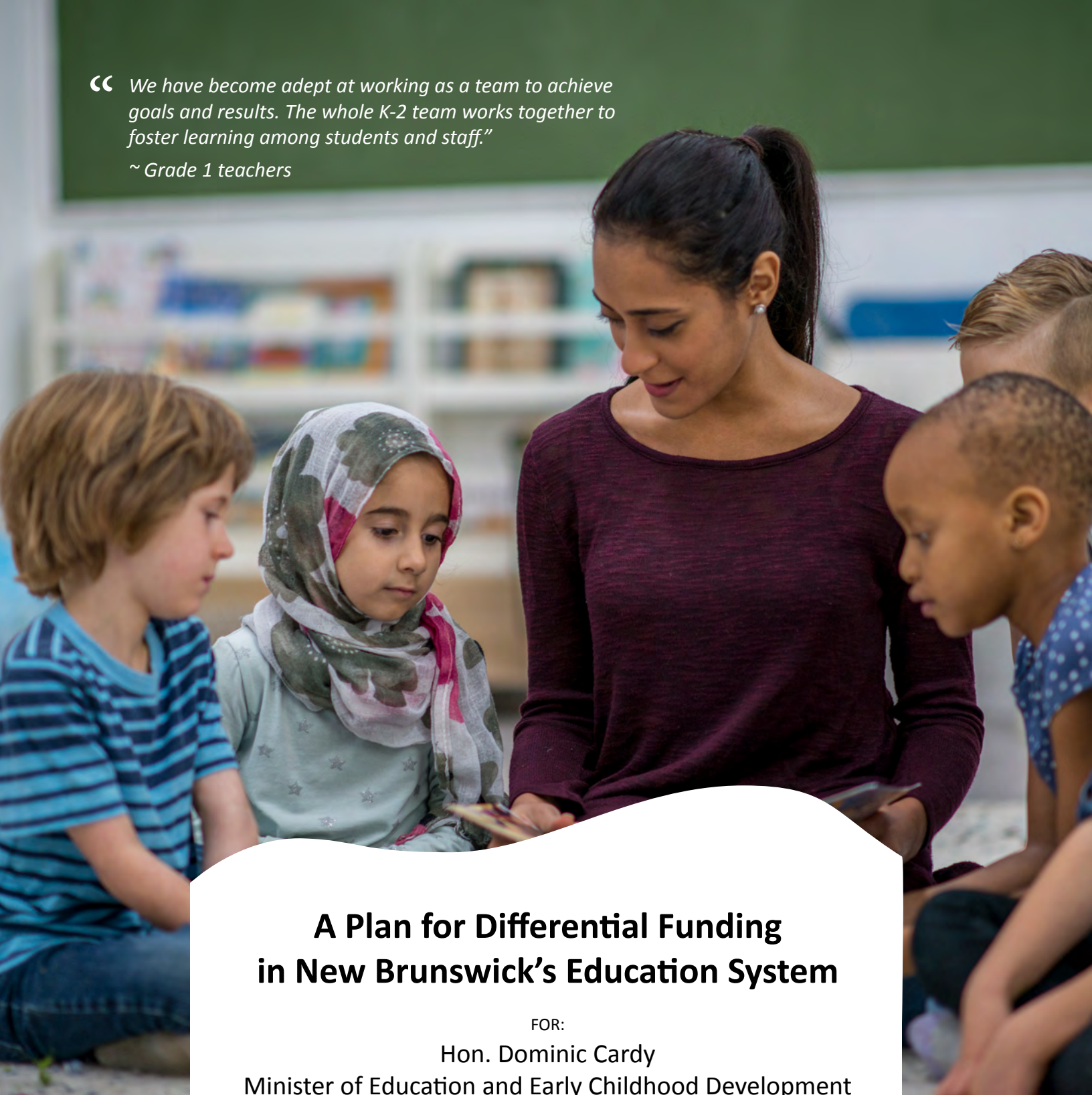


“ We have become adept at working as a team to achieve goals and results. The whole K-2 team works together to foster learning among students and staff.”

~ Grade 1 teachers



## **A Plan for Differential Funding in New Brunswick’s Education System**

FOR:

Hon. Dominic Cardy  
Minister of Education and Early Childhood Development

November 25, 2020

Respectfully submitted by:

**BUSINESS COMMUNITY**  
**ANTI-POVERTY INITIATIVE**  
IN SAINT JOHN

## IN THEIR WORDS

“ I have only wonderful things to say about my classroom composition. I am able to meet and work with all of my students daily in multiple subject areas (Literacy, Math and oral language). This has allowed me to differentiate my lessons on a daily basis, focusing on the needs of all of my students individually. I am able to have discussions with all of my students daily about their weekends, activities outside of school. I feel that I really know my students which has created a positive learning environment. My students are all kind and caring to one another, and I believe it is because we are such a small group working together every day. I have enjoyed working with my teaching partner, as we are able to bring our classes together for whole group lessons which allows us to pull out students for assessing/extra support. Common planning is being done on a daily basis between myself and my teaching partner, as well as k-2 team meetings on a weekly basis.

~ Primary teacher

“ We say it’s challenging, but at the same time it’s extremely rewarding. At the end of the day no matter what the challenge was, you feel you are truly making a difference in the lives of these kids. They are developing that bond, that trust. We are giving them something they are not getting elsewhere.

~ Primary teacher

“ Our class is the best! It is a small class because we only have 10 students. There’s lots of space in our room! We are very quiet workers. We get to do a lot of fun things with our small class. We get to work in groups and work with our teacher a lot. We are positive people. We always follow the rules, because it’s easy with 10 people. We love our class!

~ Students in a Grade 2 class

“ When the children leave on Friday, they say, ‘How many days ‘till I come back?’ It’s rewarding to know we’ve created that safe environment and they want to be here with us.

~ Primary teacher

“ Children living in poverty face challenges that demand additional academic support. We know the benefits of this from previous privately funded programs. The results are not only an improvement in math and reading scores but also a vital change in the child’s self-esteem and ability to see a brighter future. An investment in helping a child to read by Grade 3 is lifechanging.

~ J.K Irving, BCAP I Investor



CLICK TO WATCH THE  
2019 PROJECT VIDEO





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## 1.0 EXECUTIVE SUMMARY / BRIEFING NOTE

30,000 New Brunswick children live in poverty, which is a well-documented cause of diminished educational achievement and academic attainment. The resulting effects are lifelong and come with a staggering economic and social cost.

Beyond the moral imperative to help these children have a better life, the financial imperative is pressing. Government and societal costs related to poverty amount to billions of dollars EVERY YEAR.

For the New Brunswick government, we estimate that the direct cost of poverty is approximately a half a billion dollars per year—and that these costs account for 6.5% of the 2009/10 New Brunswick government budget. This is a significant amount of resources. Health care spending alone amounts to \$196 million per year, an amount that could be saved or reallocated if we lifted the poorest 20% of New Brunswickers out of poverty.

For society overall, the cost of poverty is much higher—up to **two billion dollars a year in New Brunswick**. This corresponds to as much as \$2,700 per person, per year. Thus, when the direct costs to government are added to broader costs of poverty, this total cost of poverty (\$2 billion) is equivalent to 7% of New Brunswick's GDP (gross domestic product or size of its economy).

Canadian Centre for Policy Alternatives  
InFocus: Cost of Poverty in New Brunswick, 2011.  
By Angella MacEwen and Christine Saulnier  
ISBN 978-1-926888-76-7

We can fix this.

### RESEARCH

Research shows that adopting an **early childhood education model** that supports children with wraparound services from birth to junior kindergarten, and a **differential or needs-based funding model** in our schools will close the achievement gap for children living in poverty and create a substantial return on investment for taxpayers (\$6 for every dollar spent). Closing the gap early in a child's life produces best results with the highest payoff.

### CONTEXT

The *When Children Succeed* project in Saint John, a \$4.5 million, 3-year demonstration project funded in partnership by the Anglophone School District-South/NB Department of Education and Early Childhood Development, Living SJ, and BCAP investors, began in 2018 with the goal of proving the positive impact of class size reduction (CSR) strategies on the achievement gap in New Brunswick schools.

COVID-19 interrupted the project at the midway point, and when schools re-opened, they did so with a similar class size reduction strategy in place.

### RESULTS

Our project results, which are included in **Appendix A** (*When Children Succeed: A Blueprint for Success in NB Schools* Final Report August 2020 Prepared by Cynthia Hatt, Ed. D.) and **Appendix B** (*When Children Succeed: an evaluation of one and a half years of strategic intervention to close the achievement gap*. Derek J. Gaudet, M.A. The University of New Brunswick Saint John); were trending strongly in the right direction, and we learned a great deal with respect to project wins and losses that we can build upon going forward.



## LEARNINGS

Among the many learnings were these three key concepts:

- the importance of **increased autonomy** for school districts and schools to determine how to spend their resources (both human and financial) to best serve the students in their communities;
- the large gap that exists in **effective data collection** to guide diagnosis and treatment of learning issues, benchmark and measure pedagogical interventions, and monitor achievement over time; and,
- the absolute requirement for **culture change** throughout the education system – if we are to set our teachers up for success, poverty must become a lens through which we view all strategic decisions from budget setting to infrastructure prioritization, from to community investments to wraparound services, from teacher education to classroom composition.

