EDI in Ontario
Over Time - Cycles 1-5

REPORT

Offord CENTRE FOR CHILD STUDIES
McMaster University

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INTRODUCTION

EDI IN ONTARIO

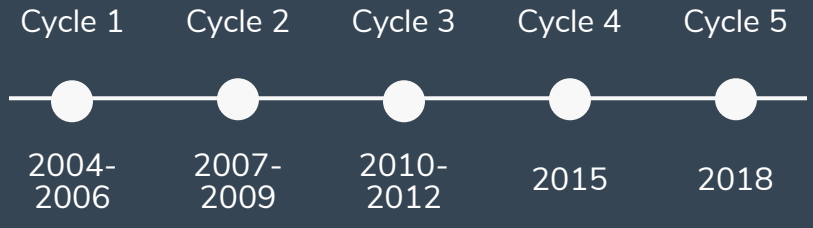
The Early Development Instrument (EDI) measures children's ability to meet age-appropriate developmental expectations at school entry. It focuses on the overall outcomes for children as a health-relevant, measureable concept that has long-term consequences for individuals and populations. The data from its collection helps monitor the developmental health of our young learners.

The EDI has a long history in the province of Ontario. Between 2003/2004 and 2011/2012 the Ministry of Children and Youth Services sponsored three full provincial collections of the EDI, completed over three-year cycles. Most publicly funded school boards participated in each full provincial collection. Some school boards completed their EDI collection across all three years of a cycle, whereas others completed the entire school board in a single year.

The first province-wide implementation of the EDI was completed between 2004-2006. These data constitute the Ontario Baseline or Cycle 1, and are used to determine the 10th percentile cut-offs for subsequent reporting for all cycles.

The Ministry of Education sponsored the EDI collections in 2014/2015 and 2017/2018. In contrast to previous cycles, the fourth and fifth full provincial collections took place entirely in a single year.

A full report on the Cycle 5 collection is available online in English and French.



WHY LOOK AT EDI DATA OVER TIME?

The information collected through the EDI helps us to understand the state of children's developmental health by connecting the conditions of early childhood experiences to learning outcomes and future successes. Examining how children are doing over time is important for mobilizing stakeholders towards change. Focusing on strengthening the areas in which children are vulnerable allows schools, communities, and governments to make decisions on how to best support early development. Investigating how children's developmental health is changing over time can also allow for evaluation and strategic planning around what is currently being done to support children and their families.

This report provides trends across all five provincial collections of the EDI in Ontario.

A one-page summary of the changes between Cycles 4 and 5 is available online.

Long-Term Trends

Vulnerability is trending lower in two domains

- Language & Cognitive Development (7.5% in Cycle 5 vs. 9.6% in Cycle 1)
- Communication Skills & General Knowledge (10.0% in Cycle 5 vs. 12.1% in Cycle 1)

Vulnerability is trending higher in three domains

- Physical Health and Well-Being (16.3% in Cycle 5 vs. 12.9% in Cycle 1)
- Social Competence (9.9% in Cycle 5 vs. 9.3% in Cycle 1)
- Emotional Maturity (11.3% in Cycle 5 vs. 10.3% in Cycle 1)

Change since 2015

Trend continuation

- Vulnerability in Physical Health & Well-Being continues to rise (16.3% in Cycle 5 vs. 16.1% in Cycle 4)
- Vulnerability in Communication Skills & General Knowledge continues to fall (10.0% in Cycle 5 vs. 10.2% in Cycle 4)

Trend reversal

- Vulnerability in Language & Cognitive Development rose from Cycle 4 (6.7%) to Cycle 5 (7.5%)
- Vulnerability in Social Competence dropped from Cycle 4 (10.7%) to Cycle 5 (9.9%)
- Vulnerability in Emotional Maturity dropped from Cycle 4 (12.3%) to Cycle 5 (11.3%)

NUMBER OF CHILDREN IN ANALYSIS

Children without Special Needs

	Cycle 1 Count (%)	Cycle 2 Count (%)	Cycle 3 Count (%)	Cycle 4 Count (%)	Cycle 5 Count (%)
Total Completed EDIs	124,866	120,302	129,071	135,937	136,391
Excluded from Analysis*	11,543 (9.2%)	9,386 (7.8%)	9,577 (7.4%)	10,079 (7.4%)	12,479 (9.1%)
Total Number of Children Without Special Needs Included in Reports	113,323 (90.8%)	110,916 (92.2%)	119,494 (92.6%)	125,858 (92.6%)	123,912 (90.9%)

*Children are excluded if they are not in senior kindergarten, have been identified as having special needs as reported by the teacher, have not been in class for more than one month, or do not have a minimum number of items completed on the EDI questionnaire.

Please note: Numbers may not exactly match previously released reports as the EDI now requires children to have been in class for more than one month to be included in any analyses. This change was made as part of improving EDI methodology and creating consistency across provinces.

Children with Special Needs

Under the definition of special needs is a broad range of disorders affecting behaviour, communication, as well as physical or intellectual development. Children with special needs often contend with multiple problems, which require tailor-made, flexible support. These children may also have above average abilities in certain areas, adding to the complexity of providing appropriate support to help them reach their optimal development.

