



Change Learning

A project to re-envision education, build community capacity and increase social capital in the 21st century.

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CLASSROOM CONNECTIONS

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Section One: The Change Learning Project Summary

1 Overview

The *Change Learning Project* is an innovative, multi-stage initiative to create and implement a restructured education model—one that maximizes learning outcomes, integrates community development and builds human and social capital. Because initiating extensive change within entrenched systems is so difficult, we plan to start where the need is greatest—where youth are most at risk and where critical economic and social issues are forcing communities to rethink the purpose and structure of education. More often than not, this involves First Nations populations both on- and off-reserve.

The work is grounded in the understanding that optimizing learning for youth requires the support of both healthy families and strong communities. As a result, the project moves beyond reinvention of formal education to include economic and social development—creating a prototype for community capacity building.

● **Why Start with First Nations' Youth**

Canada's First Nations youth are the fastest growing student group in the K–12 system—and also the one most at risk for failure. With school failure comes decreased opportunity and increased unemployment (three times that in the total population). And lack of productive employment is a leading contributor to the multiple social issues facing First Nations communities. The rapid growth rate in First Nations youth combined with an aging mainstream population has significant implications for both the costs of service provision and for the economy overall. The First Nations youth in our schools today and tomorrow will represent an ever-increasing portion of the nation's potential labour force. With almost 50% of First Nations populations lacking the fundamental entry-level high school certificate, they will continue to face staggering levels of unemployment (and the consequences), while a shortage of skilled workers forces companies to look to China and India to keep pace with growth.

In addition to demonstrated community and economic needs, we have found that much of the evidence and research on how humans learn best is clearly aligned with traditional First Nations ways of learning and knowing.. Gathering evidence about how to effectively combine culturally appropriate approaches to learning with the knowledge and skill requirements of the 21st century will build First Nations knowledge and practices directly into a new model of education—one that will help all of our children learn to the best of their abilities.

● **Identified Issues in Mainstream Education**

Our current educational system is struggling to meet the diverse needs of our youth and failing to adequately prepare them for the complex and interconnected world they will inhabit. Many ingrained educational practices, as well as the very structure of our educational and social systems are counterproductive to real learning, successful transition into adulthood, active citizenship and full employment. We see this reflected in student disengagement and inequitable educational outcomes for minorities—especially for First Nations youth where drop out rates are double the national average and students lag at least two grades behind.

The problems within education have not been addressed by decades of educational reform initiatives because they are systemic, ingrained and far reaching.

1. Canada's economy, society and technology have changed exponentially since public schooling was initiated over 150 years ago, yet our schools are still built around an out-of-date industrial model of education.
2. As shifts have occurred in culture and society, we have increasingly made learning the sole responsibility of formal education. The evidence, however, is clear. Schools alone can never be enough. We have failed to recognize the importance of healthy families and strong communities in improving educational and social outcomes for our children.
3. Our understanding of brain function, human development and the process of learning has expanded dramatically, especially with the advances of brain imaging technology and neurobiology, but these advances are not applied comprehensively within education.

● Why Has Educational Reform Fallen Short—Both on and off Reserve?

In recent decades, there has been no shortage of experimental initiatives, community development projects and alternative schools. What has been strikingly absent is the effort to amalgamate the lessons learned and situate educational transformation within community development and the creation of social support networks for families.

There have also been innovative examples of First Nations-centred programming making a difference across Canada. Typically, however, they take the form of “add-ons” and overlays to what already exists—the traditional provincial model of education. We believe that attempts to significantly improve First Nations educational outcomes can never reach full potential if they are built overtop of a model that is fundamentally flawed. If we fail to *start* with a system solidly grounded in what we know about optimizing learning and human development, even the best attempts at change will never result in success for First Nations youth, or for any of our youth.

● Overall Project Goals

The Change Learning Project will work with pilot communities to help turn what we know into what we do—combining extensive research and available best practice with community engagement and capacity building. Through on-the-ground action research, the project will develop a re-envisioned education model that focuses on:

- building strong, safe, sustainable and resilient communities that are economically viable and responsible for the education and well being of future generations.
- supporting healthy families and optimal parenting to provide all children with the best possible developmental opportunities.
- creating effective, engaging and relevant educational experiences for all youth that maximize educational outcomes, employment possibilities and personal development.

● Project Strategy

Building on decades of investigation by the 21st Century Learning Initiative, we have amassed an extensive body of knowledge about learning, the brain, human development and maximizing the potential success and well-being of children and communities. Please see the *Guiding Principles* (page 6) for a synthesis of key themes that emerge in the research. In addition we have investigated countless results-oriented community programs and educational initiatives that align effectively with the guiding principles identified, as well as with the *First Nations Values and Orientations* summarized on page 8. In the process of synthesizing this work, a conceptual picture has begun to emerge of what powerful and effective education might look like, and the

benefits it could bring to building community capacity. The initiation phase of the project will involve working with identified First Nations to:

1. assess community assets and needs
2. co-create a plan for action research around implementation of specific components and approaches within the community

A key strategy for project implementation will be to actively engage youth as agents of change within their communities and to make these activities the central focus of a redesigned learning process. Where possible youth will be taking a lead role in community improvement projects and initiatives—creating the positive, real-life learning opportunities so essential to engaging youth, optimizing learning and improving educational outcomes. Learning skills within the context of meaningful activity develops key competencies and builds a sense of belonging and purpose that will enhance self esteem, broaden life goals and expand life options. This process will empower youth as they become key instruments in improving the health of their communities and it will capitalize on the natural agitation of adolescence to create change.

Research findings and lessons learned will inform expansion projects in other communities and a framework for community development and educational reform will be built as the research expands.

● **Project Details**

Chipewyan Prairie First Nation (Janvier/Chard) and Bigstone Cree Nation (Wabasca) have organized to become the first pilot communities, with support of Treaty 8 and the Athabasca Tribal Council. An on-site project facilitator will be contracted for 3 years to help lead the working groups and manage the process on a full time basis. The facilitator will be sourced internally or externally depending on capacity and availability.

