

ARE WE LEARNING?

Cognitive, social, and emotional well-being

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Ensuring the full cognitive, social, and emotional development of children in Nova Scotia is essential for optimizing well-being throughout their lifespan and for the future social and economic welfare of the province. While a child's caregivers provide the foundation for their earliest learning, governments also have a responsibility to help fully realize children's fundamental right to education as afforded by the UNCRC (Articles 28 and 29).¹ This includes creating high-quality, inclusive, and safe learning environments that foster the unique abilities and talents of all children. Children and youth deserve access to opportunities from birth through adolescence to obtain academic proficiency and social and emotional skills that allow them to reach their full potential.

The early years, defined here as the period from birth to school entry, represent a critical period for setting the paths that children will follow throughout their lives.² The trajectory of development in the early years can lead to short-term success or significant challenges in elementary and secondary school, and a similar spectrum of long-term outcomes for adults in terms of post-secondary education, relationships, and employment.² The importance of early childhood development is recognized and emphasized to varying degrees in jurisdictions across Canada and around the world.³

Progress to support early childhood development and education in Nova Scotia is a provincial success story for child and youth well-being. This is seen in the establishment of the Early Years Branch within the Department of Education and Early Childhood Development (DEECD) and the introduction of no cost Pre-primary Programming connected to the public school system. Early learning and child-care bilateral agreements also signal a commitment to creating an accessible, affordable, high-quality, and inclusive early-learning and child-care system in Nova Scotia that will support early childhood development.

Despite these advances, data suggest an ongoing need to optimize the cognitive, social, and emotional development of children and fully recognize their right to education in the early years all the way through to graduation.

AT A GLANCE

- █ Nova Scotia
- █ Canada

Dimension	Indicator		
Public policies related to early childhood education	Participation in preschool Percentage of the four-year-old population enrolled in pre-primary programs <i>Early Childhood Education Report 2020</i> Table 3.3 Nova Scotia ECE School Programs (2019-2020)	52%	
	Participation in preschool where available Percentage of children enrolled in pre-primary for four-year-olds in designated catchment areas with programs in place <i>Early Childhood Education Report 2020</i> Table 3.3 Nova Scotia ECE School Programs (2019-2020)	N/A	
Early cognitive development	Omission of important skills in the first year of school Percentage of children that are vulnerable on one or more domain of the early development instrument (EDI) in grade primary <i>Province of Nova Scotia (2021), EDI data from 2020</i> <i>Offord Centre, McMaster University, 2008-2017</i>	25.5%	
		27%	
Learning behaviours and attitudes	Enjoyment of learning in school Percentage of students in grades 4 to 12 that agree with the statement "I enjoy learning in school" <i>Province of Nova Scotia, 2018/2019 Student Success Survey</i>	73%	
		N/A	
Learning skills and competences	Reading to academic expectations (grade 3) Percentage of students in grade 3 that meet expectations for reading based on assessments developed in Nova Scotia <i>Province of Nova Scotia, 2018-2019, Nova Scotia Assessment: Literacy and Mathematics/Mathématiques in Grade 3</i>	70%	
		N/A	
Reading to academic expectations (grade 6)	Reading to academic expectations (grade 6) Percentage of students in grade 6 that meet expectations for reading based on assessments developed in Nova Scotia <i>2019-2020 Nova Scotia Assessment Reading, Writing, and Mathematics in Grade 6</i>	74%	
		N/A	

* Indicates a custom data request from the data source indicated.



Dimension	Indicator	
Learning skills and competences (cont'd)	Academic expectations in math (grade 6) Percentage of students in grade 6 that meet expectations for mathematics based on assessments developed in Nova Scotia <i>2019–2020 Nova Scotia Assessment Reading, Writing, and Mathematics in Grade 6</i>	70%
	Performance in math (grade 8) Percentage of students in grade 8 performing at or above Level 2 in mathematics <i>Pan-Canadian Assessment Program (2019) Table 1.3</i>	N/A
School environment	Performance in reading (grade 8) Mean reading score for grade 8 students <i>Pan-Canadian Assessment Program, 2019 Table 2.1</i>	500 505
	Belief that school is a nice place to be Percentage of students in grades 6 to 10 that agree with the statement "School is a nice place to be" <i>Health Behaviour in School-aged Children survey, 2018/2019*</i>	50.7%
Educational attainment and progression	Belief that school is unsafe or threatening Percentage of students in grades 4 to 12 that reported feeling unsafe or threatened at school within the past month <i>Province of Nova Scotia, 2018/2019 Student Success Survey</i>	19%
	On-time graduation Percentage of students that started grade 10 in 2015-2016 and graduated from grade 12 by the end of the 2017-2018 school year <i>Statistics Canada, Education Indicators in Canada: An International Perspective (2020) Table A.2.1, pg. 39</i>	88%

* Indicates a custom data request from the data source indicated.