## VISION > ASK > RECOMMENDATION > SCALE-UP

Our vision is for a New Brunswick-built model that supports children living in poverty from birth to grade 2 with wraparound services, diagnosis and treatment, and individualized attention that sets them up for a lifetime of success.



## THE ASK: Immediate next step

As you know, this year's funding for the *When Children Succeed* project remains unspent. We will deploy that funding to best effect, in discussion with our investors, pending the results of this meeting and the project landscape going forward.

TIMING	SCOPE	ACTION
Sept 2021 to June 2024	7 priority neighbourhood schools in SJ	Commit to fully funding the class size reduction (CSR) currently in place in our 7 priority neighbourhood schools so our project can continue for another three-year term.
<b>INSIGHT</b> The <i>When Children Succeed</i> project generated a wide variety of very positive results, as captured by Cindy Hatt's report and the UNB data analysis report (both available in the Appendices of this document). In the first 1.5 years of the project, we showed that CSR is an important plank in closing the achievement gap for children living in poverty. Our project learnings, however, showed us that more strategies are needed to remove learning obstacles for all children, set teachers up to succeed, and maximize the lasting benefit of this investment. <b>These are the basis for our recommendation below.</b>		



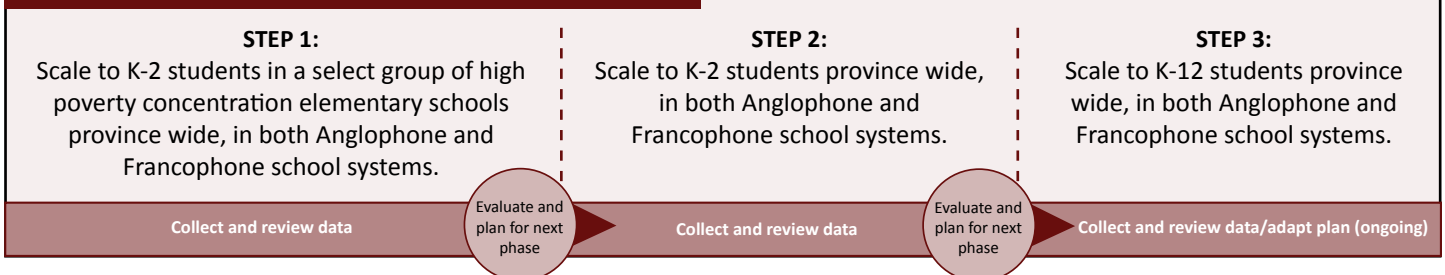
## THE RECOMMENDATION: Use Saint John as a living lab to define a multi-strategy, data-driven path to province-wide differential funding.

TIMING	SCOPE	ACTION
Now	Department wide	Implement EECD culture change with respect to poverty as a critical barrier to academic achievement and educational attainment in New Brunswick.
Now	Inter-departmental	Create a cross-departmental project team within government, tasked to move this project forward, in collaboration with the <i>When Children Succeed</i> partners and other local stakeholders. This group will determine <b>go-forward plan</b> , establish a best-practices-based <b>data collection and evaluation plan</b> and <b>create a budget</b> using inter-departmental resources.
September 2021 to June 2024	<p><b>SAINT JOHN LIVING LAB:</b> 7 priority neighbourhood schools</p> <p>SEASIDE PARK ELEMENTARY GLEN FALLS SCHOOL PRINCESS ELIZABETH SCHOOL CENTENNIAL ELEMENTARY PRINCE CHARLES SCHOOL ST. JOHN THE BAPTIST - KING EDWARD SCHOOL HAZEN WHITE SCHOOL</p>	<p><b>Implement a comprehensive differential funding model for the 7 SJ schools, comprised of:</b></p> <p><b>SCHOOL DIFFERENTIAL (SCHOOL-WIDE/COMMUNITY-WIDE STRATEGIES)</b></p> <ul style="list-style-type: none"> <li>• Close the digital divide in the catchment communities (free WIFI and training resources).</li> <li>• Add school-based, high-quality early childhood education programs and services including pre-school, after school and summer programs accessible to all families, 12 mo/year.</li> <li>• Add funding for school-based food security programs, and other basic needs supports (laundry, etc.)</li> </ul> <p><b>GRADE DIFFERENTIAL (K-2 STRATEGIES)</b></p> <ul style="list-style-type: none"> <li>• Fund CSR in grades K-2 (as indicated in THE ASK above).</li> <li>• Add funding for comprehensive data collection and analysis.</li> </ul> <p><b>STUDENT DIFFERENTIAL (STUDENT-SPECIFIC STRATEGIES)</b></p> <ul style="list-style-type: none"> <li>• Add needs-based funding for wraparound support for low socio-economic-status (SES) children 0-8 years old, including family supports, diagnosis and treatment of learning and wellness barriers, tablets and technical support, and more.</li> </ul> <p><b>Plan for province-wide scale-up</b></p> <ul style="list-style-type: none"> <li>• Evaluate and prepare the go-forward plan to expand the program to benefit more NB children. Establish financial model, develop budget.</li> </ul>



# THE SCALE-UP: Province-wide differential funding

## 2024 TO 2034 – MULTI-YEAR PROVINCE-WIDE SCALE UP



The *When Children Succeed* project included the addition of a Speech Language Pathologist, for diagnosis and treatment of learning barriers related oral language deficits. This one investment generated enormous value for the project.

“*Having dedicated access to a Speech Language Pathologist (SLP) brings the topic of Oral Language and Language development/speaking/listening to an entirely different level. We are now able to dig into the components of speaking and listening and oral language in a way that impacts daily teaching and in a short time has not only enhanced our tool belts around oral language but has also enhanced our delivery.*

*We are now applying more and more ways to engage students through play and oral language development. Teachers are now aware of screeners, what they mean, how to use them to drive instruction and how to provide opportunities to foster oral language development.*

~ *When Children Succeed* Principal

Done well, this plan will involve a collaborative and strategic approach involving multiple government departments, school districts, schools, and community partners to provide wraparound family support and education from birth to grade 2 – and eventually all grades.

It will be a cornerstone of a post-COVID provincial recovery and resilience plan.

We need to ask ourselves: who do we want to be in 10 years?

### A growth agenda fuelled by a knowledge-based economy can only happen if we fix this today.

We have talked about this long enough. It’s time for action, and here’s why:

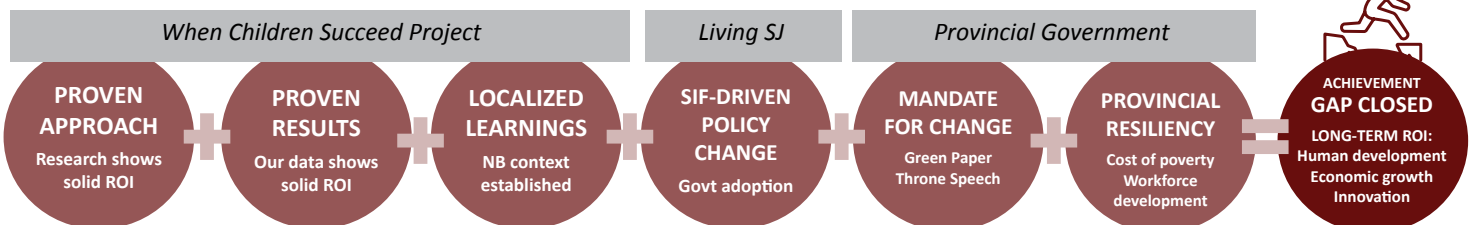
**The results are proven:** improved educational outcomes, improved labour force participation, increased tax base, a significant drop in the incidence of intergenerational poverty, reduced inequality overall, and better social integration of marginalized groups.

**The path to community-generated policy change needs to be established:** Living SJ Social Innovation Fund projects are reaching maturity, and the path to policy change and adoption of project recommendations must be established so that \$10 million investment is able to bear fruit. This project will establish a path for others to follow.

**The mandate for change is there:** Government has a mandate for change, to improve our province’s resiliency and productivity over the long term. Differential funding has the potential to be the most important strategy in making that goal achievable.



## DIFFERENTIAL FUNDING IN NEW BRUNSWICK: The time is now.



## 2.0 MEETING GOAL

This meeting was called to provide a path forward for poverty-based differential (or needs based) funding for schools in New Brunswick, designed to close the achievement gap between low SES (socio-economic status) children and their peers.

### **Caveats**

- We are not going to propose a differential funding model that addresses all special needs present in New Brunswick students – this is outside our scope of expertise.
- Nor will we propose a detailed rubric for calculating poverty-based differential funding by student – this is also outside our scope of expertise.
- We will bring our expertise as community leaders to the table, commenting on measurement, accountability and outcomes related to projects of this nature.
- We will focus on the needs of students living in high levels of poverty, and make recommendations for a differential funding model experience appropriate for the New Brunswick context – as that is where our experience lies.