Proposed actions items are as follows:

- Determine longitudinal research/assessment teams for project
- Undertake baseline assessment for community health indicators
- Assess urgent remediation measures required prior to project initiation
- Establishing community working groups and site-based processes for ongoing community decision-making, communication and feedback collection
- Conduct participatory research with community partners to determine local perspectives on community well-being and identify key issues of concern
- Facilitate community consensus-building process to help members clarify goals and create a shared vision for education and community well-being
- Raise awareness and engagement within the community around issues in education, child development and community health and prosperity (workshops, seminars, home visits and public relations campaign)
- Build community capacity for the project through on-site training in leadership, self understanding, conflict resolution, project management, etc.
- Assist community members in creating a plan of action and establishing roles and responsibilities in supporting their shared vision for education
- Initiate action research projects to test promising practices and expand on promising practices already in action

● **Timeline:** 2.5 years from secured investment

② Guiding Principles

Education is fundamental to building human capital—both economic and social. Fostering generations of well-skilled employees and innovative thinkers is key to creating a strong labour market and a vibrant economy and to remaining competitive as a nation. But equally important for social cohesion, democracy and quality of life is the development of engaged and active citizens, outstanding future parents and adults fully contributing to their communities and their world. Decades of research indicate that the following principles are critical in creating a model of education that meets the needs of the individual, the economy and society.

- ▶ **Education needs to prepare youth for the realities of today and the uncertainties of tomorrow.** Effective schools must provide learning environments that reflect the shifting nature of knowledge and teach in ways that prepare youth for employment and the challenges of a rapidly changing world. Educational structures must be flexible and adaptive, focus on the development of strong, transferable foundational skill sets and use real-world issues and challenges as the basis for creating learning opportunities with true validity.
- ▶ **Effective educational models must reflect what we now know about how humans learn best and what makes them want to do it.** Teaching methods, classroom structures and educational facilities must be designed to both engage students and increase opportunities for deep learning and the development of creative thinking. Humans learn best by doing, and powerful learning opportunities must have real-world application and authentic purpose—often needing to be situated outside the walls of a classroom.
- ▶ **Families and communities are critical partners in building an education process that optimizes child development and creates effective learning opportunities.** Successful educational models recognize and take advantage of the powerful influence of parents and communities on learning and development. They also understand the shared responsibility that societies have in preparing future generations to meet the challenges ahead. That means supporting strong families, investing in healthy neighbourhoods, building social capital and situating learning opportunities within the community.
- ▶ **Education can't be separated from healthy growth and human development, and that means addressing the needs of the whole child—body, spirit and mind.** Learning is personal and relational, and it always occurs within the context of an individual's experience, beliefs, emotions and circumstance. New models for education must address and cultivate positive development in all aspects of a child's life to optimize educational outcomes and social capital. Investing in more than just test scores is essential to developing strong, healthy individuals and communities, and it is fundamental in reducing the cost of social and health care spending.

- ▶ **Learning is naturally an intergenerational experience and we must reintegrate Elders into both formal and informal learning.** Throughout human history Elders have been the keepers of knowledge and transmitters of culture and learning through story and tradition. This source of connection has been lost for many of today's youth. We need to provide mechanisms and approaches that re-establish intergenerational relationships, adding value and depth to learning and strengthening the social capital of communities.

- ▶ **The early years are crucial to maximizing school success and optimizing life trajectories.** A restructured educational model must include extensive investment in ages 0–6, since all later learning builds on top of the framework set in place during this critical period of brain development. Investment here has disproportionate positive influence on both future educational outcomes and on maximizing life potential. It also increases the rate of return for all other systemic improvements put in place.

- ▶ **Building foundational skills is crucial, but we must also redefine the basics.** While literacy and numeracy are fundamental building blocks to educational and personal success, other social, cognitive, meta-cognitive and emotional abilities are equally critical for improving educational outcomes, employability and social capital. Developing resiliency, emotional regulation, and decision-making abilities, for example, are crucial in the workplace and in life, and they must be fostered through appropriate learning opportunities during the developmental process. New models of education must apply our current empirical knowledge about effective instruction to acquire fundamental skills, while the modeling of metacognitive and other self development processes and skills must be embedded throughout the education experience.

- ▶ **Adolescence is a crucial developmental opportunity that needs to be fully maximized for successful transition into adulthood, fulfilling employment and engaged citizenship.** Research indicates that the massive restructuring of the human brain occurring in adolescence is a powerful human adaptation that prepares youth to take on the independence and responsibility of adulthood. If we ever hope to stem the tide of youth disengagement, boredom and unfulfilled potential, education must provide opportunities that capitalize on the biological predispositions for ingenuity, daring, experimentation and questioning of the status quo. That means radically restructuring educational experiences to provide self-direction, alternative learning environments and hands-on, real-world learning outside the walls of traditional classrooms and transmission models of teaching.

- ▶ **Environmental sustainability, democracy and social justice must become more than curriculum topics—they must be integrated into the very structure of the education model.** Children recognize the hypocrisy of learning 'about' the environment while sitting in environmentally unfriendly buildings. They also feel the injustice of learning 'about' democracy in a school setting without democratic participation from students. If we want youth to internalize core values such as respect for the earth and each other, these values must be modeled directly within the educational environment. This means green buildings as well as a curriculum for sustainability. It also means schools as living models of democracy with educational opportunities that stress service learning approaches of education.

3 Values and Orientation

Decisions on how the new framework is implemented will be led by the community. The creation of the strategic plan to mesh the framework with community goals and values will begin and end with local leaders and community members. External “expertise” and resources will be provided only as needed and only upon request. Because Change Learning will be developed in partnership with First Nations communities, the values under which the Project operates will be aligned with traditional First Nations ways of knowing and teaching.

The following are among the key attributes of a First Nations view of learning:

- It is **holistic**—engaging and developing all aspects of the individual (emotional, physical, spiritual and intellectual) and of the community. It stresses the interconnectedness of all life under the Creator.
- It is **lifelong**—beginning before birth, it continues through old age and involves the intergenerational transmission of knowledge.
- It is **experiential**—connected to lived experience, reinforced by traditional ceremonies, meditation and storytelling, and through observation and imitation.
- It is **respectful**—valuing the differences of individuals, protecting mother earth and honouring Elders and traditions.
- It is **rooted in First Nations languages and cultures**—language is the essential vehicle for a culture’s unique world view and values, its way of making sense of things and the key to its continuity.
- It is **spiritually oriented**—spiritual experience and development is fundamental (manifested in ceremonies, vision quests, dreams)
- It is a **communal** activity—a process in which parents, family, Elders and community all have a role and responsibility.
- It **integrates First Nations and Western knowledge**—an adaptive process that draws on the best from both traditional and contemporary knowledge.