	Cycle 1 Count (%)	Cycle 2 Count (%)	Cycle 3 Count (%)	Cycle 4 Count (%)	Cycle 5 Count (%)
Total Number of Children with Special Needs	4,422 (3.5%)	4,408 (3.7%)	5,017 (3.9%)	5,686 (4.2%)	7,092 (5.2%)
Total Number of Children with Special Needs Included in Reports*	4,140 (3.3%)	4,195 (3.5%)	4,821 (3.7%)	5,449 (4.0%)	6,811 (5.0%)

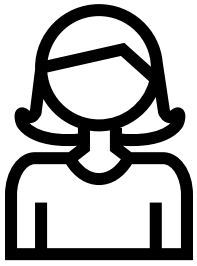
*Children with Special Needs meeting all other inclusion criteria (are in senior kindergarten, have been in class for more than one month, and have a minimum number of items completed on the EDI questionnaire) are reported on separately from children without Special Needs.

DEMOGRAPHICS

It is important to understand the demographic information of the population as these factors may influence EDI scores.

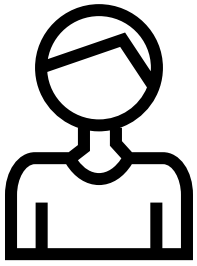
The following information includes children that are in senior kindergarten, have not been identified by teachers as having special needs, have been in class for more than one month, and have a minimum number of items completed on the EDI questionnaire.

Girls



Cycle 1	56,038 (49.4%)
Cycle 2	54,856 (49.5%)
Cycle 3	59,155 (49.5%)
Cycle 4	62,328 (49.5%)
Cycle 5	61,365 (49.5%)

Boys



Cycle 1	57,056 (50.3%)
Cycle 2	56,018 (50.5%)
Cycle 3	60,335 (50.5%)
Cycle 4	63,530 (50.5%)
Cycle 5	62,547 (50.5%)

Children Considered ELL, ALF, or PANA

Cycle 1	13,024 (11.5%)
Cycle 2	13,333 (12.0%)
Cycle 3	14,390 (12.0%)
Cycle 4	14,397 (11.4%)
Cycle 5	19,449 (15.7%)

Average Age (In Years)

Cycle 1	5.7
Cycle 2	5.7
Cycle 3	5.7
Cycle 4	5.7
Cycle 5	5.7

Average Days Absent

Cycle 1	4.6
Cycle 2	4.7
Cycle 3	5.5
Cycle 4	9.0
Cycle 5	9.6

EDI SCORES

EDI Domains

Physical Health & Well-Being

assesses children's physical readiness for the school day, physical independence, and gross and fine motor skills.

Social Competence

assesses children's willingness to explore new things, their approaches to learning, the amount of respect and responsibility they show, and their overall social competence.

Emotional Maturity

assesses children's prosocial and helping behaviour, their aggressive behaviour, their ability to balance between too fearful and too impulsive, and their amount of hyperactivity and inattention.

Language & Cognitive Development

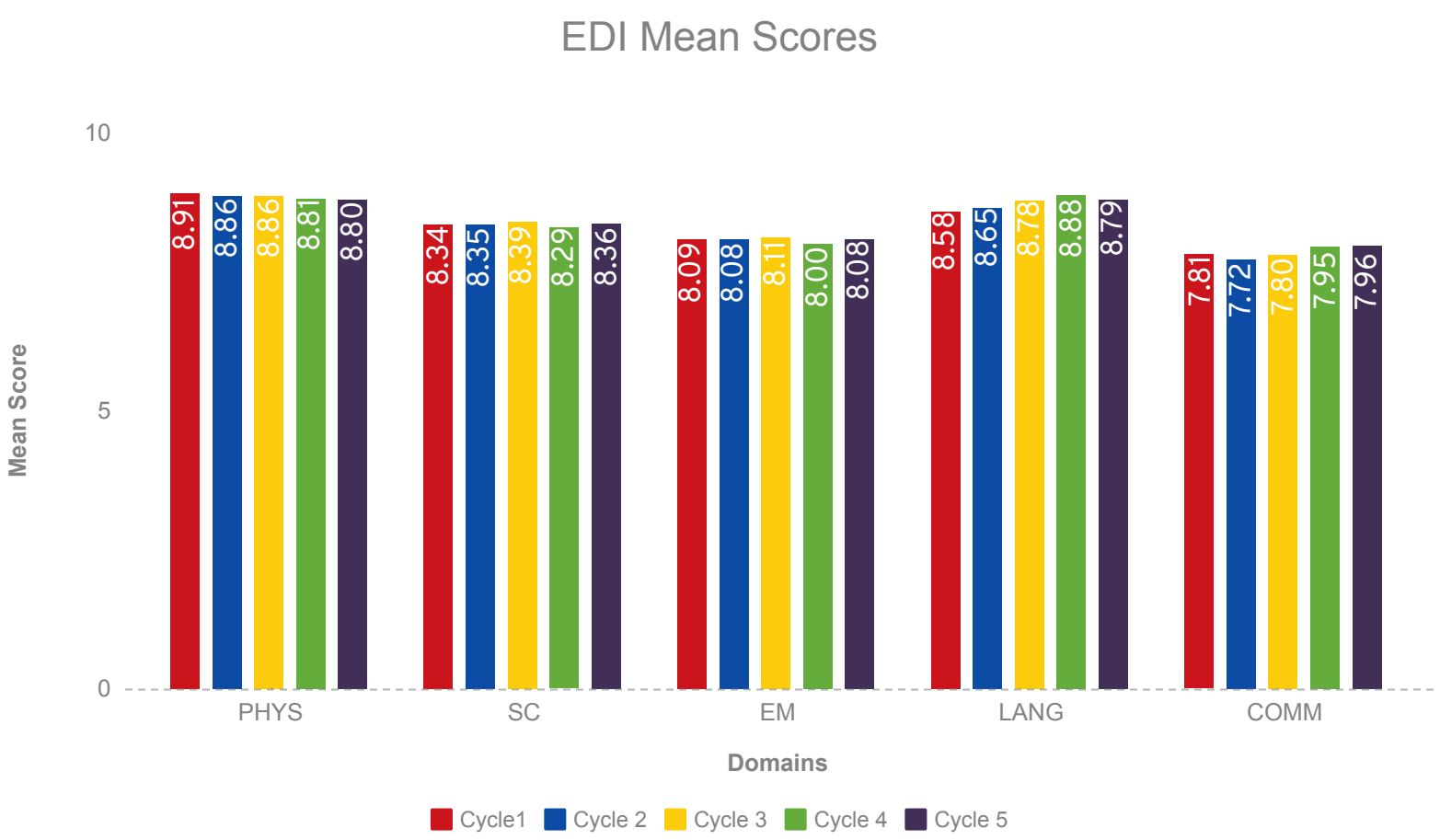
assesses children's basic and advanced literacy skills, basic numeracy skills, interest in math and reading, and memory.

