canada. Learning about the treaties and the historic and contemporary contributions of Indigenous peoples about the treaties and the historic and contemporary contributions of Indigenous peoples is also vital if Canadians are ever going to achieve a base-level of knowledge to enter into a form of 'new relationship' with us"(Vowel, 2016, p.178).

We all have a great deal of work to do at the classroom, school, school district, and local community levels to build a focus on truth and reconciliation. School districts across the province - and throughout Canada are recognizing this pressing need and have taken steps to respond as a sign of good faith and a genuine interest in renewal. The Upper Canada District School Board, as well as several other school districts mandated Indigenous Studies course credits as part of each secondary student's learning in their diploma program. There are also symposia, staff development sessions, and community feasts which build dialogue, further insights, and strengthen connections between schools and Indigenous peoples. In Ontario schools, events such as Orange Shirt Day, Treaty Recognition Week, and National Indigenous History month are contributing to a greater dialogue and awareness among students and their teachers on topics that resonate with the findings arising from the TRC.

While these steps are encouraging, we need to confirm that the sum of these efforts adds up to a set of functional skills, instills values, and develops a capacity to engage in relationship-building between Indigenous and non-Indigenous peoples which our students can then draw upon in the future. What are the components of "reconciliation literacy" for students? What are key considerations for school districts to build an internal capacity for this outcome? Are there steps that school districts can follow to "get to scale" when pursuing a priority of reconciliation literacy for our students that have been used in other public priorities for education?

The Final Report of the TRC defined reconciliation "...as an ongoing process of establishing and maintaining respectful relationships" and presented it as an active commitment where "... Canadians must do more than just talk about reconciliation; we must learn how to practice reconciliation in our

everyday lives..." (Truth and Reconciliation Commission of Canada, 2015, p.11). With this context in mind, what knowledge, values, and social practices form the basis of reconciliation literacy for our students, such that it can enable respectful discourse and invites active engagement that can contribute to the public good? At its core, reconciliation literacy has four essential components that will realize this outcome: care, conversation, curiosity, and courage.

Caring about reconciliation is a precursor to any purposeful action in schools, throughout our communities and across Canada. At a recent session for the Standing Senate Committee on Aboriginal Peoples, former Chair of the TRC (and now Senator) Murray Sinclair commented that a lack of caring is one of the greatest barriers on the road to reconciliation. Senator Sinclair reminds us that "...we have to put our minds and our hearts together to make this happen" (Canada, 2018). To ignore the accounts from residential school survivors, to overlook the treaty obligations of our ancestors, and to not care about other truths leads to a form of national amnesia that runs contrary to the vision of the educated person who will contribute to the public good. In classrooms, schools, and school districts, the antidote to indifference or apathy is conversation.

Conversation is the grease that keeps the large wheels of truth and reconciliation moving over the difficult terrain that defines the present and the future. In her book, Turning to One Another, Margaret Wheatley reminds us how a combination of caring and conversation results in "powerful actions that change lives and restore hope to the future" (Wheatley, 2009, p.27). Conversation, dialogue, active listening, and reflection are natural resources that supports student learning in every classroom. These resources are seeded by a rich curriculum in Ontario that values student voice and critical thinking and is actively fostered in every school by teachers who understand the net value of purposeful talk around concepts such as colonialism, sovereignty, self-determination, identity, or reconciliation. These conversations become pathways for revisiting existing social realities and our relationships with other nations and communities. It is curiosity, however, that illuminates the path of these conversations for our students.

Apart from engaging our students' hearts and voices, reconciliation literacy is about nurturing curiosity so our students will explore big questions and engage key ideas relevant to truth and reconciliation. Curiosity serves as a bridge for students to consider the current and future state of Indigenous and settler Canadian relations. The significance of curiosity for exploring the complexities of colonialism is evident given the many questions about, and potential of, reconciliation in Canada. For example, Sto:lo author and activist Lee Maracle addresses our curiosity when she asks, "Who are Canadians and Indigenous people separately and together?" (Maracle, 2017, p.25). A recent re-write of the Ontario curriculum in First Nations, Métis, and Inuit Studies has students consider "How do we individually and collectively engage in the process of reconciliation?" (Ontario Ministry of Education, 2018, p.41). Reconciliation proves to be an invitation and an opportunity for curious minds to explore these questions, as evidenced by a collection of essays that author Danielle Metcalfe-Chenail has assembled, often resulting in "aha" moments (Metcalfe-Chenail, 2016, p.3). These are moments of enlightenment and often painful realizations about the past, where truths were hidden, suppressed or ignored.