In sum, this view of learning is all encompassing and demands recognition as an integrated whole.

In keeping with First Nations ways of being the Project will hold the following as some of the key purpose of learning:

- to honour and protect the earth and ensure the long-term sustainability of life
- to increase resilience and adaptability of the individual as well and the collective community
- to achieve self-sufficiency for children as they become adults and for the community as a whole
- to create healthy balanced individuals and communities living in harmony with themselves and those around them
- to understand tradition, language and culture as they bring beauty and value to life and connect us to our Elders and ancestors as well as those who come after us
- to deepen appreciation for the Creator and the interconnectedness of all life as this brings peace and purpose and helps us understand our place in Creation to add value by using “good hands” to leave the world a little better than we found it

4 Who We Are

● Lead Organization: Classroom Connections

Classroom Connections is a national non-profit educational organization (with charitable status). For the past 10 years, we have produced innovative, award-winning and bilingual educational materials for schools, parents, faculties of education and community groups across Canada. Currently, over 85% of Canadian schools are registered to receive our resources, with a reach of well over 800,000 students.

Resources are designed to promote better pedagogy, actively engage students in meaningful learning experiences and inspire youth to challenge themselves and their world. Classroom Connections has a well-earned reputation for providing groundbreaking programs, and it has forged a unique and powerful network among educators, pedagogical experts, boards of education, community organizations, First Nations groups and both federal and provincial governments. Because Classroom Connections is non-partisan and not tied to any level of government or teaching union, it has retained a distinctive position “outside” the system, yet fully interactive with it. This position allows both access and trust, which are critical to forming the partnerships required for true educational reform. Please see Appendix A for more information.

● The Change Learning Project Team

For this initiative, Classroom Connections has partnered with the 21st Century Learning Initiative (www.21learn.org) to merge its Canadian experience and network with international expertise and practice. The 21st Century Learning Initiative is a network of academics, researchers, policy makers and educators from numerous countries, whose purpose is to facilitate the emergence of new approaches to learning. These approaches make use of a range of insights into the human brain, the function of human societies and learning as a community-wide activity. The Initiative draws on research from cognitive science, neurology, evolutionary biology and psychology, cultural anthropology, conventional psychology and systems theory to encourage people to rethink current education systems and institutions.

The Initiative has more than 20 years of experience working directly with community leaders and educators at the grassroots level. It believes in mobilizing the full resources of communities, the power of new technology and the most recent research on effective learning strategies to galvanize community activity. It works in many countries around the world, delivers over 100 lectures a year, produces numerous papers and books, and maintains an extensive website. Most recently the Initiative president, John Abbott, worked with Classroom Connections Executive Director, Heather MacTaggart, to co-author a new book, *Overschooled but Undereducated: Society's Failure to Understand Adolescence*.

Classroom Connections is also working with support from the Canadian Council on Learning (www.ccl-cca.ca), an independent non-profit corporation that promotes and supports research to improve all aspects of learning—across the country and across all walks of life. The Council's goal is to provide Canadians with the most current information about effective approaches to learning for learners, educators, employers and policy makers. Since 2005, the Canadian Council on Learning has been supporting the 21st Century Learning Initiative in raising awareness around issues in human learning across the country.

The Change Learning Project Team has already formed a strong and diverse Advisory Committee that includes experts and leaders from across Canada (see next page) and has also developed a broad network of partners and supporters (see page 12). Selecting partners and Advisory Committee members outside of the traditional parties already vested in the system facilitates truly innovative approaches, new perspectives and the possibility for authentic change.

The project team provides a unique combination of Canadian, international and First Nations experience, an extensive collection of expertise and a broad, varied network of support. As a result, we are uniquely positioned to shift the course of education in this country, especially for those in highest need, our First Nations populations.

● Project Leaders and Advisory Committee

▶ Project Partners

Heather MacTaggart, Executive Director, Classroom Connections
(www.classroomconnections.ca)

John Abbott, President, The 21st Century Learning Initiative (www.21learn.org)

Harvey McCue (Waubageshig), First Nations Partner and Guide

▶ Project Advisors

Peter Garrow, Director of Education Jurisdiction and Governance, Assembly of First Nations (www.afn.ca)

Roberta Jamieson, President and Chief Executive Officer, National Aboriginal Achievement Foundation (www.naaf.ca)

Penny Milton, Chief Executive Officer, Canadian Education Association
(www.cea-ace.ca)

Dr. Stuart Shanker, Distinguished Research Professor of Philosophy; Psychology Director, The Milton and Ethel Harris Research Initiative, York University; Past President, Council for Early Child Development (www.mehri.ca)

Peter Istvanffy, President, Centre for Educational Research Applications; President of Calgary Academy (www.inlets.net)

Dr. H. Bruce Ferguson, Director, Community Health Services Research Group The Hospital for Sick Children; Professor, Psychiatry, Psychology and Public Health Sciences, The University of Toronto (www.sickkids.on.ca)

● Change Learning Project Supporters

Lloyd Axworthy, President and Vice-chancellor, University of Winnipeg

Robert Breaker, Breaker Consulting, Siksika First Nation

Charlie Coffey, Retired Executive Vice-president, Royal Bank of Canada

Carlene Donnelly, Executive Director, Calgary Urban Project Society—One World Child Development Centre

Randy Fielding, AIA, Chairman, Fielding Nair International; LLC Founder, DesignShare.com

Shirley Fontaine, Manager of Educational Institutional Development, Assembly of Manitoba Chiefs

Terry Fortin, Quality Learning Solutions Inc., Alberta

Calvin Helin, author of *Dances with Dependency*

Lorne Keeper, Executive Director, Manitoba First Nations Education Resource Centre

Kelly Lendsay, President and CEO, Aboriginal Human Resource Council

Dr. Ken McCluskey, Dean of Education and Extended Learning, University of Winnipeg