## 3.0 CLOSING THE ACHIEVEMENT GAP

### Research Scan Summary

*A full detail research scan is included in Appendix C.*

#### EARLY CHILDHOOD EMOTIONAL WELL-BEING

- To grow up emotionally healthy, children under three need 10 to 20 hours each week of harmonious, reciprocal interactions. This process, known as attunement, is most crucial during the first 6–24 months of infants’ lives and helps them develop a wider range of healthy emotions, including gratitude, forgiveness, and empathy.

#### LINK TO MATERNAL EDUCATION

- Socioeconomic status (SES) and inequality in children’s skill development is present well before they enter school.
- Among the core dimensions of SES (occupation, income and education), maternal education shows the strongest association with children’s cognitive development.

#### THE BENEFITS OF EARLY INTERVENTION

- Cognitive and language delays can accumulate over a lifetime. Cycles of vulnerability carry forward to subsequent generations.
- High-quality ECE is generally thought to accelerate cognitive and language development in the short term, but research has found its effects can be detected even in late secondary school.
- Canadian economists estimate a long-term \$6 return for every public dollar spent as Canada reaps the benefits from improved maternal labour force participation, reduced inequality, better social integration of marginalized groups and improved educational outcomes for children. The return on investment is highest for children who live in poverty.

#### THE IMPACT OF EARLY CHILDHOOD EDUCATION

- The benefits of early childhood programs in these areas were found to be “uniformly positive and overwhelmingly statistically significant.” (Barnett, 2001).
- Economically disadvantaged children who participated in preschool programs in Ypsilanti, Michigan experienced greater academic achievement through the high-school years, as well as lower adult criminal activity, participation in welfare programs, and unemployment. (Karoly, 1998).

#### THE IMPACT OF POVERTY CONCENTRATION

- Success starts turning to failure, it is generally agreed, when the school becomes 50% minority or low income. Another expert has concluded that a district with over 60% poor children “can no longer rely solely on its own internal efforts” to avoid failure.

#### DOES DIFFERENTIAL OR NEEDS-BASED FUNDING WORK?

- How schools spend their money is at least as important as how much money they have to spend. (Hanushek, 1996).
- When UK schools invested in additional educational support and learning resources achievement gaps among students declined. (Nicoletti & Rabe, 2012).
- Additional, flat per-pupil expenditure has a modest relationship with improvement in students’ standardized test scores. (Cobb-Clark & Jha, 2013).
- For children from low-income families, increasing per pupil spending yields large improvements in educational attainment. (Jackson, Johnson & Persico, 2016).
- When examining school funding and student outcomes...the following adult outcomes were found: a 23 percentage-point increase in high school completion rates, nearly a full additional year of completed



education, 25% higher adult earnings, 52% higher annual family incomes, and a 20% reduction in the annual incidence of poverty in adulthood. (Jackson, Johnson & Persico, 2016).

#### COST EXAMPLES: HOW MUCH DOES IT COST TO CLOSE THE ACHIEVEMENT GAP?

- EXAMPLE 1: It costs more than three times the amount per pupil (\$20k to \$30k) to achieve national average outcome goals in very high poverty districts (>40% poverty) as it does in relatively low poverty districts (<10% poverty) (\$5k to \$10k).
- EXAMPLE 2: the cost of educating low-income students produced the need for a supplemental poverty weight of 139 percent, or more than twice the base per-student cost of education.
- EXAMPLE 3: The extra cost to school districts of bringing low-income students up to the average level of statewide academic performance...was estimated to be almost twice that of educating non-poor students, producing a supplemental funding weight of 97 percent.

#### THE IMPACT OF CLASS SIZE REDUCTION (CSR) EFFORTS

- Results published by the Tennessee Department of Education showed significant increases in academic achievement for students in the smaller classrooms.
- Follow-up studies have indicated benefits lasting well beyond the early years in areas such as drop-out rates, class rank, and enrollment in advanced courses. As with the earlier test scores, this effect was more pronounced for minority and low-income students. (Krueger, 2001)
- Another analysis found that reduced class sizes increased student performance in reading and math, and that schools with more low-income students were likely to receive larger benefits (Jepson, 2002).

## 4.0 OUR CONTEXT

New Brunswick has the second highest spending per pupil in Canada, \$14 768 per student, behind only Saskatchewan. (Updated Fraser Institute, 2020)

Further, NB is over-represented by the number of students performing below Level 2, the skill-level deemed necessary to participate in a literate society, at 22%, the highest percentage in Canada. Of this group, 7% failed to meet even Level 1, again the highest percentage in Canada. (Updated PISA 2018)

New Brunswick is determined to substantially improve children's education outcomes and exceed the Canadian standard. However, 30,000 New Brunswick children live in poverty, which is a primary cause for poor education outcomes.

Child poverty is unevenly distributed throughout the province with concentrations in Campbellton, Bathurst and Saint John – all with rates above 30%. Further, inequities are clear in Saint John with Wards 2 and 3 (the 'north' and 'south' ends) experiencing rates of 42.7% and 47.8% respectively. Visible minority children in NB experience poverty at an alarming rate of 46.7%, nearly twice the national average. Particularly disturbing is the high rate among children of Arab descent at 80%, again almost twice the national average.

The education system currently lacks a strategy to close the achievement gap for these children, which creates a wide variety of devastating long-term financial, emotional, social and health-related impacts.

The *When Children Succeed* project, a \$4.5 million, 3-year demonstration project funded in partnership by the Anglophone School District-South/ NB Department of Education and Early Childhood Development, Living SJ, and BCAP I investors, seeks to prove the positive impact of class size reduction (CSR) strategies on the achievement gap in New Brunswick schools.

COVID-19 disrupted the project at the halfway mark. When elementary schools reopened this fall, they did so after implementing a CSR strategy (1:15 teacher/student ratio for K to 2 students) as a social-distancing/classroom bubble strategy.

Since this change applies to all students equally, the achievement gap remains untouched.

We must take steps to re-activate the benefits of the project through a) scaling the effort with the support of government and b) tapping into additional strategies to create an equitable opportunity for children to succeed in school.

The funds associated with the final year of the *When Children Succeed* project remain dedicated toward the original project goal. How they are spent depends upon the outcome of this meeting and the go-forward decisions of government.

## 5.0 BACKGROUND

### Timeline (government perspective): equity-related milestones in New Brunswick education

1940	<i>Compulsory Attendance Act</i> established
1960s	Group educational rights focus on linguistic topics
1967	Equal opportunity established to resolve deep regional inequalities – government takes responsibility for education from municipalities
1977	<i>The Education Act</i> replaces the <i>The Schools Act</i>
1986	Inclusion established, incorporating students with disabilities into regular classrooms
2007	Community schools program established by government
2008	New Brunswick’s first poverty reduction plan introduced
2012 – 2014	International testing shows poor achievement in New Brunswick schools
2016	10-year education plan introduced
2017	\$10 million Social Innovation Fund announced for Living SJ
2018	<i>When Children Succeed</i> 3-year project begins, with \$1.5 million in funding from Department of Education and district-level partnership
2019	Green paper introduced Education Summit
2020	Elementary and middle schools open with class size reductions (CSR) of 50% due to COVID-19.

### Timeline (Saint John community perspective): equity-related milestones through Saint John-led initiatives

1997	Business Community Anti-Poverty Initiative (BCAPI) established
2000	Deloitte study on poverty in Saint John conducted, becoming roadmap for BCAPI activities moving forward.
2000	Partners Assisting Local Schools (PALS) program initiative begins The PALS program began in 2000 as a way to help children in New Brunswick reach their full potential and is an internationally and nationally honoured anti-poverty initiative. PALS supports over 30 schools in New Brunswick, with close to 200 business and community partners and hundreds of volunteers.
2001 - 2011	Pilot project at Prince Charles School – 3 additional teachers (PALS project) Three teachers were added to the school staff to help improve education outcomes. Prince Charles school serves a neighbourhood with an 85% child poverty rate and with this intervention, produced a significant increase in student achievement. Standardized tests by Grade 7 jumped by 106 per cent in writing and 121 per cent in reading from 2006 to 2011. The high school graduation rate for the neighborhood students rose from 41% (2011) to 75% (2017).
2002	Positive Recreation Opportunities (PRO) Kids begins P.R.O. Kids is a service administered by the City of Saint John that provides funding for and matches children and youth up to the age of 18 with organized, registered recreation activities.
2003	First Steps program begins First Steps is a residential facility operating in partnership with the community. It offers a supportive environment to young pregnant and parenting women who have no safe place to live assisting them in reaching their full potential.