Courage prevails as an essential component of developing reconciliation literacy for students. Whether reflecting on experiences, encountering new truths, or persisting with relationship-building, each requires extraordinary courage when it has been the focus for emotional distress. Marie Wilson, a former Commissioner of the

TRC, commented that reconciliation is "hard work", requiring "deep humility and boundless courage" (Canada, 2018). Without courage however, the prospect of caring may be compromised, conversations with others may be curtailed and curiosity can be subjected to significant limitations. At the same time, the need for courage is what appears to unite us at this moment – young and old, students and their teachers, Indigenous peoples and settler Canadians - since it is tied so closely to seeking truth and the desire for respectful relationships that accompany reconciliation.

What are the conditions that will cause reconciliation literacy to flourish in school districts? How do we ensure that this becomes a viable part of student learning and not a practice limited to a few classrooms or a handful of schools? No matter how compelling the case is for enabling this commitment, there is a need for strategy and infrastructure to launch, implement, and nurture what we desire for students. An alignment with school improvement practices in literacy and numeracy presents a practical and viable approach for building a deep commitment to truth and reconciliation and reconciliation literacy in all schools and school districts. In this case it is worth considering what change leaders like Michael Fullan and Lyn Sharratt (Fullan & Sharratt, 2006 p.12) have identified as key components for building continuous improvement in schools which could, in fact, enable a focus on reconciliation literacy for students:

- Articulate shared beliefs, goals and vision;
- Distributed leadership and professional learning cultures that fosters the desired focus for learning;
- Determine measures for success and celebrating success in our students' learning;
- Assemble resources to address our priorities, and;
- Reach out to community partners to support our work.

What this amounts to are key steps and considerations for broadening student learning to include the fourth "R": reading, writing, arithmetic, and reconciliation. It all begins with a vison about what we desire for our students, then mobilizing our talent, time, energies, and stakeholder relationships at the school and district level to make it happen. The harmonization of current practices that separates improvement planning around literacy, numeracy, and well-being from the goals and aspirations we have for learning about reconciliation needs to be our starting point.

The technical work of co-planning in this regard should not be mistaken for what really is adaptive change in schools and school districts since it resides in building value, understanding, purpose, and process. Focus on reconciliation literacy will require time, though it will be an essential outcome

for our students within the K-12 education sector in Canada, in response to some of the Calls to Action summarized in the Final Report of the TRC. Let's take our inspiration for moving forward with a commitment to reconciliation literacy in all classrooms from Chief Robert Joseph – an Ambassador for Reconciliation Canada and a member of the National Assembly of First Nations Elders Council – who reminds us: "There are going to be a million little steps but every time we take one of them it's progress" (Rabson, December 31, 2017).

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Exploring STEM Impact and Engagement in Student-Led and Purpose-Driven Projects

(aka - Make with Data)

BY CASSIE XU

e live in a data-driven age where data and the skills associated with it are in high demand in science, technology, engineering, and mathematics (STEM) fields and beyond. Many students, particularly those from groups underrepresented in STEM professions, are given few opportunities to engage with data in a way that connects their lived experiences to scientific practices. The Make with Data project aims to address this by empowering youth to construct solutions to personally meaningful community challenges using open-source data and anchoring them in a collaborative team of educators, data experts, industry professionals, and community groups.

In order to reach these goals, a twoyear collaboration between Columbia University's Lamont-Doherty Earth Observatory and Teachers College, the New York City Department of Education's Division on Teaching and Learning, community organizations, educators and students across the five boroughs, and relevant industry partners, will engage high-school-aged learners in after-school clubs. These clubs will use data to identify a compelling local community challenge and design a potential solution to address

the problem. The project, funded by the National Science Foundation (USA), will advance efforts of the Innovative **Technology Experiences for Students** and Teachers (ITEST) program to better understand and promote practices that increase student motivations and capacities to pursue careers in STEM fields by advancing student skills and interest in the area of data and data analytics. Leveraging the constructionist design paradigm and research on project-based service learning, the project will investigate how framing STEM practices to contribute to and improve one's community might increase student interest and shift identity towards STEM fields.

Extensive work has been done to illustrate the positive benefits of project-based learning for students, which has much of its theoretical core in constructionism. For the constructivist, "knowledge is (derived from) experience, and actively constructed and reconstructed by subjects in interaction with their worlds" (Ackermann, 2007, p.1). Building on Piaget's work on the development of these knowledge structures, constructionism argues that this mental construction happens most effectively when learners are engaged in the construction of a personally



meaningful artifact (Papert, 1980; Papert & Harrel, 1991). This artifact should be tangible (physical or virtual), should have personal value to the learner, and should be public, so that others could see, critique, and share the constructed work.