Raffi, Children's singer and humanitarian, Found of the Child Honouring Movement

Strini Reddy, Retired Director of Education, Frontier Division, Manitoba

Martin Sacher, Program Coordinator & Principal of Sunchild Cyber School

Jim Silver, Chair, Department of Politics, University of Winnipeg; author of *In Their Own Voices—Building Urban Aboriginal Community*

Bryan Taylor, Associate Professor of Education, Atlantic Baptist University

Dr. Wilton Littlechild, Assembly of First Nations Executive Committee, Regional Chief for Alberta

Dr. John Wiens, Dean of Education, University of Manitoba

Dr. Jon Wiles, Professor of Education, University of Florida; international consultant in curriculum change; author of *Leaving School: Finding Education*

Dr. Lorna Williams, Canadian Research Chair Indigenous Knowledge and Learning, Director, Aboriginal Education, University of Victoria

Dr. Stan Wilson, Dr Peggy Wilson, University of Alberta's First Nations Education Graduate Program

Dr. Mary Young, Assistant Professor, Faculty of Education, University of Winnipeg

Section Two: Rationale and Background Information

5 What's Wrong With the Status Quo?

Canada has much to be proud of when it comes to education. We have a strong history of investment (both philosophical and financial) in public schooling, access is free and universal and the majority of our youth graduate from high school. But many of us have a nagging suspicion that somehow we are missing the mark. Public opinion polls show confidence in the education system is at an all-time low,¹ home schooling is growing exponentially and the percentage of children attending private schools has doubled over the past 25 years.² Growing numbers of Canadians recognize that our current system is struggling to meet the diverse needs of our youth and failing to adequately prepare them for the complex and interconnected world they will inhabit.

● Student Disengagement

What is evident on closer inspection is a pattern of growing disengagement, dissatisfaction and disconnection as youth progress through the educational system. While most children enter school eager to learn and filled with seemingly unending curiosity, there are few among us who can think of a Grade 10 student with a similar zeal for education. More often than not, students are disengaging with each passing grade,³ a trend illustrated by their increasing dislike for school⁴ and dwindling sense of connection.⁵ Nearly one fifth of youth register their dissatisfaction with the system by leaving school completely.⁶ Somehow we are failing to provide an education that is relevant, engaging and viewed as meaningful in the lives of our youth. And this failure has costs—skyrocketing rates of depression⁷ and suicide⁸ among adolescents as well as rising rates of gang involvement⁹ and youth crime.¹⁰

● Failing Some More than Others

Contrary to Canada's most fundamental democratic tenets, minority and low-income children are most at risk for poor educational outcomes. Children from lower socio-economic families demonstrate weaker literacy and numeracy skills,¹¹ have a diminished readiness to learn in preschool, reduced chances of attending university and increased likelihood of living in poverty as an adult.¹²

The inequities of the current system are further reflected in lower graduation rates for certain ethnic groups¹³ and staggering differences in graduation rates and test scores for First Nations youth. The system, in fact, has failed our First Nations children more than any other group. More than 86% of First Nations students in reserve schools are at least two grades behind their non-Aboriginal peers in provincial public schools.¹⁴ Almost 20% of Aboriginal youth will drop out before completing Grade 9, and over 60% will not graduate from high school—double the national average.¹⁵ First Nations youth are more vulnerable to gang recruitment,¹⁶ and suicide rates among First Nations youth are a shocking five to six times higher than among non-First Nations youth.¹⁷

In a country where the gap between the rich and the poor continues to grow, the percentage of minority populations is on the rise and the growth rate for First Nations youth increases annually, this breach of contract poses a serious threat to both social cohesion and economic prosperity.

● An Out-of-Date System

Our schools are not falling short because of uncommitted teachers, apathetic youth or lack of rigorous standards. The problem is rooted in an educational system built 150 years ago for a very different world and created using the limited knowledge and tools available at the time. We now live in an age where the power of computers doubles every 18 months¹⁸ and the rate of change itself is accelerating dramatically. We have moved from slate and chalk into the digital era and from local systems of trade to global economies. Our classrooms, however, still reflect an industrial age approach, use a transmission model of learning and rely heavily on pencil, paper and textbooks.

In addition, Canada's population has shifted from rural to urban,¹⁹ immigration has increased dramatically²⁰ and we have moved away from interconnectedness with community and extended family into nuclear or single-parent family units.²¹ More women are in the workforce,²² and media and advertising have exploded as major societal influences.²³ The values and beliefs once formed by family and church are now more likely based on peers and media.²⁴ Massive shifts in our social fabric mean radically rethinking how school, home and community work together to ensure positive educational outcomes.

Education has typically adapted to significant changes in family, work, technology and culture with short-term patches and band-aid solutions, and these can never be enough. A radically different context for education in this country means that significant restructuring is required to meet the needs of our 21st century world—not only to keep pace with today but also to create structures flexible enough to adapt for an unknown tomorrow.

● Not Using What We Know

The past 150 years have also brought extensive progress in research techniques and in our understanding about child development. For the first time in the history of public education in Canada, we have the powerful opportunity to use the tools, data and insight available to create an education system based on how children actually learn and develop.

Much of what we now know is antithetical to the existing structure—created and shaped by outdated, untested and faulty theories on learning and child development. Research shows, for example, that what happens in the early years actually shapes the structure and capacities of a child's brain, laying the foundation and trajectory for all development that comes after it. Adult human capital, from workforce skills to co-operative behaviour, builds on capacities developed during this critical period,²⁵ yet we continue to invest more resources in university education than in the early years.²⁶ Brain-imaging studies show that challenging, varied mental stimulation increases brain activity and helps develop more complex neural interconnections,²⁷ but we still make kids sit in regimented classroom settings using time-honoured repetitive methods of presentation. We also know that real-world interactions and mentoring take advantage of the massive neural restructuring occurring in adolescence and the natural predispositions of the developing teen brain,²⁸ yet we lecture students “about” abstracted ideas, separated from their daily usefulness. We need to build educational models based on what we now know about effective instruction, not on what we have always done.