Communication Skills & General Knowledge

assesses children's ability to communicate in socially appropriate ways, use language and story-telling, and age-appropriate knowledge of life and the world around them.

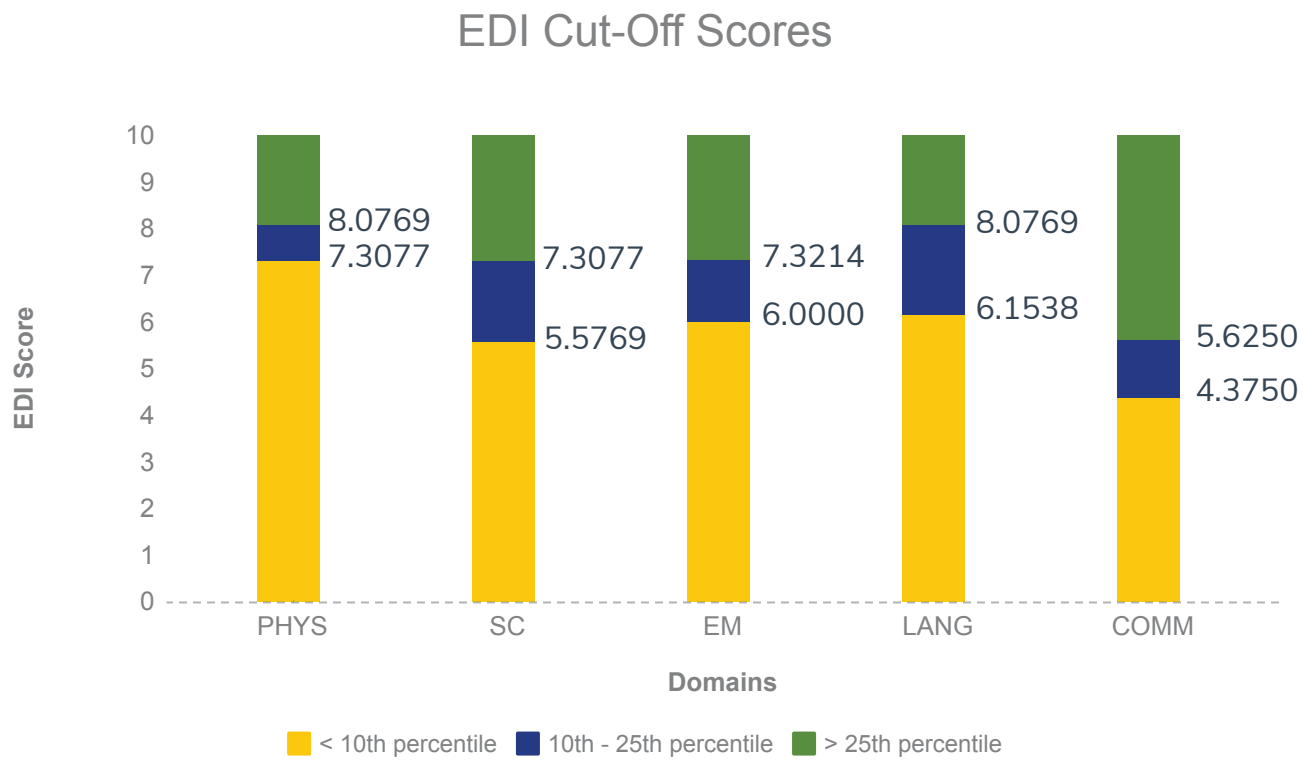
* EDI domain logos were originally created by the Knowledge Translation team at the Human Early Learning Partnership and are reproduced with permission.