Service learning is a framework that naturally complements constructionist design. It is defined as opportunities and projects that actively engage participants in meaningful and personally relevant service activities and exposes learners to diverse values and practices, helping participants to identify and analyze different views and perspectives (National Youth Leadership Council, 2008). At a personal level, service learning improves student academic outcomes as they are able to demonstrate a greater complexity of understanding, problem analysis, critical thinking, and cognitive development (Astin et al., 2000, Eyler et al., 2000).

What remains unclear and not well studied is how traditionally underrepresented groups in STEM can access project-based learning and utilize it in a way that allows them to become more active participants in the STEM fields and eventually in the STEM workforce. Research that has been done in this area has not looked closely at the contexts and experiences of where and how learners learn, and instead often focuses on factors such as specific classes in school, or when students lose interest in STEM. By situating construction activities grounded in data experiences in a service learning framework, the project will examine building as a group for community purposes rather than in isolation, as we believe this is more likely to have an impact on student learning. By combining both constructionism and service learning frameworks, the Make with Data project looks to explore the

process where student interest and identity in STEM could be strengthened through activities that focus on their communities. The project will address the following research questions:

- 1 How do interactions with and working alongside domain experts, data exerts, community organizations, and industry professionals, to create a solution to a personally relevant local community challenge impact student interest in STEM and STEM careers?
- When students have full freedom to identify and choose their own service learning project, how does their commitment to and engagement with the project change over the duration of the project?
- 3 How do students participating in a data-driven service learning project articulate the role of data in identifying community challenges, designing solutions, and communicating these challenges and solutions to stakeholders?

Rather than create a one-size-fits-all activity that assumes a community problem, Make with Data aims to develop and study design frameworks for creating personally meaningful and learner-centric experiences and activities that can be deployed in a broad range of communities with similar demographics. The first year of the project will be devoted to the development of a network of education and industry partners and pilot activity design and

evaluation. In the second year, we will pilot at two sites with eight partnering schools and approximately 20 students. Research activities will include the evaluation of student learning about the core concepts and practices of data, students' connections with local communities, and students' STEM interests and identities.

By positioning students as leads in designing projects that address compelling community challenges, training them to become familiar with data tools for solutions-oriented learning, and amplifying their voice to share their solutions with key stakeholders, this project provides important insight into the factors and experiences that contribute to student learning and examines how to better use co-designed and shared data-driven experiences to broaden participation and diversify STEM workforces.

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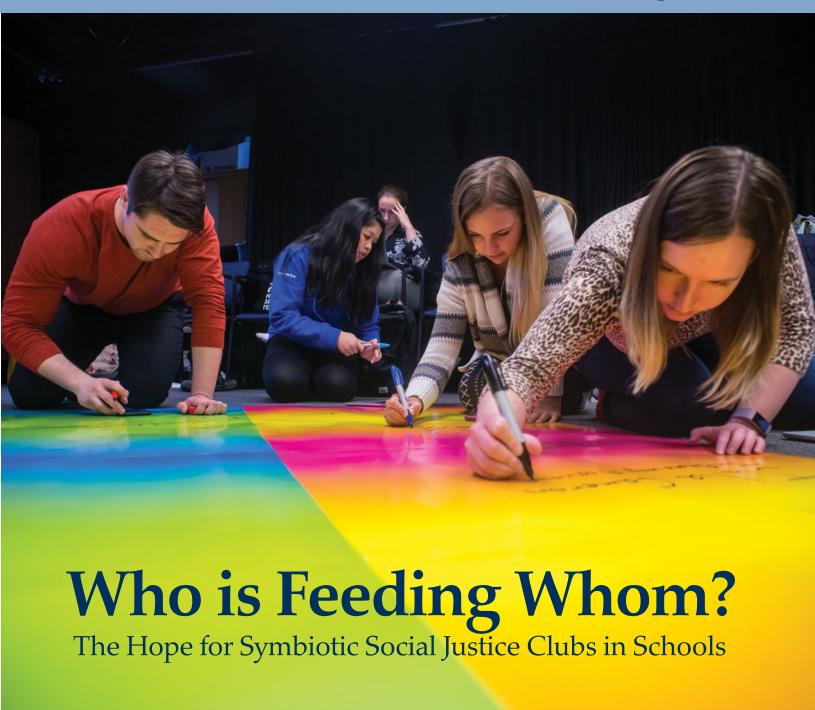
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NATHALIE REID

few years ago, the students from our school's social justice group and I attended a youth conference dedicated to social justice promotion. At the conference, students were instructed to choose one issue about which they were passionate and create relevant projects

of social change. The momentum generated in that room was powerful, full of hype for action, and the need to hit the ground running, now, all with the moral impetus of doing good. Students left with the belief that they, in fact, could change the world. But I was uneasy. I began to feel some of the students' energies shift from a spirit of service to a spirit of arrogance, as

some began drawing upon their identities as activists to position themselves as "better than" their peers, and those whom they considered less fortunate.