6 Why Start in First Nations Communities?

“First Nations entrants into the labour market will be absolutely vital in filling labour demand requirements. To a larger extent than is generally recognized, Canada’s future prosperity depends on how successful we are in achieving equitable results in our labour market for First Nations Canadians.”²⁹ Equity in the labour market, however, can’t occur without equity in educational outcomes. With almost 50% of First Nations populations lacking the fundamental entry-level high school certificate,³⁰ neither equity nor the fulfillment of labour market demands is possible. The implications are serious—not only for those unable to earn decent incomes and gain independence, but for the economy as well. “It has become clear that educational attainment is not only vital to the economic well-being of individuals but also for that of nations.”³¹

● Education and Employment

Forty percent of Canada’s First Nations people are under age 19, making this the fastest growing student group in the K–12 system—and the one most at risk for failure.³² The disturbing educational success rates for First Nations students have been documented for decades. From elementary school attendance to high school completion to participation in post-secondary education, “native education is still in an atrocious state from almost any perspective”.³³ The legacy of residential schooling and the erosion of family, culture and community linger, and the application of the one-size-fits-all provincial system has failed to provide solutions for First Nations youth either on- or off-reserve.

Despite studies, policy documents, commissions and reports, estimates suggest that it will take 28 years to close the gap between the numbers of First Nations and non-First Nations high school graduates, and, sadly, the number of years estimated to close that gap continues to rise.³⁴ Along with failure in school comes decreased opportunity and increased unemployment. Unemployment in the First Nations population is three times that in the total population.³⁵ And lack of productive employment is a leading contributor to the multiple social issues facing First Nations populations—abysmally higher rates of poverty, suicide, substance abuse, health problems, incarceration and welfare dependence. The *Royal Commission on Aboriginal Peoples Report* (1996) estimated that two thirds of the status quo spending was related to Aboriginal people’s increased likelihood of unemployment.

● Demographics

As Calvin Helin warns in his book, *Dances with Dependency*, the rapid growth rate in young First Nations populations means that Canada is facing a “demographic tsunami” with unprecedented fiscal consequences. Not only is our First Nations population younger and growing, the mainstream population is declining drastically and aging. If we continue to ignore the issues facing our First Nations populations, the costs for future delivery of support programs and services will escalate drastically at the same time that our aging baby boomers pull more resources from social and health care spending.³⁶

In addition to the cost implications for the provision of services, the demographic trends raise issues for the economy overall. The 10 million baby boomers getting ready to retire have already raised alarm bells regarding an impending shortage of skilled workers. Over the next 10 years, however, the First Nations working-age population will grow three to five times as fast as the

non-Aboriginal population in the same age group.³⁷ As a result, the First Nations youth in our schools today and tomorrow will represent an ever-increasing portion of the nation's potential labour force.

With effective educational experiences, First Nations youth could be set to access a wealth of available job opportunities, providing a large pool of potential employees at a time when the mainstream Canadian population is heading into retirement. Instead, if trends continue, they will face staggering levels of unemployment (and the consequences), while a shortage of skilled workers forces companies to look to China and India to keep pace with growth.³⁸

● The Need for New Approaches

More recent attempts to devolve the control of education to First Nations communities has increased enrolment in First Nations-operated schools and improved the cultural relevance of programming where this has occurred, but significant problems remain. Firstly, the overwhelming majority of First Nations youth (75–80%) attend non-Aboriginal, provincially run schools,³⁹ and, secondly, First Nations schools often lack the vast range of support services, staff and structures needed to assist in successfully implementing local control.⁴⁰

There is no question that place-based and culturally relevant curricula are essential components in successful education, but alone they are not enough. While there are innovative examples of First Nations-centred programming making a difference across Canada, typically they take the form of “add-ons” and overlays to what already exists—the traditional model of education supported by provincial ministries of education. We believe that attempts at significantly improving First Nations educational outcomes can never hope to reach full potential because they are being built overtop of a model that is fundamentally flawed. If we fail to *start* with a system solidly grounded in what we know about optimizing learning and human development, even the best attempts at change will never result in success for First Nations youth, or for any of our youth.

Instead, we need to turn what we *know* into what we *do*—building a transformed model of education that firmly supports all stages of learning, growth and development to maximize outcomes for all our children. Customizing that model to be place-based and culturally relevant would be integral in creating an effective educational model. It would, in fact, be crucial, since successful learning experiences must be relevant for individuals, have authentic context, address the needs of the whole child and connect new knowledge to what is already known and understood. Educational models that really work must always be situated within communities, families and culture.

Ironically, much of the evidence and research on how humans learn best (from neuroscience, anthropology, cognitive sciences, etc.) is clearly aligned with traditional First Nations ways of learning and knowing. Long before colonization, residential schooling and years of marginalization within provincial educational models, First Nations parents and Elders were teaching their youth using strategies and methods now recognized to work with how the human brain may have evolved to learn. Gathering evidence about how to effectively combine culturally appropriate approaches to learning with the knowledge and skill requirements of the 21st century will build First Nations knowledge and practices directly into a new model of education—one that may help all of our children learn to the best of their abilities.

7 Why Has Traditional Educational Reform Fallen Short?

Changing large systems is difficult. When we grow up and succeed within the traditional system, it's hard to see what's wrong and it's even harder to imagine that we can do it any other way. Traditional schooling models are entrenched in our collective psyches and in our culture, and, as a society, we have invested a great deal in keeping them the way they are. In a glaring example of what Roger Martin calls "contented model defence," the education system continues to resist and ignore overwhelming evidence that the model is flawed and out of date.

Decades of educational reform calling for higher standards and a return to the basics have served only to drag an already out-of-date system even further in the wrong direction. Many aspects of these initiatives go directly against what we now know about how kids learn and develop. Even well established educational research has gone awry in implementation through misinterpretation or inappropriate application that lacks effective training and support. Increased opportunity for hands-on learning, for instance, has often occurred at the expense of direct instruction, even when it is necessary. Children need teacher-led instruction to master fundamental skills and concepts in literacy and numeracy before they can engage in more complex thinking and benefit from more self directed forms of inquiry learning.

Sadly, there have been so many "change initiatives" in educational reform (often contradictory) over the last 60 years that even well-researched and potentially effective attempts at change feel like one more "flavour of the month." Educators have become wary of pendulum swings in both directions and increasingly resistant to short-term changes that do not have valid research support, are not adequately supported with training and are implemented with no long-term vision or resources.