DOMAIN SCORES



Domain	Cycle 1 Mean (SD)	Cycle 2 Mean (SD)	Cycle 3 Mean (SD)	Cycle 4 Mean (SD)	Cycle 5 Mean (SD)
Physical Health & Well-Being	8.91 (1.27)	8.86 (1.28)	8.86 (1.29)	8.81 (1.33)	8.80 (1.33)
Social Competence	8.34 (1.79)	8.35 (1.78)	8.39 (1.78)	8.29 (1.87)	8.36 (1.82)
Emotional Maturity	8.09 (1.48)	8.08 (1.49)	8.11 (1.49)	8.00 (1.59)	8.08 (1.57)
Language & Cognitive Development	8.58 (1.73)	8.65 (1.71)	8.78 (1.63)	8.88 (1.56)	8.79 (1.62)
Communication Skills & General Knowledge	7.81 (2.52)	7.72 (2.52)	7.80 (2.49)	7.95 (2.43)	7.96 (2.43)

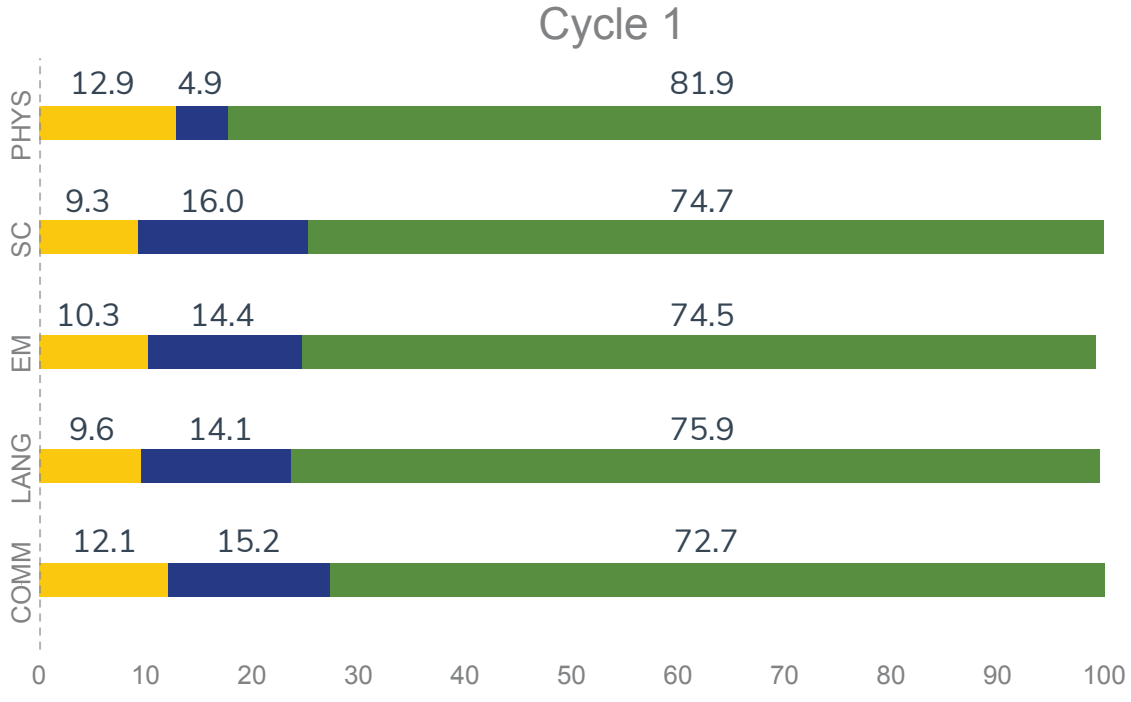
CUT-OFFS

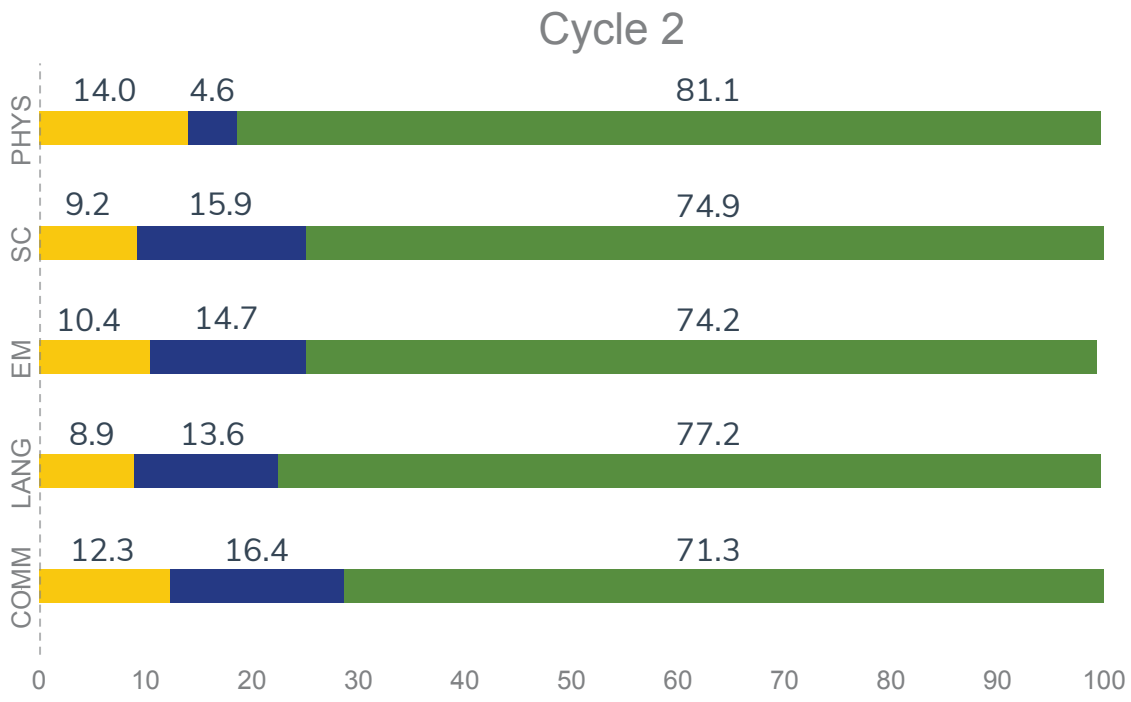


Domain	10th Percentile Cut-Off	25th Percentile Cut-Off
Physical Health & Well-Being	7.3077	8.0769
Social Competence	5.5769	7.3077
Emotional Maturity	6.0000	7.3214
Language & Cognitive Development	6.1538	8.0769
Communication Skills & General Knowledge	4.3750	5.6250

DISTRIBUTION OF EDI SCORES

Please note: Distributions may not equal 100% due to missing values in a domain.