I began unpacking my own assumptions regarding social justice work, and I began by asking myself if all social justice work is "good" work. I have come to the conclusion there are implicit dangers to uncritical social

justice work that predominantly focuses on fundraising projects. In writing this, it is not my intention to criticize the plethora of teachers and administrators doing great work with social justice clubs. Rather, I hope to contribute some of my awakenings to this complex and contemporary conversation.

Whom is service learning feeding?

Service-learning opportunities, as one form of social justice work, have become a widely accessible opportunity for students (Butin, 2003, p.1674). The ideal of service learning is "to encourage students to develop a sense of civic or community responsibility... advancing students' notion of social change from the mindset of charity to the promotion of social justice" (Krings, 2015, p.404). By contrast, Purpel (1995) argues that the very notion of service in fact sustains dominant ideas of hierarchy, thus keeping the needy as needy and the helpful as helpful. These kinds of binaries can be inadvertently supported and sustained by social justice groups in schools, as evidenced by Maybach's (1996) quotation, from a former student who completed service learning which highlights this fundamental problem: "Doing service as a college student was such a meaningful experience for me. I hope that my children have the opportunity to work in a homeless shelter" (p.224). This student voices her hope that homelessness continues so that her children can have the same meaningful experience as she did. She hopes that her children will feed themselves from the same social issue from which she "benefited," rather than hoping for different experiences that might eliminate the need for homeless shelters altogether.

Moving social justice toward who we are in schools

Examining privilege in all of its forms is difficult and often painful work to which there is much resistance. As Noddings states, "To feel superior is more attractive than feeling inferior, to identify with a dominant group is more satisfying that to be classed with a subordinate one" (Noddings, 2006, p.40). And yet, it is this very understanding that I have learned helps counteract the superior/inferior, us/them, fortunate/unfortunate binaries.

One of my former students participated in a service learning trip. Upon his return, I asked him what his biggest learning was. He answered with such wisdom: "What I learned is that I went there thinking I had so much to offer; that I was going to give and to help. What I learned is that they do so much RIGHT, that we do so WRONG. I learned about valuing school, and relationships in ways I had never known before. We have so much we can learn from them to do better, and to be better. I didn't know that before." While this student's passion for good and willingness to work for change brought him to Kenya, it was his awakening to the stories he encountered that reoriented his thinking. He travelled there with one set of conceptions, and came back with a totally different understanding of privilege and of position. Unfortunately, not all service learning accomplishes this reorientation, and not all students can partake in these large trips. The challenge remains, how do we, as teachers and club advisors, try to facilitate this learning every day?

A possible reconceptualization of social justice groups in schools

Over the years, when I have asked them about social justice, children and youth often share with me the fundraisers they have done. For example, when asking a youth about a Water Walk, the youth answered that they were "walking for water somewhere where he guessed there was no water." I was quite surprised at the lack of understanding of the underlying issues of dependence, colonization, inequity, and ecology. A possible first step toward reconceptualizing social justice groups might be to ground projects and initiatives in understandings of the underlying realities and structures that shape and sustain them.

A second possibility is for the teacher advisors, the school administrators, and the youth to undertake self-facing activities that begin re/shaping their understandings of privilege not as something they have earned, but rather as something they carry unwittingly. Each person will carry different understandings which, by extension, will begin problematizing the us/them metanarratives that often shape perceptions of the world.

The third possibility is to strive to move social justice away from being something we do in schools, and toward who we are as a way of knowing and being in the world. UNESCO's Associated Schools Program (https://aspnet.unesco.org/en-us) is an excellent organization that promotes this orientation. Attaching an identity piece to social justice work supports valuing all voices and experiences, particularly those of the marginalized and oppressed, as carrying rich knowledge regarding the structures that continue to support inequity. In this way, for example, raising money for a community support centre as an 'activity' can be transformed by going to the centre,

cooking and serving the food, and inviting conversation with key stakeholders. As such, the sense of meaningful collective action and responsibility grows into something that by far exceeds what I experienced as the tokenizing activities that address symptoms, rather than the larger issues.

The implications of this possible new lens are significant; however, they are neither simplistic nor without challenge. Change is possible, but change by itself is not the answer. Reciprocity, intersectionality, and selffacing activities can support advocates to live with/in these complex conversations to truly effect the change they want to see in the world.

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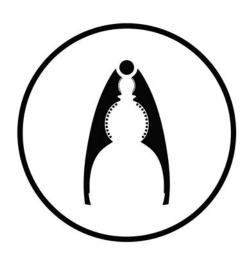
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