ACCESS TO HIGH-QUALITY EARLY CHILDHOOD EDUCATION AND CARE

Access to high-quality early childhood education contributes to the cognitive, social, and emotional development of children and helps to reduce social inequities by ensuring that all children can develop critical early-learning skills.² Through a play-based approach, high-quality early childhood programs, such as licensed child care and pre-primary programs, provide opportunities for young children to learn and develop foundational skills. For example, the Nova Scotia Early Learning Curriculum Framework focuses on well-being; discovery and invention; language and communication; and personal and social responsibility.⁴ The role of responsive early childhood educators is crucial in supporting intentional play-based programming that promotes exploration and encourages children to expand upon and extend their play.⁴

Investments in early childhood education over the last 10 years have resulted in an increase in the percentage of children aged two to four years participating in programs across the province. In 2020-2021, over 6,000 children were enrolled in the province's Pre-primary Program where it was available, representing 75 percent of eligible children, a meaningful increase in access to early childhood education over time for Nova Scotian children that is expected to realize long-term benefits.⁵ However, the availability of early childhood programming for the province's younger children remains a concern.⁶ While the total number of regulated child-care spaces has increased in the last few years, a recent survey found that in 2020 more than one third of parents/guardians reported difficulties in finding a child-care arrangement, a figure similar to Canada as a whole.⁷

Developmental status at school entry

Since 2013, Nova Scotia has administered the Early Developmental Instrument (EDI) to all eligible grade primary students every two to three years.⁸ The EDI is the only population-level estimate of the developmental status of our province's youngest children and a useful, albeit imperfect, measure of the skills necessary for success at school.

The EDI is a teacher-completed assessment of children that occurs several months into their first year of school.⁸ It comprises 161 questions in five developmental domains (2018 Ontario version). The first domain, physical health and well-being, includes questions about health, independence, and being rested. The second domain, social competence, deals with the ability of children to play and get along with others, share, and show self-confidence. The third domain, emotional maturity, deals with the ability to concentrate, help others, show patience, and inhibit aggression or anger. Language and cognitive development, the fourth domain,

assesses interest in reading and writing, ability to count, and recognition of numbers and shapes. The fifth domain, communication skills and general knowledge, has questions about the ability of children to tell a story and communicate with adults and other children.⁸

Scores are summed for each domain and converted into percentile ranks (i.e., 1 - 99 percent). Children who score below the 10th percentile cut-off for the Nova Scotia baseline population on any of the five EDI domains are considered “vulnerable.” Children who are vulnerable are at increased risk of experiencing difficulties at school or in other settings compared to children at or above the 10th percentile. Data show that around one-quarter (25.5 percent) of grade primary children in the province are vulnerable in one or more EDI domains, a number that has been stable between 2013 and 2020 (with the exception of 2018).⁸ This rate is comparable to the national estimate of 27 percent of students entering school with developmental vulnerabilities.⁹

The increased vulnerability documented in Nova Scotian children in 2018 may reflect differences in how the EDI was administered or a change in causative factors that affected child development during the five years of those children’s lives.⁸ Changes in EDI administration in each survey cycle make cycle-to-cycle comparisons difficult. In addition, some questions may consciously or unconsciously disadvantage some children based on cultural norms (e.g., social competence and emotional maturity). Nevertheless, it is critical to continue EDI administration: this is the only population-wide measure available to assesses children’s development at around age five. Each cycle adds to our ability to see changes over time in response to any investments or program changes in early learning and child care.

PASS THE MIC

“Sometimes when you learn new stuff,
you can make it to your big dreams.”