Vulnerable

Children with scores below the 10th percentile

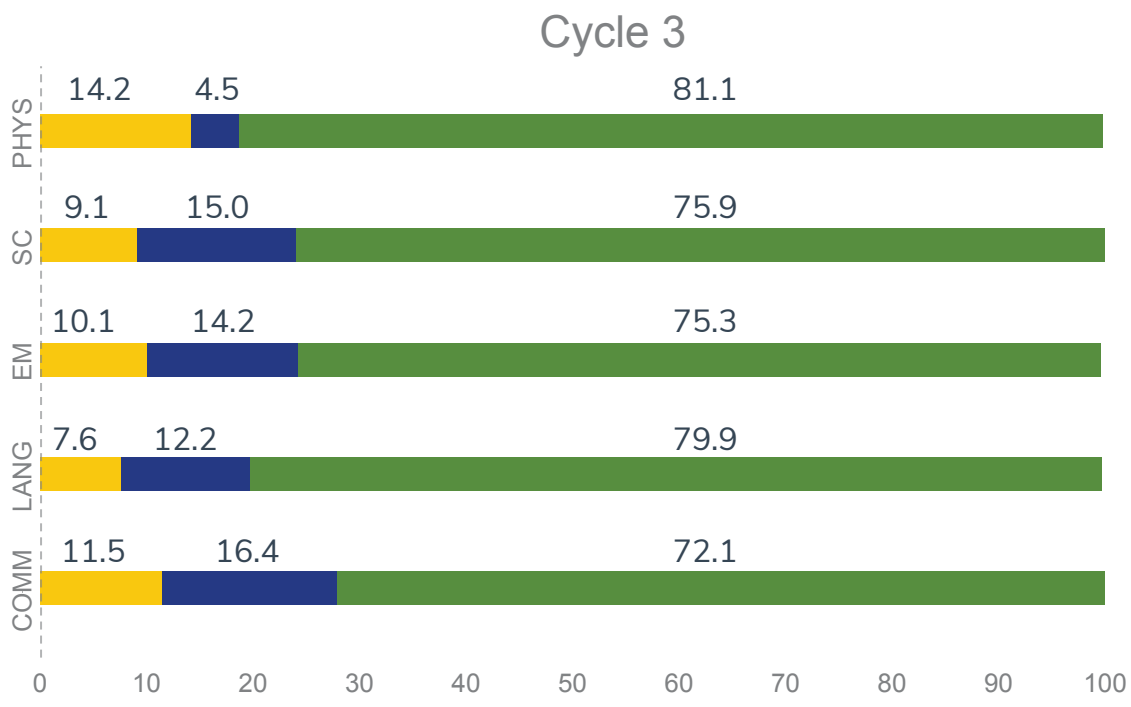
At Risk

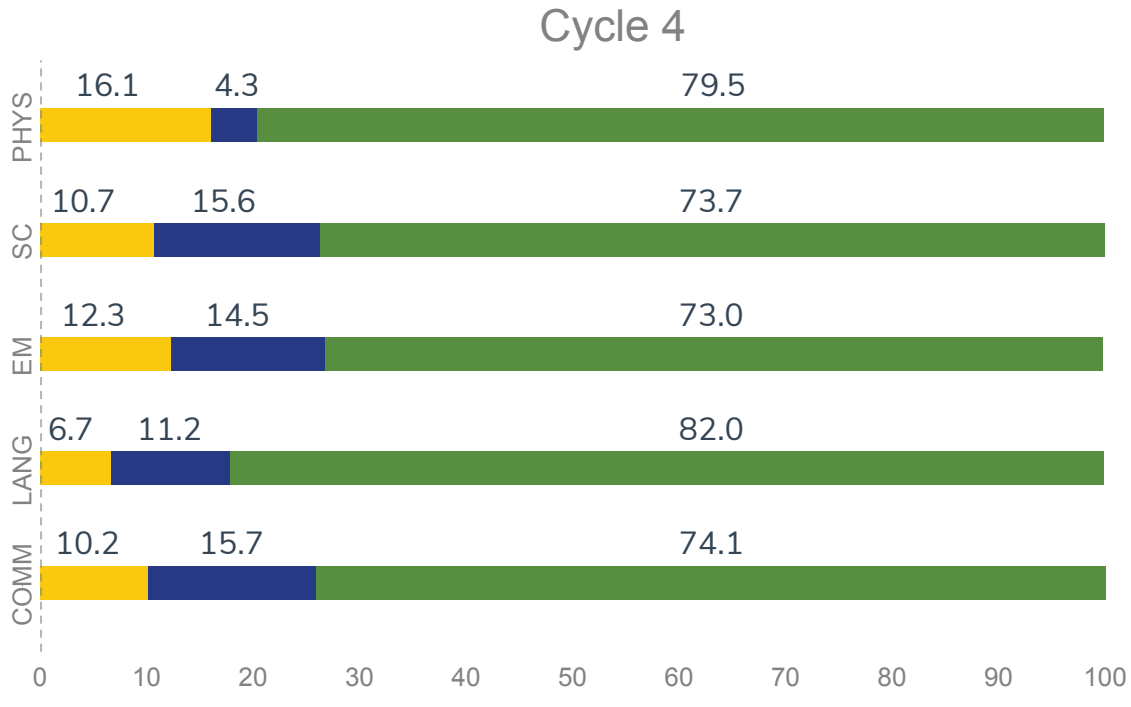
Children with scores between the 10th and 25th percentiles