2005 - 2013	<p>Vibrant Communities Saint John (convened by BCAPI)</p> <p>Vibrant Communities Saint John is a multi-sector leadership roundtable tasked with engaging the community in the design and implementation of a poverty reduction strategy with the goal of reducing its overall poverty rate.</p>
2007	<p>Teen Resource Centre (TRC) expands</p> <p>The TRC is a safe place where youth between the ages of 12-30 can find support to reach their full potential through innovative programs and services including a safe place to hang out, supportive counselling, and employment &amp; educational supports.</p>
2008	<p>Crescent Valley Resource Centre established</p> <p>Focusing on the residents of Crescent Valley and Anglin Drive, the Resource Centre offers educational, social, and recreational programming at no charge. Many programs and services are open to residents living outside Crescent Valley.</p>
2010	<p>Deloitte study 2.0 on poverty in Saint John conducted, becoming roadmap for BCAPI activities moving forward.</p>
2010	<p>Saint John's first early learning centre established at St. John the Baptist/King Edward School</p>
2010	<p>UNB's Promise Partnership begins</p> <p>The Promise Partnership at UNB Saint John connects the university with the community to help combat poverty. This initiative provides educational support and opportunities to youth in two of Saint John's priority neighbourhoods.</p>
2011	<p>Sistema launched in Saint John</p> <p>Sistema is a program of the New Brunswick Youth Orchestra (NBYO) that promotes social change and improvement of the lives of kids through orchestra music lessons.</p>
2011	<p>PALS En Route to Success program begins at St. Malachy's HS</p> <p>Provides students in grades 9, 11, and 12 with an alternate learning environment every afternoon, for one semester. Summer employment is provided, and credits are obtained for graduating from high school.</p>
2013	<p>Living SJ launched (BCAPI is a founding partner)</p> <p>Living SJ is Saint John's movement to end generational poverty by removing the education, health and employment barriers for families who live in low-income neighbourhoods. We use a Collective Impact approach and work with a network of over 100 partners from three levels of government, the private sector, non-profits and neighbourhoods.</p>
2014	<p>Bee Me Kids launched</p> <p>Bee Me Kids is an educational non-profit, empowers and inspires elementary aged children and their families to develop the social and emotional skills that will enable them to succeed in school and life. It operates free of charge for kids in grades 1-3, in two locations in Saint John every Saturday during the school year from 10:00 a.m. until 2:00 p.m.</p>
2015	<p>Achieve Literacy GSJ launched (BCAPI project)</p> <p>Achieve Literacy GSJ is a team of business, education and community leaders, dedicated to championing a community-wide response to help every child learn to read before Grade 3.</p>
2016	<p>Differential funding report (BCAPI project)</p>
2016	<p>Pathways to Education opens in Saint John with TRC as lead agency</p> <p>The Pathways to Education program supports youth and their families in Waterloo Village and South End Saint John through a variety of free supports designed to improve graduation rates: academic supports and tutoring, social supports and mentoring, financial supports and scholarships, and advocacy support and advising.</p>
2018	<p>High school graduation rates report (BCAPI project)</p>
2018	<p><i>When Children Succeed</i> project begins, with \$1.5 million in BCAPI investor funding and BCAPI partnership with the ASD-S/EECD and Living SJ.</p> <p>The <i>When Children Succeed</i> project is a three-year demonstration project designed to help 1,000 students from the city's poorest neighbourhoods to succeed in school and pave the way for New Brunswick to improve education outcomes.</p>
2020	<p>Deloitte study 3.0 underway</p>

## 6.0 WHEN CHILDREN SUCCEED PROJECT

**APPENDIX A:** *When Children Succeed Final Project Report. Cindy Hatt*

**APPENDIX B:** *UNB Data Collection Report*

### Problem to be solved

Generational poverty is entrenched in Saint John and severely holds our city back – socially and economically. To break the cycle, children’s education success is an imperative – but too many children who live in poverty do not graduate from high school. They enter the school system with fewer skills and experiences required for standard achievement and, grade by grade, fall further behind.

### Project activities

- Provide additional funding to 7 elementary schools with high concentrations of poverty to close the gap in the children’s achievement and improve their education outcomes.
- Reduce the teacher-student ratio in K to 2 classrooms to 1:12 to enable each child to receive intensive, individualized help to overcome learning barriers caused by economic disadvantages and acquire the foundational social and academic skills essential for progressive school success.
- Document the social and academic progress of the children using quantitative and qualitative measures.
- Engage parents in their children’s education success and document these results.
- Capture best practices and changes in teaching methods and their impact, create a positive feedback loop for the project, and inform public policy and education practice in New Brunswick.

### Project findings to date

**APPENDIX A:** *Please refer to the Evaluation Report detailed information.*

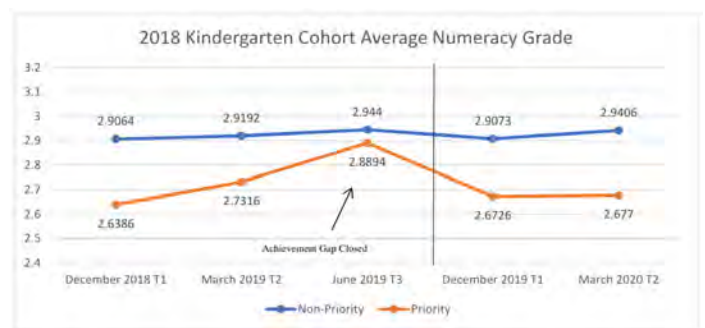
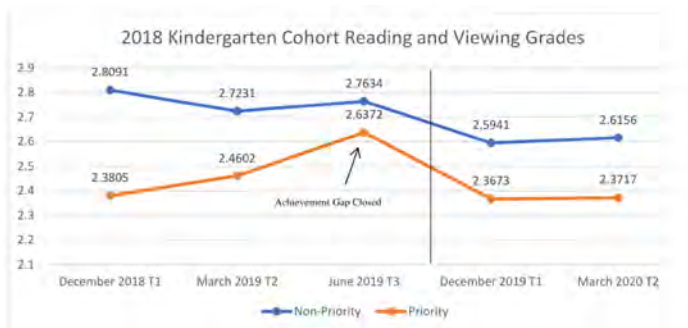
#### **With respect to children:**

##### *Social-emotional skills*

- Substantial improvements - all grades (teacher reported)
- Impressive gains in children’s confidence and readiness to learn.
- Behaviour incidents were substantially reduced.

##### *Academic skills*

- Literacy and numeracy – The achievement gap was successfully closed for Kindergarten students (measured using report card data) and the students matched the School District average.



Although Grade 1 and 2 students did not achieve the school district average, their growth compared to benchmarks set by their peers indicated they were making measurable improvements. Research shows the gap increases with each progressive grade and therefore, it takes a little longer for older students to close the gap.

- Oral language – New strategies and measurements were established for this project, recognizing that oral language skills, the foundation for literacy, are generally poor for children who live in poverty and must be substantially improved. Teachers and parents were coached by NB Speech Language Pathologists (SLP) in oral language techniques, and then standardized tests used by SLPs showed significant growth in

vocabulary and grammar. The majority of children started the project below standard and within 12 months, had met the standard.

***With respect to parents:***

- Teacher-parent communication and rapport substantially increased (teacher reported).
- Parent participation in classroom and school events substantially increased (teacher reported).
- Parent satisfaction with the school was very high. 97% of the parents felt welcome at their child's school and that their child enjoyed school.
- Chronic absenteeism of students was significantly reduced from 21.7% to 14.9% within the initial 12 months of the project (school district data). District average is 9%.

***With respect to teachers:***

- There was significant improvement in teacher confidence in their ability to help their students succeed.
- Teachers reported that the benefits to each student were significant and multi-faceted. Personalized learning techniques were applied in the classrooms, enabling the children to receive much more individual and small-group coaching. Teachers were able to rapidly assess each student and provide what the student needed in a timely fashion.
- Teachers felt the small classes sizes produced a calmer and safer environment which increased students' readiness to learn and substantially reduced negative behaviours and the effects of toxic stress, etc.
- There was a significant increase in the professional development of all staff. Teachers and principals worked in teams and coached one another, throughout the project, and were highly motivated to learn and improve their techniques. The teachers acknowledged that their own learning curve was high and expressed determination to help their students succeed.
- Teachers attributed the small class size to their ability to learn how to teach differently and to build authentic relationships with each child and family and that these factors were helping their students to progress in profound ways.
- All principals stated that this project was truly worthwhile, were grateful for the opportunity to lead change, and believed that in time it would produce significant improvements for the students, the families, the staff and school system.

**Critical project learnings**

Distinct from the project findings, we learned a wide variety of things along the way that are critical concepts and strategies that need to be incorporated into any future differential or needs based funding scenarios.

***Increased Autonomy***

- Increased discretion for how funds will be used should be instilled at the District and school level, and amongst project participants – ensuring the initiatives at play in each school and with each student are the ones required to make the most difference.

***Data***

- Harmonized and detailed testing and data collection processes must be established, in partnership with educators.
- Data collection structures should allow for individual progress measurement, demographic and cohort progress measurement, classroom and teacher measurement, absolute achievement compared to benchmarked measures, and more.
- Establish leading and lagging indicators for success, benchmarking and KPIs.
- The department has extremely limited resources in this regard at present.

***Culture change***

- Poverty, its associated traumas, and their impact on educational achievement and attainment need to become part of the conversation throughout the education system.
- Closing the achievement gap needs to be a strategy used in improving the education system's performance overall.