- Child participant



ELEMENTARY SCHOOL PERFORMANCE: A MARKER OF LEARNING OVER TIME

Children's literacy and numeracy skills are critical for unlocking life opportunities. Most students in Nova Scotia complete standardized tests to measure student performance in literacy and mathematics in grades 3, 6, and 8. Results are typically reported in four levels of proficiency and then collapsed into two groups: not meeting expectations (levels 1 and 2) and meeting expectations (levels 3 and 4). The processes used by the DEECD for these assessments have changed in recent years. In 2018-19, a new literacy and mathematics assessment for grade 3 students was administered at the end of the school year.¹⁰ Previously, grade 3 literacy and grade 4 mathematics assessments were administered at the beginning of the school year, so results prior to and after 2018-19 cannot be compared directly. There is also no national comparator for these data.

In the 2018-2019 school year, 70 percent of grade 3 students met expectations for reading.¹⁰ Grade 6 provincial results have remained consistent over the last three years (2017-18 to 2019-20), with about three-quarters of this population meeting expectations in both reading and mathematics (74 percent and 70-71 percent, respectively).¹¹

The Pan-Canadian Assessment Program, a national initiative from the Council of Ministers of Education, Canada, seeks to determine whether students across the country reach similar levels of performance at about the same time in their schooling. A survey is conducted in grade 8.³ In 2019, the most recent assessment, students in Nova Scotia were slightly below their national counterparts for mathematics (89 percent performing at or above Level 2 provincially versus 90 percent nationally) and reading (mean reading score of 500 provincially versus 504 nationally).³ For some children in this age group, it may be too late to identify and correct any challenges with learning.

When children require specific educational interventions, based on needing either remediation or enrichment in school, the school engages in a program-planning process. This process sometimes results in the development of an adaptation or individualized program plan (IPP), which is governed by the provincial *Special Education Policy*.¹² Adaptations focus on strategies or resources to address identified challenges and/or support a child's strengths.

PASS THE MIC

“Asking students what their interests are or how they prefer to learn can help students learn effectively. Sometimes I wish we could add another grade in school so things could be spaced out and I wouldn’t be as stressed.”

- Youth participant

At the discretion of the school, children with adaptations or IPPs may not be allowed to complete standardized assessments. While IPPs are used with a small minority of students (approximately six percent in 2016-17), it is important to remember how they may impact population-level data about school performance and critical to appreciate that some groups of children and youth are disproportionately over-represented in IPP data.¹³

There are several ways to measure whether a child or youth is developing the skills and proficiencies they need. Standardized testing is the primary method used by the DEECD to track the academic performance of elementary school children. These tests, although indicative of educational performance, do not provide a full picture of a child’s cognitive, social, and emotional development in middle childhood. Furthermore, interpretation of these data is hampered by the different rates of participation by school, the ability of school administrators to decide who writes these tests, and the lack of a national comparator.

Clear criteria that school administrators can apply to each student in the same manner would allow easier comparison of standardized test results among schools across the province and over time. Adopting instruments that assess the totality of development during this period would also provide a more rounded picture of whether young children are being equipped with the variety of life skills they need to meet their full potential and not just the basic academic building blocks.

CHILDREN'S EXPERIENCE IN SCHOOL

School environments can be a significant source of stress or support for children and youth. A positive school climate improves student achievement and sense of belonging.¹⁴ It is important to understand how children and youth in Nova Scotia feel about learning and school. The 2018-2019 *Nova Scotia Student Success Survey* assesses students' perceptions in a variety of areas, including school climate and personal engagement in school.¹⁵ All public-school students in grades 4 to 12 were eligible to complete the survey, and there was a response rate of 65 percent.

Seventy-three percent of children and youth agreed or strongly agreed with the statement "I enjoy learning in school." Children and youth in grades 4 to 6 also generally reported having an encouraging relationship with teachers (85 percent).¹⁵ There was a substantial decline, however, in those who enjoyed learning in school after grade 6 and marked variability in responses for students based on self-reported disability status, sexual orientation or gender identity, and race or ethnicity.¹⁵

Based on the 2018-2019 *Health Behaviour in School-aged Children* survey, students in Nova Scotia were less likely than their national counterparts to agree with the statement that "school is a nice place to be".¹⁶ The biggest discrepancy was seen in older students: only 43 percent of boys and 41 percent of girls in grades 9 and 10 agreed that school was a nice place to be compared to 62 percent of boys and 57 percent of girls nationally.¹⁶ These responses are consistent with the 2018-2019 *Nova Scotia Student Success Survey* results: nearly 1 in 5 students in grades 4 to 12 reported feeling unsafe or threatened at school in the past month.¹⁵ Children and youth who reported feeling unsafe identified social, verbal, or written sources of abuse as the main causes.¹⁵ These responses again varied by self-reported disability status, sexual orientation or gender identity, and race or ethnicity.¹⁵