On Track

Children with scores above the 25th percentile

DISTRIBUTION OF EDI SCORES





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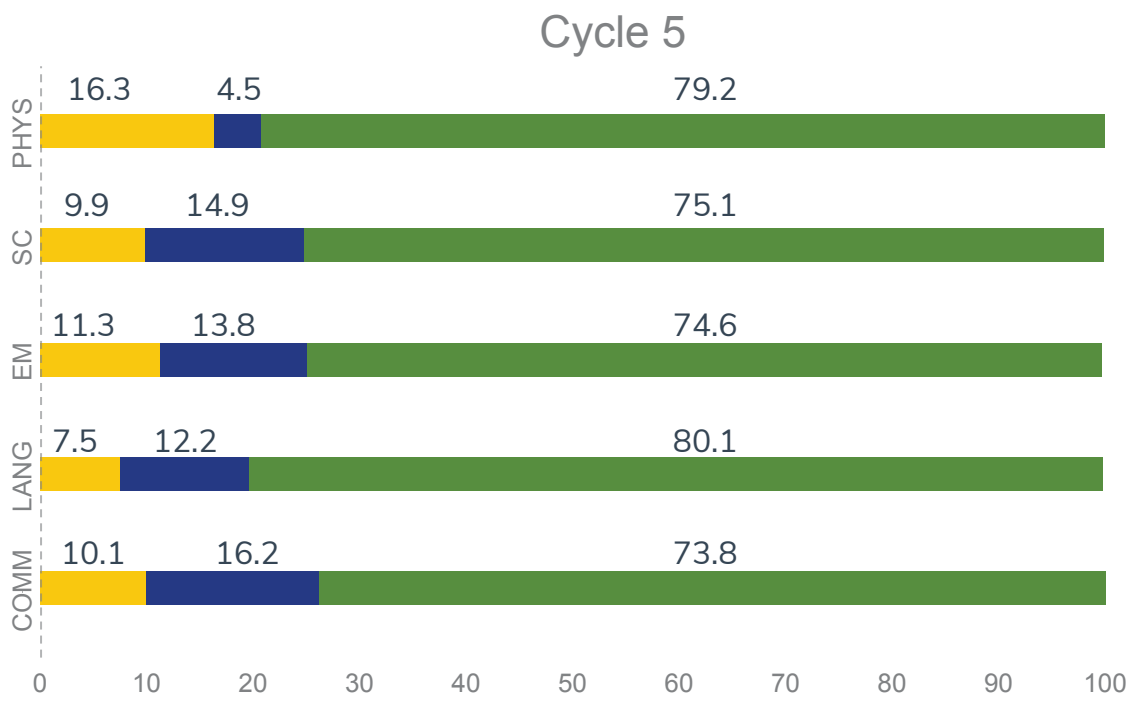

Vulnerable

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At Risk

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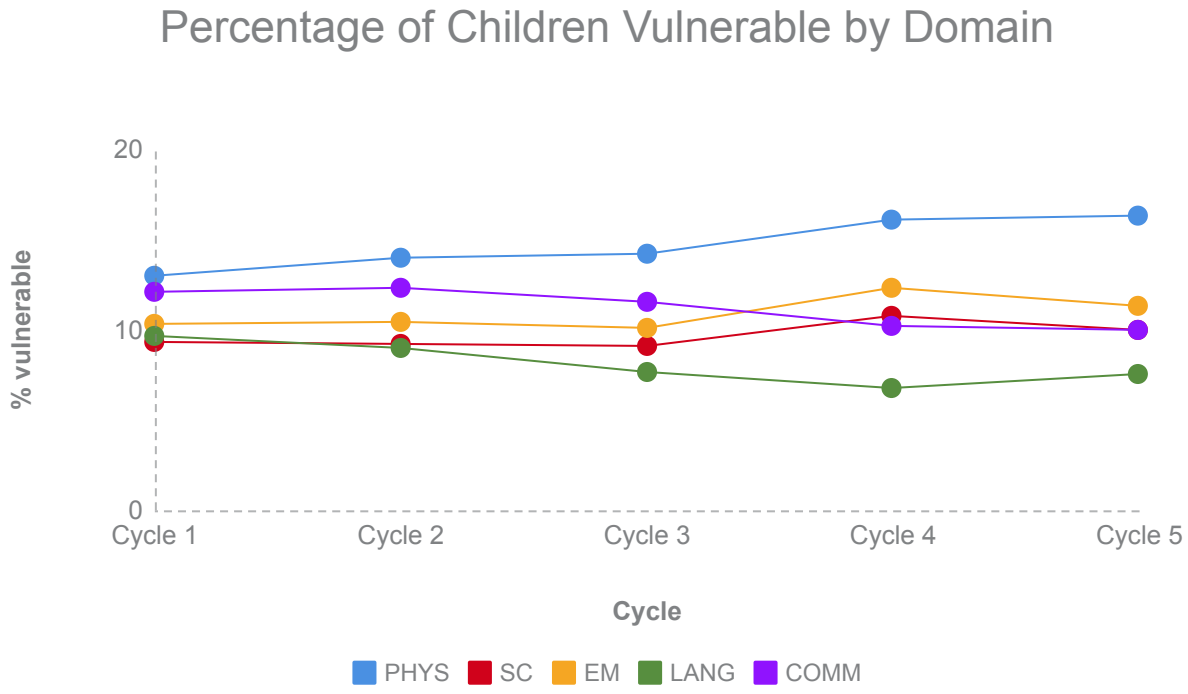
On Track