***Transparency***

- Differential funding models need complete transparency, so all participants understand the method of calculation, the intended beneficiaries, the measurement tools to be used, and the results realized.



### ***Boundaries management***

- Safeguarding project benefits (like class size) is something that requires regular monitoring, in order to avoid watering-down over time. Keeping an eye on variable creep is another complexity that requires management – the fewer variables at play, the more reliable the experiment.

### ***Collaboration***

- The potential of differential funding can only be maximized through determined and positive collaboration among team members.  
Looking forward:
  - Working closely with parents and other family/community members to model learning through play, teaching and parenting techniques in a non-threatening way that builds trust and creates linkages with the school.
  - Crafting a customized team of collaborators for each school that includes partners like ECEs, childhood health and wellness professionals, and proven local not-for-profit programs can expand the scope of benefit dramatically while adding an important localization factor to the initiative.
  - Breaking down silos between government departments, ensuring the Department of Health, Department of Social Development, and EECD work closely together to support this project in an active way.

### ***Absenteeism prevention and management***

- Detailed tracking, issue management, and intervention plans must be put into place to prevent and manage absenteeism throughout the system – but particularly so in high poverty schools.
- Looking forward: Involving priority neighbourhood organizations in this process could be a strategically valuable addition.

### ***Consistency***

- A harmonized pedagogical approach to all facets of curriculum and measurement from grades K to 2 should reduce summer learning loss, reduce teacher-to-teacher standards variation.
- Looking forward: This consistency should extend to and include any digital teaching tools.

### ***Diagnosis***

- Regular professional diagnostic testing of students from a variety of perspectives, using both public and private resources as required, should be implemented.
- Speech and language services need to include a focus on language development for Tier 1 (general classroom) and Tier 2 (small-group) intervention. The process for allocating Speech and Language therapists needs to be more clearly defined so that those with highest needs are prioritized.
- Rapid access to treatment and corrective measures, using both public and private resources as required, should be implemented.

### ***Digital***

- Among our project schools, anywhere from 13% - 60% of families do not have an Internet connection at home. We must ensure families living in poverty have:
  - free Internet connectivity
  - one age and learning-appropriate device in the home
  - ongoing training and technical support for the above

### ***Training***

- Teachers in the project suggested additional teacher training should include:
  - Small class size teaching methods
  - Digital tool use in the classroom
  - Data collection basics/Effective use of data to design small group learning models
  - Pro-active behaviour management
  - Oral language modelling
  - Teaching in a high-poverty environment
  - Parent and community involvement
- Best-practices sharing and learning among administrators and K-2 teacher groups in individual schools should be established, linking to larger thought leadership structures in high poverty schools throughout the province.

### **Infrastructure**

- Research shows that the built environment of a school has a positive impact on achievement.
- Schools in high-poverty areas should be recognized as critical community assets, and flagged for early or priority replacement based on age, deferred maintenance, and other criteria so they can be replaced with schools designed to be community hubs, providing space for:
  - Early childhood education, after-school and summer programs
  - Wraparound services that contribute to education equity for every child and that help to optimize the wellbeing of the families
  - School, family and community gatherings – positive social connections and learning
  - Outside the classroom learning environments
  - Community gardens and green spaces, social innovations and entrepreneurship

### **Community & project management**

- *When Children Succeed*-style program management teams, like the Living SJ Collective Impact Education Team, can be established with representation from all project stakeholders, responsible for:
  - Defining key priorities and strategies
  - Benchmarking and KPI tracking and management
  - Return on investment tracking
  - Reporting to the minister

## **7.0 A VISION**

The following presents a vision for a multi-faceted poverty-based differential or needs based funding scenario at work in a single school. It builds upon our research scan and the learnings associated with the *When Children Succeed* project.

### **Needs-based funding at work: WHAT IF?**

**APPENDIX E:** *We have included a more detailed timeline breakdown of our vision in Appendix E.*

- What if, in our high-poverty communities, when an at-risk mother-to-be presents for medical care, her Internet connectivity is established, and she receives a tablet (and training) so she can participate in a virtual pregnancy/parenting group?
- What if her neighbourhood organization and nurse practitioners check in with her monthly to see how she's doing, and link her with other local supports as needed?
- Once the baby is born, what if she attends a virtual parenting/directed play group? What if childhood development specialists check in regularly to measure progress, and EYE-DA and ACES testing is mandatory – even if it happens during a house call?
- What if at-risk children in high poverty neighbourhoods could attend a free, part-time pre-K ECE-led program, and then a free, full-time Junior Kindergarten program at a community hub school? What if these kids had door-to-door bus pickup/dropoff for these and other programs so attendance could be closely monitored and absenteeism prevented using on-the-spot support?
- What if these kids were assessed, tracked and treated by specialists and their detailed progress tracked and reviewed, in a consistent manner, over the long term?
- What if these kids had multiple hours every day of positive interactions with their peer group and with adults, helping them build attachment and trust and find their place in their community?
- What if these kids arrived at Kindergarten on par with their peers, and then in grades K-2 they received the added support they need to stay on par, in spite of their challenging environment?

### **Stakeholder experiences: a high-level look**

#### **Student experience**

- Wraparound care, birth to age 8
- Consistent continuum of learning
- Strengthened neighbourhood connections
- Individualized progress tracking and management

- Age appropriate milestone achievement and goals
- Improved and targeted supports as required
- Achievement gap is closed
- Resilience training
- Improved relationships: parents/teachers/peers

#### ***Parent experience***

- Prenatal support and intervention as required
- Improved parenting skills
- Free ECE programs (after school, pre-school, summer)
- Strengthened neighbourhood connections
- Wraparound care
- Improved and targeted supports as required

#### ***Neighbourhood organization experience***

- Strengthened neighbourhood connections
- Enhanced role in digital device training
- Enhanced role in absenteeism prevention
- Enhanced role in wraparound services delivery

#### ***Not for profit organization experience***

- Strengthened neighbourhood connections
- Enhanced role in wraparound services delivery

#### ***Teacher experience***

- Kindergarten students arrive prepared for school
- Improved access to professional diagnosis & treatment
- Enhanced role in data collection and tracking
- Small-class training
- Improved student resilience and self-control
- Reduced absenteeism
- Consistent teaching approach to curriculum, K-3

#### ***Government experience***

- Higher educational achievement and attainment
- Lower costs associated with health care and crime
- Enhanced connection to neighbourhoods
- Population growth
- Enhanced innovation
- Lower social development costs (reduced poverty)
- Improved workforce participation
- Thriving communities
- Enhanced tax base

## **8.0 RECOMMENDATIONS TO GOVERNMENT**

Ensuring these children have the resources they need to meet grade-level achievement targets is critical to breaking the cycle of poverty and improving education outcomes in NB – and will be instrumental in improving our workforce participation rate and growing the economy.

Ensuring education success for children who live in poverty must be a priority for the NB government.

### **How does differential funding work?**

Differential funding is a calculation that usually includes:

- a flat per-pupil amount,
- a school differential (based on remoteness, community needs, transportation costs, etc.),
- a grade differential (focusing funds in K-2 and 11-12), and
- a student differential (based on individual student needs: poverty and other factors).

Installing differential funding across a district or education system usually starts by freezing the flat per-pupil amount, and then applying budget growth to the differential portions over time.

Below we have proposed a method for doing just that, with one caveat and one idea for consideration.

#### **The caveat**

Our caveat is that all school-based funding calculations must take into account and fund digital connectivity gaps in the community and in the school. This will position these investments for resilience should we need to lock down again, and for home-based learning in the evening, on weekends, and during the summer.

#### **Our idea**

Our idea for consideration is that in New Brunswick, the student differential could be collaboratively funded by the Department of Health, the Department of Social Development, and EECD.



## THE ASK: Immediate next step

As you know, this year's funding for the *When Children Succeed* project remains unspent. We will deploy that funding to best effect, in discussion with our investors, pending the results of this meeting and the project landscape going forward.