High school completion

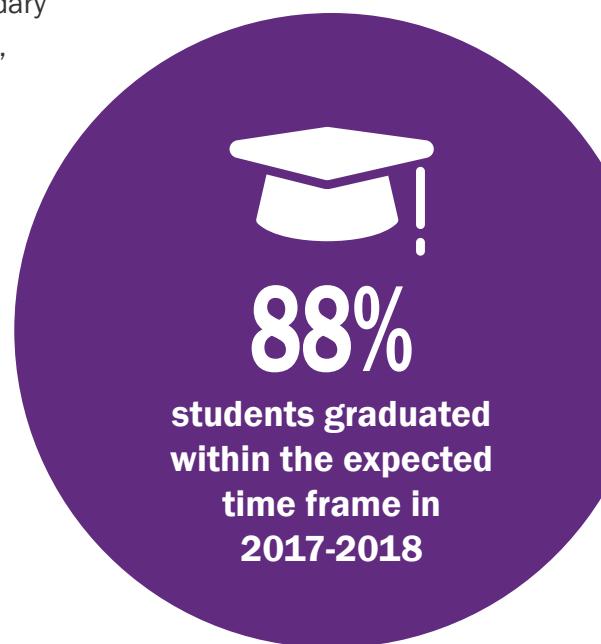
Graduation from high school is an important milestone; it is a requirement for access to post-secondary education, which, in turn, is associated with employment success and other benefits to health, well-being, and quality of life. Based on a national report that compares provincial and territorial graduations rates, an estimated 88 percent of students in Nova Scotia graduated at the expected time (2017-2018 year) compared with 81 percent of students across Canada.¹⁷

The graduation rate reported by the Government of Nova Scotia is calculated differently than other regions and is defined as the percentage of students receiving a high school graduation diploma compared to the number of students in grade 9 three years earlier.¹⁸ These provincial data show an increasing trend in the overall graduation rate from 84.8 percent in 2006-2007 to 92.3 percent in 2016-2017 (the most recent available data).¹⁸ This rate varied in 2016-2017 across the province's seven Regional Centres of Education from 81.7 percent to 97 percent.

Although rates were calculated using different methods, Nova Scotia appears to be a strong performer on this indicator relative to national comparators.

It is not known what proportion of graduates go on to post-secondary education and to employment in Nova Scotia, and therefore, graduation rates do not necessarily indicate future success.

Information about the later life course of youth who do not graduate in the province is also lacking.



THE BOTTOM LINE

Recent and planned investments in early childhood education and the provincial Pre-primary Program, as well as the Nova Scotia Government's ongoing commitment to measure early childhood development using the population-based EDI, is encouraging. However, without high-quality information about development, skill acquisition, and educational achievement across childhood and into adolescence, it is difficult to ascertain a complete picture of how well children and youth in Nova Scotia are learning. Greater efforts are needed to improve the monitoring of development and learning outcomes across the lifespan with attention to existing gaps, for example, measuring the development of young children or tracking the outcomes of adolescents after graduation.

Available data suggest there is significant room for improvement to realize the right of children and youth to learning and education (UNCRC Articles 28 and 29). Child-care settings and schools also have a recognized role in supporting leisure, play, and culture (UNCRC Article 31).¹ Implementing affordable, high-quality child care and earlier formalized opportunities for childhood education may help improve children's preparedness for school entry. Adding at least one more measurement point at the age of 18 months, as has been implemented in many jurisdictions across North America, would help with earlier identification of vulnerabilities and provide guidance for early intervention prior to school entry.

A child's or youth's ability to learn is influenced by their enjoyment and feeling of safety in the school environment. Many Nova Scotian children and youth feel that school is not a safe and enjoyable place to be. Therefore, it is critical that the province continue to implement ongoing strategies to hear from young people of school age about their experiences. Nova Scotia's *Inclusive Education Policy* is an important step forward in supporting student achievement and well-being.¹⁹

Further efforts are needed to ensure that learning environments provide safe, inclusive, educational experiences that foster a desire to learn and promote optimal well-being in all children and youth.

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