Additionally, in the perceived march towards progress and societal change, we have come to believe education is the sole responsibility of schools, not the shared responsibility of families and communities in supporting the next generation. We must move to develop and implement research based, coherent and long term approaches that strengthen families and communities and build necessary foundational skills while optimizing engagement, participation and learning outcomes for all our students.

In the end, attempts at educational change from within have little chance of success because the fundamental problem is the structure of the system itself. All of the participants are well socialized to the traditional norms, routines and values of the existing institutions, and, because of this, today's educational leaders are poorly equipped to meet the challenges of initiating significant change on their own.⁴¹

8 Core Issues in Educational Restructuring

In assessing economic and social shifts as well as the research in human learning and development, it becomes clear that our current system of education is neither adequately preparing youth for the world they will enter nor applying what is known to optimize educational outcomes. Several critical issues must be addressed if we ever hope to move forward with effective educational change.

● Changing Economies Demand Different Learning Environments

Society has undergone a massive and rapid shift from a factory-based economy dependent on physical labour to a knowledge-based economy to what some now call *the concept age*. This new economy requires radically different approaches to work, productivity and prosperity and consequently requires radically different approaches to learning, schools and education. “The future belongs to a very different kind of person with a very different kind of mind—creators and empathizers, pattern recognizers, and meaning makers.”⁴²

Rote instruction, student passivity and memorization of formulaic solutions made sense when training people for the standardized production of a factory or repetitive office tasks. Today’s workplace, however, and our need for global competitiveness require creativity, initiative and the ability to learn beyond any one set of skills that can be taught as discrete units of information. “If we want children to function well in an open and dynamic economy then it is imperative to expose them to open and dynamic learning environments...In other words, for young people to thrive in highly flexible, changing environments, they need to have grown up in open and challenging environments that stimulate their ability to be creative and thoughtful.”⁴³ “When students spend their days in closed, structured learning situations, they learn to play it safe. We are creating a potentially dangerous disconnect between the learning environments we are providing for children and the economy we are creating for them to enter into as adults.”⁴⁴ Youth today must become active entrepreneurs and innovators to succeed.⁴⁵ Rigid school days, subject specialization, teaching to standardized tests and onerous homework loads do not support optimal academic outcomes or the development of genuinely creative or entrepreneurial youth.

● The Digital Era Requires New Learning Paradigms

Our current education system was originally built around the technologies of the time—talk, pencil, paper and textbooks—and these are still the predominant tools used in our classrooms today. Today’s students, however, are the first generation to grow up in the midst of digital technology, and these very different experiences have changed the way they think, behave and, quite possibly, the physical structure of their brain. They are accustomed to receiving information at warp speed and from multiple sources. As a result, they are adept at parallel processing and multi-tasking. “It’s as though their cognitive structures are parallel, not sequential.”⁴⁶ Consequently, lecture style transmission and the typical step-by-step instructions don’t work to engage or challenge these students. In fact, the “linear thought processes that dominate educational systems now can actually retard learning for brains developed through game and web surfing processes on the computer.”⁴⁷ We cannot continue to assume that what worked for students raised before the digital era will work for students today. It is essential that we study

empirically how to use the new technologies to help students learn and use the technological advances to make our schools more effective.

The changing nature of knowledge and its availability also needs to shift the typical teacher/student hierarchy of knowledge dissemination.⁴⁸ Knowledge building and innovation is now about mass collaboration,⁴⁹ not the transmission of information from expert to student. Our schools must come to reflect this reality if we ever hope to prepare students for the workplaces of tomorrow. Youth can't possibly reach their full creative potential (especially at the adolescent level) when they are forced to "learn" within a rigid system that does not match with the world in which they function or the interest and interaction that they encounter outside the walls of the classroom.

Schools also need to help youth in developing the skills needed to work effectively within our digital world—concentration, the ability to differentiate valid sources and to consolidate isolated facts into a larger context.⁵⁰ Without these abilities, youth are subject to not only misinformation, but also manipulation. Drastically different approaches to teaching and learning may be required to better fit students' learning styles and to develop the skills needed to function effectively in the digital world.

● New Understanding of Learning and Brain Development Means Relocating Resources and Creating New Structures

Applying what we now know about learning and human development requires more than just shifting how or what we teach. It means changing how we structure educational opportunities over the developmental span of schooling to reallocate existing resources and ensure the highest return on educational and community investment.

► **Setting Trajectories for Life: The Early Years**

The experiences and interactions that occur from conception to age 6 drastically affect the trajectory of children's lives, their success in school and who they will become as adults.⁵¹ Research on the predictors of success at age 18, for instance, show the single most significant factor to be the quantity and quality of dialogue in the child's home before age 5.⁵² In fact, all aspects of human capital, from workforce skills to social competence to mental health, are built over the basic architecture of the brain that is developed during these early years.⁵³

That's because human babies are born with brains that are less than 40% formed. Although fully equipped with all the necessary raw material needed to do the rest (over 1 billion nerve cells), it is the activity, experience, attachment and stimulation they get from their environment that determines the function of those nerve cells and how they get connected. What happens during the first years of life shapes the very structure of the brain and the neural pathways that will be formed.⁵⁴ Providing rich and stimulating environments and interactions in the early years builds better brains that can do more as they grow.⁵⁵

Despite overwhelming evidence that investing early pays off, Canada ranks "dead last" among developed nations in spending on early childhood education.⁵⁶ In Ontario alone, the cost of behavioural and mental health issues triggered by problems in early childhood is estimated at \$30 billion.⁵⁷ With about one quarter of Canadian children experiencing some

learning or behavioural difficulty by age 6⁵⁸ and studies showing long-term consequences such as poor school performance, social maladjustment, criminal behaviour, substance abuse and health problems later on, the costs of doing nothing are extraordinarily high.⁵⁹

Not doing our best in the early years is a huge opportunity lost. Many skills, behaviours and emotional capacities have time-limited windows for development—if the appropriate experiences don't occur during a sensitive period of growth, the brain prunes away those unused connections and the opportunity for acquisition is lost or severely diminished. "It's very expensive to do intervention on a school-age child and at best you'll only succeed about half the time."⁶⁰ With effective programs in place, we could drastically reduce the long-term costs of behavioural and mental health problems triggered in early childhood⁶¹ and significantly improve educational outcomes and life success for all of our youth.