TIMING	SCOPE	ACTION
Sept 2021 to June 2024	7 priority neighbourhood schools in SJ	Commit to fully funding the class size reduction (CSR) currently in place in our 7 priority neighbourhood schools so our project can continue for another three-year term.
<b>INSIGHT</b> The <i>When Children Succeed</i> project generated a wide variety of very positive results, as captured by Cindy Hatt's report and the UNB data analysis report (both available in the Appendices of this document). In the first 1.5 years of the project, we showed that CSR is an important plank in closing the achievement gap for children living in poverty. Our project learnings, however, showed us that more strategies are needed to remove learning obstacles for all children, set teachers up to succeed, and maximize the lasting benefit of this investment. <b>These are the basis for our recommendation below.</b>		

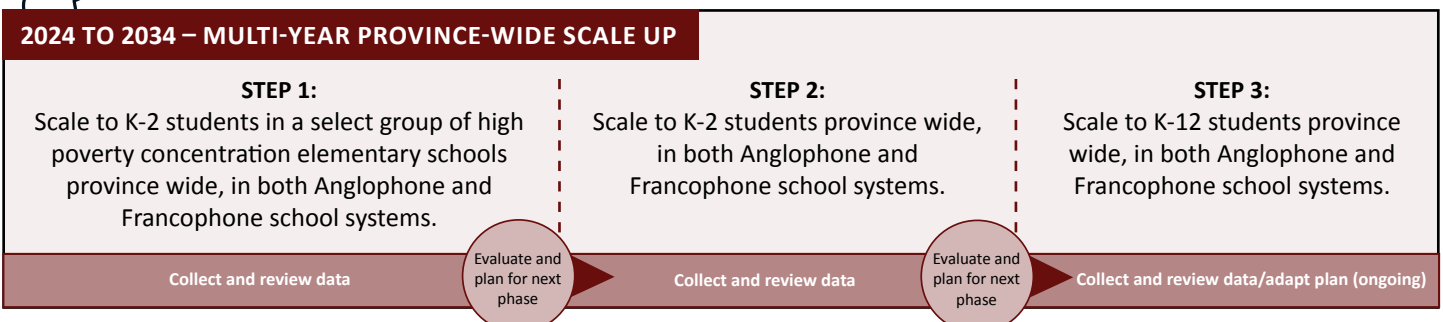


## THE RECOMMENDATION: Use Saint John as a living lab to define a multi-strategy, data-driven path to province-wide differential funding.

TIMING	SCOPE	ACTION
Now	Department wide	Implement EECD culture change with respect to poverty as a critical barrier to academic achievement and educational attainment in New Brunswick.
Now	Inter-departmental	Create a cross-departmental project team within government, tasked to move this project forward, in collaboration with the <i>When Children Succeed</i> partners and other local stakeholders. This group will determine <b>go-forward plan</b> , establish a best-practices-based <b>data collection and evaluation plan</b> and <b>create a budget</b> using inter-departmental resources.
September 2021 to June 2024	<b>SAINT JOHN LIVING LAB:</b> 7 priority neighbourhood schools  <b>SEASIDE PARK ELEMENTARY</b> <b>GLEN FALLS SCHOOL</b> <b>PRINCESS ELIZABETH SCHOOL</b> <b>CENTENNIAL ELEMENTARY</b> <b>PRINCE CHARLES SCHOOL</b> <b>ST. JOHN THE BAPTIST - KING EDWARD SCHOOL</b> <b>HAZEN WHITE SCHOOL</b>	<b>Implement a comprehensive differential funding model for the 7 SJ schools, comprised of:</b> <b>SCHOOL DIFFERENTIAL (SCHOOL-WIDE/COMMUNITY-WIDE STRATEGIES)</b> <ul style="list-style-type: none"> <li>Close the digital divide in the catchment communities (free WIFI and training resources).</li> <li>Add school-based, high-quality early childhood education programs and services including pre-school, after school and summer programs accessible to all families, 12 mo/year.</li> <li>Add funding for school-based food security programs, and other basic needs supports (laundry, etc.)</li> </ul> <b>GRADE DIFFERENTIAL (K-2 STRATEGIES)</b> <ul style="list-style-type: none"> <li>Fund CSR in grades K-2 (as indicated in THE ASK above).</li> <li>Add funding for comprehensive data collection and analysis.</li> </ul> <b>STUDENT DIFFERENTIAL (STUDENT-SPECIFIC STRATEGIES)</b> <ul style="list-style-type: none"> <li>Add needs-based funding for wraparound support for low socio-economic-status (SES) children 0-8 years old, including family supports, diagnosis and treatment of learning and wellness barriers, tablets and technical support, and more.</li> </ul> <b>Plan for province-wide scale-up</b> <ul style="list-style-type: none"> <li>Evaluate and prepare the go-forward plan to expand the program to benefit more NB children. Establish financial model, develop budget.</li> </ul>



## THE SCALE-UP: Province-wide differential funding



## 9.0 CONCLUSION

This time has come to take action on the achievement gap for children living in poverty in New Brunswick.

Implementing free wraparound individualized care, early learning opportunities, and differential funding in school from birth to grade 2 will provide a very real return on investment for taxpayers, while substantially improving the lives of 30,000 New Brunswick children living in poverty.

Not only should this initiative figure prominently in our province's recovery from COVID-19, but it should be a cornerstone of all resilience planning going forward.

If we want our economy to grow we must increase our workforce and retain our newcomer population. Differential funding is the most reliable and cost-effective way to make that happen.

This investment in equity will be an investment in us all.



## **APPENDIX A**

### **LINK**

*When Children Succeed: A Blueprint for Success in NB Schools*  
Final Report August 2020  
Prepared by Cynthia Hatt, Ed. D.

## **APPENDIX B**

### **LINK**

*When Children Succeed: an evaluation of one and a half years of strategic intervention to close the achievement gap*

Derek J. Gaudet, M.A.

The University of New Brunswick Saint John

## APPENDIX C

### Research Scan

#### **EARLY CHILDHOOD EMOTIONAL WELL-BEING**

Teaching with Poverty in Mind, Jensen, 2009.

<http://www.ascd.org/publications/books/109074/chapters/How-Poverty-Affects-Behavior-and-Academic-Performance.aspx>

Recent evidence (Harris, 2006) suggests that the complex web of social relationships students experience—with peers, adults in the school, and family members—exerts a much greater influence on their behavior than researchers had previously assumed. This process starts with students' core relationships with parents or primary caregivers in their lives, which form a personality that is either secure and attached or insecure and unattached. Securely attached children typically behave better in school (Blair et al., 2008).

Beginning at birth, the attachment formed between parent and child predicts the quality of future relationships with teachers and peers (Szewczyk-Sokolowski, Bost, & Wainwright, 2005)

To grow up emotionally healthy, children under 3 need

- A strong, reliable primary caregiver who provides consistent and unconditional love, guidance, and support.
- Safe, predictable, stable environments.
- Ten to 20 hours each week of harmonious, reciprocal interactions. This process, known as attunement, is most crucial during the first 6–24 months of infants' lives and helps them develop a wider range of healthy emotions, including gratitude, forgiveness, and empathy.
- Enrichment through personalized, increasingly complex activities.

#### **LINK TO MATERNAL EDUCATION**

Maternal Education, Changing Family Circumstances, and Children's Skill Development in the United States and UK. Jackson, 2018.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5857959/>

- Socioeconomic status (SES) inequality in children's skill development is present well before they enter school, and the degree of inequality increases throughout childhood and adolescence (Adler et al. 1994; Currie and Stabile 2003; Finch 2003; Duncan, Ziol-Guest and Kalil 2010).
- Among the core dimensions of SES (occupation, income and education), maternal education shows the strongest association with children's cognitive development. (Harding, Morris and Hughes 2015; Reardon 2011).

#### **THE BENEFITS OF EARLY INTERVENTION**

Early Years Study 4, Hon. Margaret McCain 2020

[https://earlyyearsstudy.ca/wp-content/uploads/2020/02/EYS4-Report\\_01\\_15\\_2020.pdf](https://earlyyearsstudy.ca/wp-content/uploads/2020/02/EYS4-Report_01_15_2020.pdf)

- Children who start school behind their peers often have difficulty acquiring these 21st century skills. Cognitive and language delays can accumulate over a lifetime. Cycles of vulnerability carry forward to subsequent generations with learning, behavioural and health consequences creating barriers to opportunity that are exacerbated by poverty, racism and other forms of marginalization. Pan-Canadian assessment using the Early Development Instrument (EDI) shows gaps in children's early development at age 5 years. Across Canada, more than one in four children is having difficulties.
- High-quality ECE is generally thought to accelerate cognitive and language development in the short term, but research has found its effects can be detected even in late secondary school. An analysis of 22 experimental studies found that ECE reduces special education placement by 8.1 percent, lessens grade repetition by 8.3 percent and increases high school graduation rates by 11.4 percent. These results support ECE's value in reducing education related expenditures and promoting child well-being.

- Canadian economists estimate a long-term \$6 return for every public dollar spent as Canada reaps the benefits from improved maternal labour force participation, reduced inequality, better social integration of marginalized groups and improved educational outcomes for children. The return on investment is highest for children who live in poverty.

Research Summary: The Lifecycle Benefits of an Influential Early Childhood Program, James Heckman, a Nobel Laureate in economics.

<https://heckmanequation.org/resource/research-summary-lifecycle-benefits-influential-early-childhood-program/>

- Professor Heckman and colleagues finds 13% ROI for comprehensive, high-quality, birth-to-five early education. This research analyzes a wide variety of life outcomes, such as health, crime, income, IQ, schooling, and the increase in a mother's income after returning to work due to childcare. ABC/CARE collected data on the participants throughout childhood and well into adulthood, allowing for an in-depth analysis of long-term effects in multiple dimensions of human development. This ROI, representing high-quality, comprehensive programs from birth to five, is substantially higher than the 7-10% return previously established for preschool programs serving 3- to 4-year-olds.

### ***DOES DIFFERENTIAL OR NEEDS-BASED FUNDING WORK?***

Differential funding options for New Brunswick's schools: to equity from equality. Noble, 2016. On file.