Children with scores above the 25th percentile

VULNERABILITY

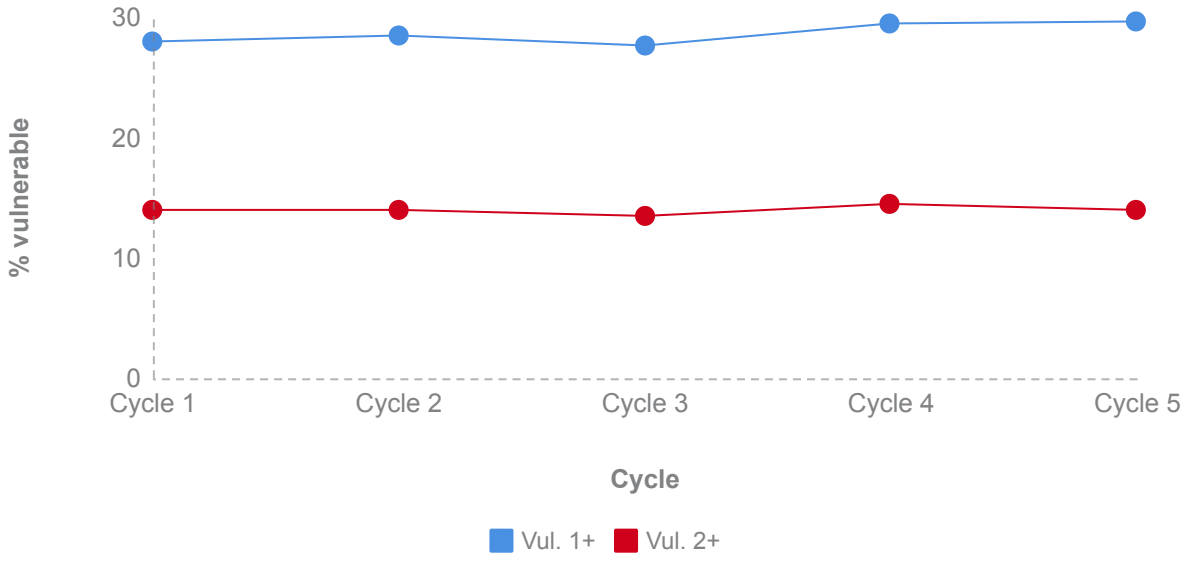
Vulnerable describes the children who score below the 10th percentile cut-off of the Ontario Baseline population. Vulnerability data indicates a percentage of children who are struggling in comparison to the Ontario Baseline data.

Research linking EDI findings to later educational data demonstrate that, on average, kindergarten vulnerability predicts ongoing vulnerability in the school system. Numerous studies have shown that early vulnerability predicts a child's lifelong health, learning, and behaviour.



Domain	Cycle 1 %	Cycle 2 %	Cycle 3 %	Cycle 4 %	Cycle 5 %
Physical Health & Well-Being	12.9	14.0	14.2	16.1	16.3
Social Competence	9.3	9.2	9.1	10.7	9.9
Emotional Maturity	10.3	10.4	10.1	12.3	11.3
Language & Cognitive Development	9.6	8.9	7.6	6.7	7.5
Communication Skills & General Knowledge	12.1	12.3	11.5	10.2	10.0

VULNERABILITY



Domain	Cycle 1 %	Cycle 2 %	Cycle 3 %	Cycle 4 %	Cycle 5 %
Vulnerable on ONE or more domains	28.0	28.5	27.6	29.4	29.6
Vulnerable on TWO or more domains	13.9	14.0	13.4	14.4	13.9

SUBDOMAINS

Please visit the Domains and Subdomains section of our website to learn more about the aspects of development included in each subdomain.

Physical Health & Well-Being

- Physical readiness for the school day
- Physical independence
- Gross and fine motor skills

Social Competence

- Overall social competence
- Responsibility and respect
- Approaches to learning
- Readiness to explore new things

Emotional Maturity

- Prosocial and helping behaviour
- Anxious and fearful behaviour
- Aggressive behaviour
- Hyperactivity and inattention