► **The Tipping Point: Adolescence**

Contrary to previous beliefs, adolescence is a period of profound structural change in the brain, rivalling early childhood as a critical period of development.⁶² Far from being fully formed, as was once assumed, the teenage brain "remains a teeming ball of possibilities, raw material waiting to be synaptically shaped...wildly exuberant and receptive."⁶³ This process of synaptic upheaval is a deep-seated biological adaptation that makes it possible and essential for youth to become independent and ready to start their own lives.⁶⁴ Despite this knowledge, we keep our curious adolescent learners contained inside the walls of the classroom, precisely at the time they are biologically designed to be exploring, apprenticing in the real world and gaining independence.

At age 11 or 12, the brain experiences a wave of synapse formation (similar to the growth spurt seen in infants), followed in adolescence by a process of synaptic pruning (much like pruning the weaker branches of a tree). Consequently, the "use it or lose it" principle becomes critical in adolescence. What teens do—or do not do—during this stage of development will affect them (and the very structure of their brain) for the rest of their lives.⁶⁵ Keeping adolescents passive within the confines of typical classrooms, separated subjects and traditional pedagogical approaches fosters strong neural pathways for following the rules, memorizing abstracted facts and thinking in a linear fashion. The rigid framework of schools and the conformity required actually "prunes out" attributes such as creativity, independence, innovation, thinking outside the box and working in novel and untraditional ways. The current education system may, in fact, be helping to shape the adolescent brain in complete opposition to what is needed to successfully meet the challenges facing us in the 21st century.

► **Powerful Learning: Using What We Know**

The human species is literally born to learn and make sense of its world. Traditional schooling models, however, tend to transform curious, eager toddlers into bored, disengaged adolescent learners. This is hardly surprising given that many of our existing educational practices and structures directly contradict what we know about how humans learn best and what makes them want to do it.⁶⁶

The typical strategy for teaching students most often comes down to reward and punishment. While it may work for lab rats, the research in humans is clear: it is internal motivation, not extrinsic reward, that determines learning success.⁶⁷ Despite common cultural assumptions,

fostering competition for gold stars and perfect test scores won't produce the results we want from education. Traditional competitive grading systems encourage surface-level thinking, increase dislike for school and decrease creativity, subject interest and willingness to undertake a challenge.⁶⁸ Learning results are stronger when work is done collaboratively as opposed to competitively, especially for complex tasks.⁶⁹ Nearly 1,000 studies have demonstrated the power of co-operative learning to promote academic achievement and deep understanding,⁷⁰ yet we continue to turn learning into a competitive struggle and an individual quest for grades.

Intrinsic motivation for learning, above all else, requires interest. Regardless of age, race or aptitude, students are more likely to remember and really understand what they are learning if they find it intriguing.⁷¹ That means we need to make learning opportunities relevant to students' lives, and we need to create choice in terms of what and how students learn. "Deprive children of self-determination and you deprive them of motivation."⁷² Our current schooling model provides very little opportunity to follow individual interests or personalize learning experiences. It gives them even less opportunity to understand how they learn and work to improve it. Teaching children how the brain makes new connections and grows "smarter" through effort and learning not only increases motivation to learn but also significantly improves skill development.⁷³

Traditional educational models also fail to capitalize on how learning actually occurs. Learning is about actively making sense of the world around us by taking in new information, comparing it to our current understanding and negotiating meaning out of those interactions. We "construct" our knowledge through experience—by doing. In young children that experience comes through play. It is the vehicle for learning everything, from mathematical logic and scientific reasoning to emotional self-regulation and social problem solving.⁷⁴ As children progress through current school systems, learning experiences become increasingly more abstract and decontextualized. This happens despite the fact that "the human mind is better equipped to gather information about the world by operating within it than by reading about it, hearing lectures on it, or studying abstract models of it."⁷⁵ Humans learn best in context by participating in authentic, meaningful and productive experiences. That means that the most powerful learning opportunities most likely occur outside the walls of typical classrooms.

If we understand that learning is an active process of making sense of new information within the context of our own understanding and experience, then learning—by its very nature—is personal and individual. It matters who we are and what we bring with us into the classroom. Learning is also relational. It can't be separated from social and emotional factors. Addressing and cultivating social and emotional learning within education improves student attitudes and behaviours, increases motivation and boosts academic achievement.⁷⁶ Ultimately, humans learn best when we recognize the individual and address the whole child. That means effective education can't rely on one-size-fits-all learning opportunities or a factory model of education, churning out students, theoretically as cost-efficiently as possible.

● **Effective Education Involves Home and Community**

In an average calendar year, kids spend about 14% of their time in school. After you take away the 33% of time they spend sleeping, you are left with 53% that is spent with family, friends and community.⁷⁷ Research has shown that factors outside the school are four times

more important in determining student achievement than factors within a school.⁷⁸ Evidence from large-scale studies of school effects suggests that differences in the characteristics of the school explains only 12–20% of the variation in math and language achievement across schools, while families and communities account for as much as half the variation in student achievement across schools.⁷⁹

“When schools, families and community groups work together to support learning, children tend to be more successful in school, have fewer attendance problems, enroll in more challenging academic programs, stay in school longer, have better social skills, adapt to school more readily—and this relationship holds across families of all economic, racial/ethnic, and educational backgrounds and for all ages.”⁸⁰ There is now growing recognition by leading economists that social capital (e.g., trust, networking and shared values as expressed through strong families and communities) is the foundation of increased human capital. So-called intangible assets and “soft interpersonal skills” initially learned in the family and community are now seen as crucial in the emerging new economy and society.⁸¹ Abundant research studies of health determinants, neuroscience, early childhood, and human and social capital affirm the substantial influence of non-formal learning in the family and community.⁸²

A consortium of top international scientists recently synthesized the main findings about teaching and learning, and their report emphasizes the needs for school-family partnerships, student engagement, opportunities for relevant and authentic learning, and community involvement in the learning process. They recommend community-centred approaches to education, approaches that encourage communities of learners (both for students and for teachers) and that connect learning to students’ lives and interests.⁸³ “No curricular overhaul, no instructional innovation, no change in school organization, no toughening of standards, no rethinking of teacher training or compensation will succeed if students do not come to school interested in, and committed to, learning...We need to look, not at what goes on inside the classroom, but at students' lives *outside* the school's walls.”⁸⁴