- Experts have always recognised that how schools spend their money is at least as important as how much money they have to spend. (Hanushek, 1996).
- When UK schools invested in additional educational support and learning resources achievement gaps among students declined. (Nicoletti & Rabe, 2012).
- Additional, flat per-pupil expenditure has a modest relationship with improvement in students' standardized test scores. (Cobb-Clark & Jha, 2013).
- Academic support teaching staff (literacy and numeracy leads, for example) for students living in poverty and immigrant/visible minority students enhances student outcomes so that greater achievement equity is realized and, so, seems especially important in promoting achievement growth in numeracy and reading in the primary- and middle-school years. (Jackson, Johnson & Persico, 2016).
- For children from low-income families, increasing per pupil spending yields large improvements in educational attainment, wages, family income, and reductions in the annual incidence of adult poverty. For children from non-poor families, we find smaller effects of increased school spending on subsequent educational attainment and family income in adulthood. (Jackson, Johnson & Persico, 2016).
- When examining school funding and student outcomes through linking spending and reform data to data on more than 15,000 children born between 1955 and 1985 from the Panel Study of Income Dynamics, the following adult outcomes were found: a 23 percentage-point increase in high school completion rates, nearly a full additional year of completed education, 25% higher adult earnings, 52% higher annual family incomes, and a 20% reduction in the annual incidence of poverty in adulthood. (Jackson, Johnson & Persico, 2016).
- Equity, or the uneven levels of funding per student based on student need will ensure greater educational outcomes for all, regardless of hardship, can be obtained (Jackson, Johnson & Persico, 2016).

### ***THE IMPACT OF POVERTY CONCENTRATION***

The Impact of School-Based Poverty Concentration on Academic Achievement & Student Outcomes. Poverty & Race Research Action Council.

[https://www.prrac.org/pdf/annotated\\_bibliography\\_on\\_school\\_poverty\\_concentration.pdf](https://www.prrac.org/pdf/annotated_bibliography_on_school_poverty_concentration.pdf)

- Research establishes that most successful schools are those in which the middle class is the majority. Success starts turning to failure, it is generally agreed, when the school becomes 50% minority or low income. Another expert has concluded that a district with over 60% poor children “can no longer rely solely on its own internal efforts” to avoid failure.

### **HOW MUCH DOES IT COST TO CLOSE THE ACHIEVEMENT GAP?**

The Impact of School-Based Poverty Concentration on Academic Achievement & Student Outcomes. Poverty & Race Research Action Council.

[https://www.prrac.org/pdf/annotated\\_bibliography\\_on\\_school\\_poverty\\_concentration.pdf](https://www.prrac.org/pdf/annotated_bibliography_on_school_poverty_concentration.pdf)

- Costs of achieving national average outcomes rise sharply with our adjusted census poverty measure. It costs more than three times the amount per pupil (\$20k to \$30k) to achieve national average outcome goals in very high poverty districts (>40% poverty) as it does in relatively low poverty districts (<10% poverty)(\$5k to \$10k).
- Initial results of the study indicated that the cost of educating low-income students produced the need for a supplemental poverty weight of 139 percent, or more than twice the base per-student cost of education.
- A similar analysis conducted by a researcher at Syracuse University examined education data from the 1999 - 2000 school year in the state of New York.(17) The study calculated the extra cost to school districts of bringing low-income students up to the average level of statewide academic performance, as measured by a composite measurement of math and reading test scores in the 4th grade, 8th grade and state regents examinations. The extra cost was estimated to be almost twice that of educating non-poor students, producing a supplemental funding weight of 97 percent. The author noted that, “...these results would suggest that most states are significantly underestimating the additional resources that are required to support at-risk students achieving higher standards.” (Duncombe, 2002).

How Family Background Influences Student Achievement. Egalite, 2016.

<https://www.educationnext.org/how-family-background-influences-student-achievement/>

- To cover the expenses of running the Promise Academy Charter School and the afterschool and wrap around programs, the [Harlem Children’s Zone] HCZ spends about \$19,272 per pupil. While this price tag is about \$3,100 higher than the median per-pupil cost in New York State, it is still about \$14,000 lower than what is spent by a district at the 95th percentile.
- New Brunswick per student funding, 2016/2017. (Stats Canada 2016).

### **THE IMPACT OF CLASS SIZE REDUCTION EFFORTS**

Education funding and low-income children: a review of current research. Carey, 2002.

[https://www.cbpp.org/archives/11-7-02sfp3.htm#N\\_15\\_](https://www.cbpp.org/archives/11-7-02sfp3.htm#N_15_)

- The most significant and widely-studied experiment in lowering class sizes was conducted in Tennessee. Beginning in 1985, the Student Teacher Achievement Ratio [STAR] project involved over 6,000 students in grades K-3 who were randomly assigned to either a “regular” class of 22 - 26 students with one teacher, a class of 22 - 26 students with a teacher and an instructional aide, or a low-size class of 13 - 17 students with a teacher. Results published by the Tennessee Department of Education showed significant increases in academic achievement for students in the smaller classrooms, relative to the achievement of the students in the “regular” classes.(19) By contrast, positive results were not found for the regular-size classes that were given an additional instructional aide. (Word, 1990)
- Although the students in the STAR Project returned to regular classrooms after the third grade, follow-up studies have indicated benefits lasting well beyond the early years in areas such as drop-out rates, class rank, and enrollment in advanced courses. One study reported that STAR participants were more likely to eventually take college entrance exams.(20) As with the earlier test scores, this effect was more pronounced for minority and low-income students. (Krueger, 2001)



- Another analysis found that reduced class sizes increased student performance in reading and math, and that schools with more low-income students were likely to receive larger benefits (Jepson, 2002).

### **THE IMPACT OF TEACHER QUALITY**

Education funding and low-income children: a review of current research. Carey, 2002.

[https://www.cbpp.org/archives/11-7-02sfp3.htm#N\\_15\\_](https://www.cbpp.org/archives/11-7-02sfp3.htm#N_15_)

- An 2002 study conducted through the University of Texas at Dallas Texas Schools Project, based on a large set of individual student achievement data, concluded: "...having a high quality teacher throughout elementary school can substantially offset or even eliminate the disadvantage of low socio-economic background."(29) (Rivkin, 2002).

### **THE IMPACT OF EARLY CHILDHOOD EDUCATION**

Education funding and low-income children: a review of current research. Carey, 2002.

[https://www.cbpp.org/archives/11-7-02sfp3.htm#N\\_15\\_](https://www.cbpp.org/archives/11-7-02sfp3.htm#N_15_)

- A survey of numerous studies of early-childhood intervention programs for low-income children such as Head Start challenged the conventional wisdom that the benefits of such programs quickly fade over time. The survey found that many analyses show statistically significant test score gains beyond the early grades. The survey also notes that early-childhood programs appear to have an even greater impact on other important measurements of school progress such as graduation rates, propensity to be identified as needing special education services, and tendency to repeat grades. The benefits of early childhood programs in these areas were found to be "uniformly positive and overwhelmingly statistically significant."(31) (Barnett, 2001).
- One of the few studies of the effectiveness of preschool programs to combine random-assignment protocols with long-term follow-up among program participants found that economically disadvantaged children who participated in preschool programs in Ypsilanti, Michigan experienced greater academic achievement through the high-school years, as well as lower adult criminal activity, participation in welfare programs, and unemployment.(32) (Karoly, 1998).

How Family Background Influences Student Achievement. Can schools narrow the gap? (Egalite, 2016).

<https://www.educationnext.org/how-family-background-influences-student-achievement/>

- A group of underprivileged, at-risk toddlers at the Perry Preschool in Ypsilanti, Michigan, were randomly selected for a preschool intervention that consisted of daily coaching from highly trained teachers as well as visits to their homes. After just one year, those in the experimental treatment group were registering IQ scores 10 points higher than their peers in the control group. The test-score effects had disappeared by age 10, but follow-up analyses of the Perry Preschool treatment group revealed impressive longer-term outcomes that included a significant increase in their high-school graduation rate and the probability of earning at least \$20,000 a year as adults, as well as a 19 percent decrease in their probability of being arrested five or more times. Similar small-scale, "hothouse" preschool experiments in Chicago, upstate New York, and North Carolina have all shown comparable benefits.

## APPENDIX D

### Other demonstration projects

#### **SAGE DEMONSTRATION PROJECT**

- A demonstration project, similar to our *When Children Succeed* project, – but bigger - was conducted by the Wisconsin education system. It was successful and became a state-wide program!
- Their project, SAGE – The Student Achievement Guarantee in Education, began in 1996 as a way to improve academic achievement in K-3 for schools serving low-income children. The schools (with a child poverty rate of 50% or more) were given additional funds and class sizes were reduced to an average ratio of 15:1. The students’ progress was measured over many years. The students showed improved literacy and numeracy skills and over time it was found that their drop-out rate in high school was lower. The schools/classes that showed the best results put singular focus on helping the students acquire the basic skills for school success.
- A bit more info about the project:  
The Student Achievement Guarantee in Education (SAGE) evaluation was conducted under contract with the Department of Public Instruction by the School of Education at the University of Wisconsin–Milwaukee. The purpose of the SAGE evaluation was to determine the effectiveness of the Student Achievement Guarantee in Education (SAGE) program in promoting academic achievement of students in kindergarten through third-grade classrooms in schools serving low-income children. The 1995 SAGE statute required participating schools to (1) reduce class size to 15 in kindergarten and grade one in 1996–97, grades kindergarten through two in 1997–98, and grades kindergarten through three in 1998–99 to 2000–2001; (2) stay open from early in the morning to late in the day and collaborate with community organizations to provide educational, recreational, community, and social services; (3) provide a rigorous academic curriculum to improve academic achievement; and (4) establish staff development and accountability mechanisms.
- The SAGE evaluation involved the 30 schools in 21 school districts that launched the SAGE program in 1996 and compared SAGE schools to a group of 14-17 non-SAGE Comparison schools located in SAGE districts.  
<https://nepc.colorado.edu/sites/default/files/epru-0201-104.pdf> (2001-2002 evaluation results).
- Another evaluation report was released in 2015.  
[https://dpi.wi.gov/sites/default/files/imce/sage/pdf/sage\\_2015\\_evaluation.pdf](https://dpi.wi.gov/sites/default/files/imce/sage/pdf/sage_2015_evaluation.pdf)
- New Legislation was introduced in 2015. And a state-wide program entitled “Achievement Gap Reduction” (AGR) was introduced. The new program is similar to the SAGE program and incorporates many existing aspects of the SAGE program.
- The Bill: <http://docs.legis.wisconsin.gov/2015/related/acts/53.pdf>
- The Program: <https://dpi.wi.gov/sage>

### **GLASGOW, SCOTLAND MODEL**

- Glasgow's approach is summarized in a concise infographic and a short report by Education Scotland.  
<https://education.gov.scot/improvement/practice-exemplars/sketchnote-glasgowcitycouncil>
- Glasgow, a major industrial city in Scotland, has a similar child poverty rate to Saint John (1 in 3 children) and pockets of neighbourhood poverty. The city has been on a 10-year journey to reduce poverty/close the education achievement gap/improve education outcomes.
- Part of Glasgow' success is that it is supported by both a National priority and a City priority to: improve education outcomes thru the twin aims of 'excellence' and 'equity'.
- The Scotland government has a policy framework and significant funding to address this priority:  
<https://www.gov.scot/policies/schools/national-improvement-framework/>.
- Glasgow says 6% of its education budget comes from this fund and they use it to "close the attainment gap which currently exists between those living in the least and most deprived areas". Most of the funding is allocated directly to schools.
- The City of Glasgow is responsible for Education. Its education priority mirrors Scotland's education priority. The city's overall strategic plan (<https://www.glasgow.gov.uk/CHttpHandler.ashx?id=40052&p=0>) aims to reduce inequality across Glasgow by creating inclusive growth - a thriving economy that we can demonstrate benefits the city, its citizens and businesses. This means a growing economy that creates jobs and investment, builds on Glasgow's position as a world class city, helps us to tackle poverty, tackles poor health in the city and improves our neighbourhoods.
- With this backdrop of support from their national and local governments, Glasgow's education leaders have stepped up with an unwavering focus on closing the education achievement gap.
  - They have strong, passionate leadership from the top.
  - They invest in three key priorities:
    - o Professional development for their staff (leadership, pedagogy, approaches that reduce poverty's impact on children's education success) and ensuring their staff are empowered to make individual decisions to adapt approaches to meet the needs of their own school contexts.
    - o Proven 'cradle to career' initiatives on the ground that: improve literacy and numeracy, children's wellbeing, parent engagement, and community partnerships to build a comprehensive and integrated approach to supporting the 'whole' child. They have many initiatives and are seeking to make these initiatives sustainable through evaluation/training/a culture shift.
    - o Data analysis and monitoring to target, select and evaluate the impact of its programs and report on progress.

## APPENDIX E

### VISION DETAIL: a timeline

Below we've created a timeline for our ideal scenario, one that leverages both the research and our project learnings to best effect.

#### **PRE-NATAL -> BIRTH**

- Internet connectivity established
- Device in place, training completed by neighbourhood organization
- Virtual pregnancy/parenting group
- Neighbourhood organization representative in person check-ins/door knocking
- Virtual check-ins by nurse practitioner – monthly
- In-home work/visits for other wraparound supports/referrals as required

#### **BIRTH -> 2 YEARS**

- Virtual parenting and infant play group
- At home child development work
- Virtual check-ins by childhood development specialists
- At age 2, EYE-DA testing
- Data collection on child begins
- In-home work/visits for other wraparound supports/referrals as required

#### **AGE 3**

- Pre-K early childhood education program with trained ECEs, at the community hub
- Door-to-door pickup and drop off - neighbourhood organization representative on the bus to provide on-the-spot absenteeism intervention/door knocking
- Absenteeism tracking and intervention
- Breakfast and lunch provided
- Speech language pathologist assessments/Childhood development specialist assessments
- At age 3, EYE-DA testing
- ACES testing
- Measurement and data collection on progress
- In-home work

#### **AGE 4**

- Junior-K early childhood education program with trained ECEs, at the community hub, full day, school year.
- After school program with trained ECEs, at the community hub, school year.
- Junior-K summer program – full day, 2 months.
- Door-to-door pickup and drop off - neighbourhood organization representative on the bus to provide on-the-spot absenteeism intervention/door knocking
- Breakfast and lunch provided
- Speech language pathologist assessments/Childhood development specialist assessments
- ACES testing
- In-home work
- Virtual check-ins by childhood development specialists
- Measurement and data collection on progress

#### **AGE 5**

- Kindergarten enrollment, at the community hub - full day, school year.
- After school program with trained ECEs, at the community hub, school year.
- Kindergarten summer program – full day, 2 months.
- Door-to-door pickup and drop off - neighbourhood organization representative on the bus to provide on-the-spot absenteeism intervention/door knocking
- Breakfast and lunch provided
- In-home work
- Virtual check-ins by childhood development specialists
- Measurement and data collection on progress

**AGES 6-8**

- Grades 1-2
- After school program with trained ECEs, at the community hub, school year.
- Grades 1-2 summer program – full day, 2 months.
- Door-to-door pickup and drop off
- Door-to-door pickup and drop off - neighbourhood organization representative on the bus to provide on-the-spot absenteeism intervention/door knocking
- Breakfast and lunch provided
- In-home work
- Virtual check-ins by childhood development specialists – quarterly or as required
- Measurement and data collection on progress

## APPENDIX F

### **Additional detail: How does differential funding work?**

It includes a flat per pupil amount, a grade differential, a student differential, and a school differential.

#### **Grade differential**

Typically, the earlier grades – and even pre-school – are funded more than the middle grades. The senior high school grades, again, typically receive more funding as students prepare for post-secondary studies.

#### **Student differential**

The third layer takes into account the unique differences that each student possesses. This variation, by definition, means every student does not receive this third level amount, but only those with additional costs because of things that can be present as barriers to learning and academic success.

Items, here, typically include levels of poverty, special education need, type and significance of disabilities, First Nations background, second language need and at-riskness.

The Centre on Budget and Policy Priorities in the United States has provided some typical multipliers related to learner differences to add to the base amount.

If, as an example, we take the base amount of \$10,000 per pupil, then the multipliers attached to each category would be added to the base amount to arrive at a truer cost to educate a student with high-cost need:

- Special Education 2.59 (\$25,900);
- Disabilities .9 (\$9000);
- Poverty 1.0 to 1.5 (\$10,000 to \$15,000);
- ESL 1.0 (\$10,000).

There is another category that is not always considered and that is for gifted or talented students. The Centre has included a multiplier for this group as well at .65 or \$6500 (Barshay, 2013a; Bryan, 2011). All these costs are annually added.

#### **School differential**

The final layer of many current funding formulas has to do with school characteristics that may create potential barriers:

- some schools are extremely small or extremely large
- remoteness of a school
- dispersed student population creating higher transportation costs

#### **Additional tweaks**

To ensure that the formulas are addressing what was intended, each component within each layer has to be very clearly defined so that administration and managers understand what the degrees of poverty cover.


For example, using three layers of poverty (each with its own multiplier), perhaps a lower level of poverty relates to one or more parents who are newly unemployed (a multiplier of .75), a moderate level of poverty includes a family with someone recently on welfare (multiplier of 1.0), and a high level of poverty involves a single parent family or both parents are long-term social assistance recipients (multiplier of 1.5).

## **APPENDIX G**

### **LINK**

InFocus: Cost of Poverty in New Brunswick, 2011.  
Canadian Centre for Policy Alternatives  
By Angella MacEwen and Christine Saulnier  
ISBN 978-1-926888-76-7





*“ I have seen the teachers reinvigorated. They love that they know their students so well. They can speak so specifically about the needs of each individual student. They know exactly what the next steps are and where they need to work. They love that they can reach each student multiple times a day. This project has given teachers a sense of being supported – of being heard.”*

*~ Principal*

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