If we truly want to provide the best learning opportunities for our kids, education needs to be more like a three-legged stool—with the structural support of home, school and community all working together. With significant changes in society and family structures, we have come to believe and expect that deterioration in two of the legs (family and community) can somehow be replaced by expecting more out of the remaining leg (school). Nowhere is this concept better illustrated than within our First Nations communities, where cultural, community and family ties have been broken over decades of historical colonization and residential schooling. As a result, First Nations youth have the highest rates of infant mortality, foetal alcohol syndrome, suicide, incarceration and family social problems.⁸⁵ Education has been hailed as the best mechanism for breaking the cycle of impoverishment; yet, despite years of policy making and reform, First Nations youth continue to have the highest rates of school departures before graduation and perform far below the achievement and employment rates of average Canadians. Attempting to fix just one leg does not mean the stool will stand. A functional system of education needs to involve, include and use both families and communities and to move outside the walls of any one institution.

Appendix A: About Classroom Connections

Classroom Connections is a national non-profit educational organization (with charitable status). For the past ten years, we have produced innovative, award winning and bilingual educational materials for schools, parents, faculties of education and community groups across Canada. Ninety percent of educators rate our resources as “very needed” in the classroom and 100% would recommend the materials to others. In addition, our materials are among the top 10 most requested items from the on-line resource centre (www.pdstore.com) of *Curriculum Services Canada*, a national standards organization for educational materials. Currently over 85% of Canadian schools are registered to receive our resources with a reach of well over 800,000 students.

Our materials are unique and highly valued because they are ready-to-use, student-centred and clearly aligned with ministry of education curriculum guidelines in provinces and territories across Canada. Moreover, they are innovative in both content and pedagogy and teacher tested. To date we have developed and distributed over 19 resources for elementary and secondary school students across the country and we have forged a unique and powerful network among educators, leading researchers, school districts and ministries of education. In the process we have created an extensive pilot-testing and review network of subject specialists and pedagogical experts which inspires teacher trust and increases program usage. Our strong partnerships with organizations such as the Canadian Education Association, the Canadian Association of Principals, and the Education Research and Development Institute, provide a solid base of consultants and advisors for individual projects as well as extensive promotional pathways within the education system.

Classroom Connections has also built a comprehensive database of school boards, educators, Faculties of Education and community organizations as well as an in-depth understanding of the education system across Canada. As a result, we have established strong distribution and promotion networks. Our methods for delivering resources target educational materials directly to the appropriate audience. This is a key usage issue as schools and school boards are bombarded with new resources that often do not get past the front office. Our reputation, registration process and close relationships with school board personnel ensure our materials are eagerly anticipated, well accepted and reach the teachers who will use them.

Our Core Strengths

- An established reputation for producing socially significant, award winning educational resources in both English and French using the most effective instructional methods based on what we know about how kids learn
- Strong connections/partnerships within the Canadian educational field to assist in development, promotion and maximum program usage by teachers, students, and community organizations nationwide
- Pedagogical and curriculum expertise to produce lessons that are innovative, involving and inspiring for students and teachers and align with provincial Ministry guidelines to insure materials will be utilized in schools
- A comprehensive pilot tester/review network and access to educational and content experts for the creation of program specific steering committees
- Unique program delivery strategies through the Classroom Connections distribution network of registered school boards and community agencies that ensure resources are expected, anticipated and well used
- Extensive and continued program promotion within the educational community through conference presentations and attendance, articles/ads in educational journals and participation in association meetings and communication networks

Organizational Capacity

The experience, reputation, expertise and networks developed by Classroom Connections, put us in a unique position to provide:

- a viable mechanism for a variety of stakeholders to contribute responsibly and effectively in the education and development of kids
- a national, apolitical mechanism for the sharing, and dissemination of educational expertise, best practice and innovative educational material

Ensuring Program Quality

Classroom Connections takes extensive measures to validate the quality and need for the programs we produce. Strong partnerships with educational organizations provide a solid base of consultants and advisors for individual projects as well as extensive promotional pathways within the education system. Each program we develop is:

- guided by national Steering Committee of experts in content and pedagogy
- written by experts in content and pedagogy e.g. David Selby from the International Institute on Global Education; Tom Morton an award winning teacher; Dr. Morton Beiser, the Director of the Joint Centre for Excellence for Research on Immigration and Settlement; Michael Hovey, Executive Director of the Hague Appeal for Peace; Barrie Bennet from the Ontario Institute of Studies in Education (OISE), a leader in Instructional Intelligence
- pilot-tested with students in classrooms across Canada
- approved by *Curriculum Services Canada* which indicates to educators that the materials have clear curriculum connections, valuable educational content and are free of gender or cultural stereotypes
- reviewed and evaluated by subject specialists and experts in pedagogy with diverse regional

Measures of Success

- 92% of educators reviewing Classroom Connections programs rate them as “*very good*” or “*excellent*”
- 90% of educators rate our resources as “*very needed*” in the classroom
- 100% of users would recommend our programs to others
- All resources approved by Curriculum Services Canada
- Classroom Connections programs are among the top 10 most requested programs on the PD Store website (Curriculum Services Canada)
- Cultivating Peace in the 21st Century was chosen as the representative program for Canada at the UNESCO International Education Forum in Oslo, Norway 2002
- Classroom Connections won the National Peace Education Award by the Canadian Centres for Teaching Peace, 2003
- Programs are recognized and supported by school boards and leading educational organizations across Canada
- Classroom Connections materials are requested and distributed around the world

Strong Growth

From 1998 to 2008 Classroom Connections has:

- Expanded registration from 8% of Canadian schools (Ontario only) to 87% of schools nationally
- Extended reach to students from 48,000 youth in Ontario to a potential audience of over 800,000 youth across the country
- Produced and distributed over 20 free educational resource products for schools and community agencies
- Built an extensive customized database of [over 40,000 teachers, schools, community agencies, faculties of education and educational organizations](#)
- Developed a strong reputation with educators and educational organizations across Canada

Our Structure

Classroom Connections Support Services is a registered non-profit. ***Classroom Connections Learning Foundation*** is a related organization with charitable status with a mandate to fund projects by Classroom Connections Support Services.

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