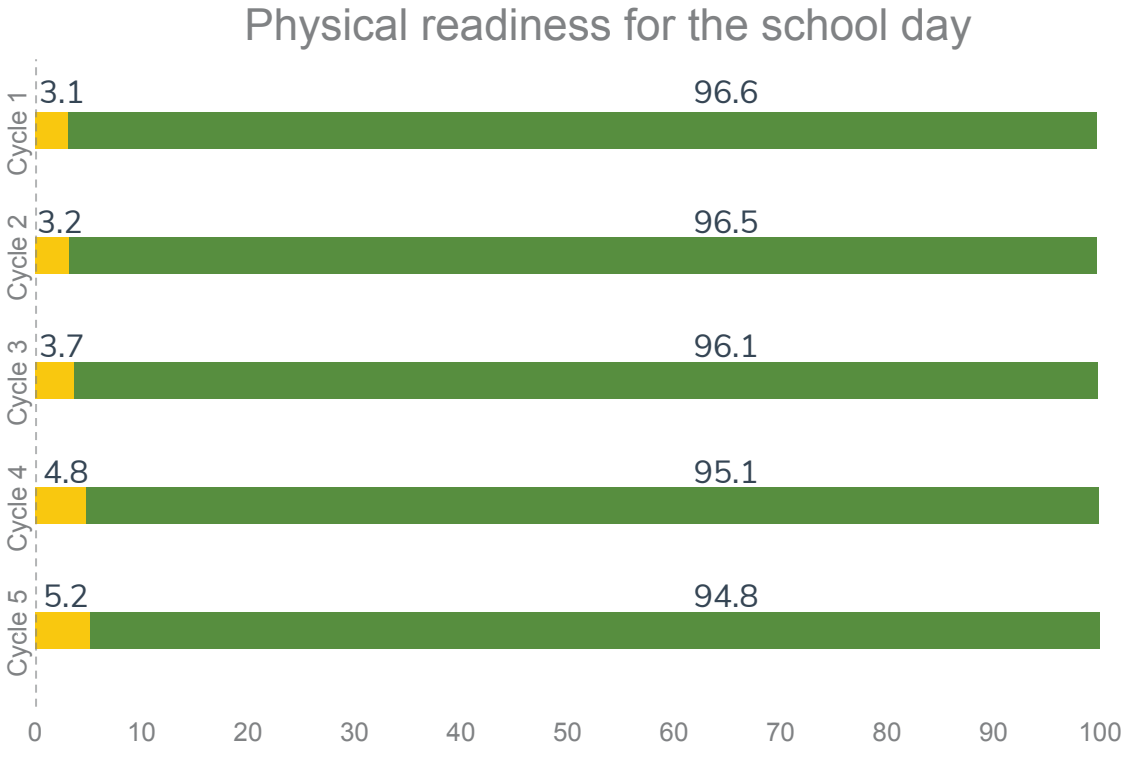
Language & Cognitive Development

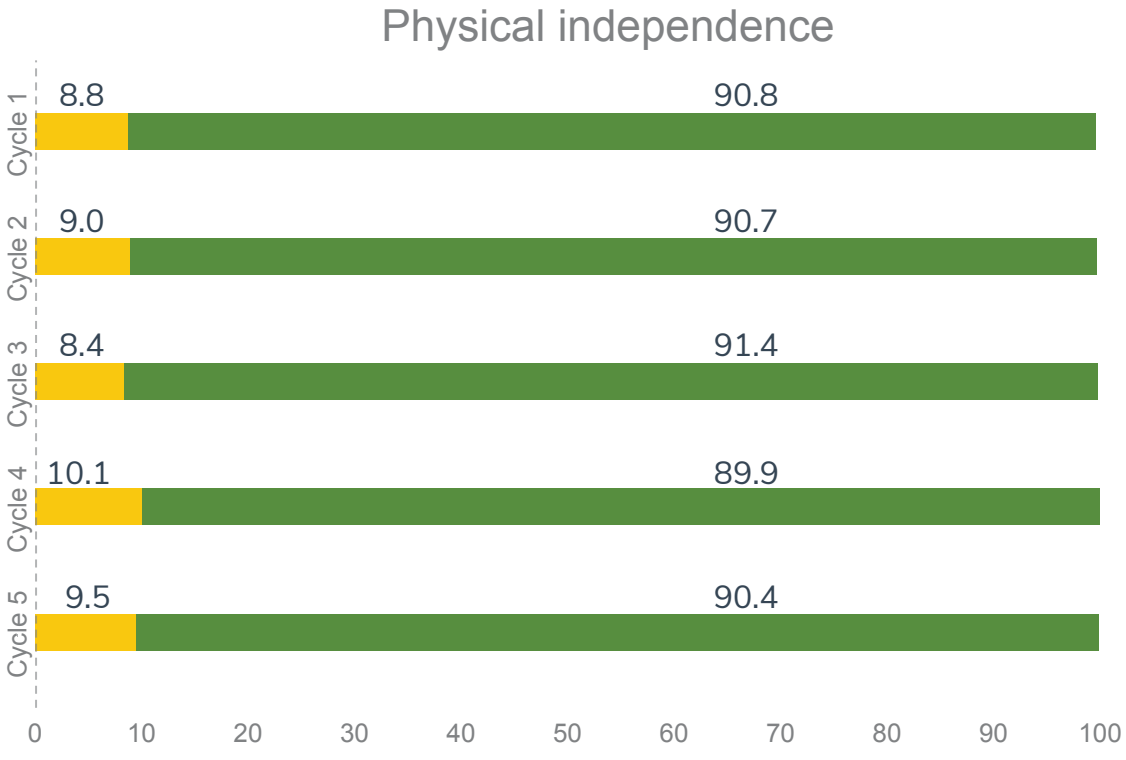
- Basic literacy
- Interest in literacy/numeracy and memory
- Advanced literacy
- Basic numeracy

Communication Skills & General Knowledge

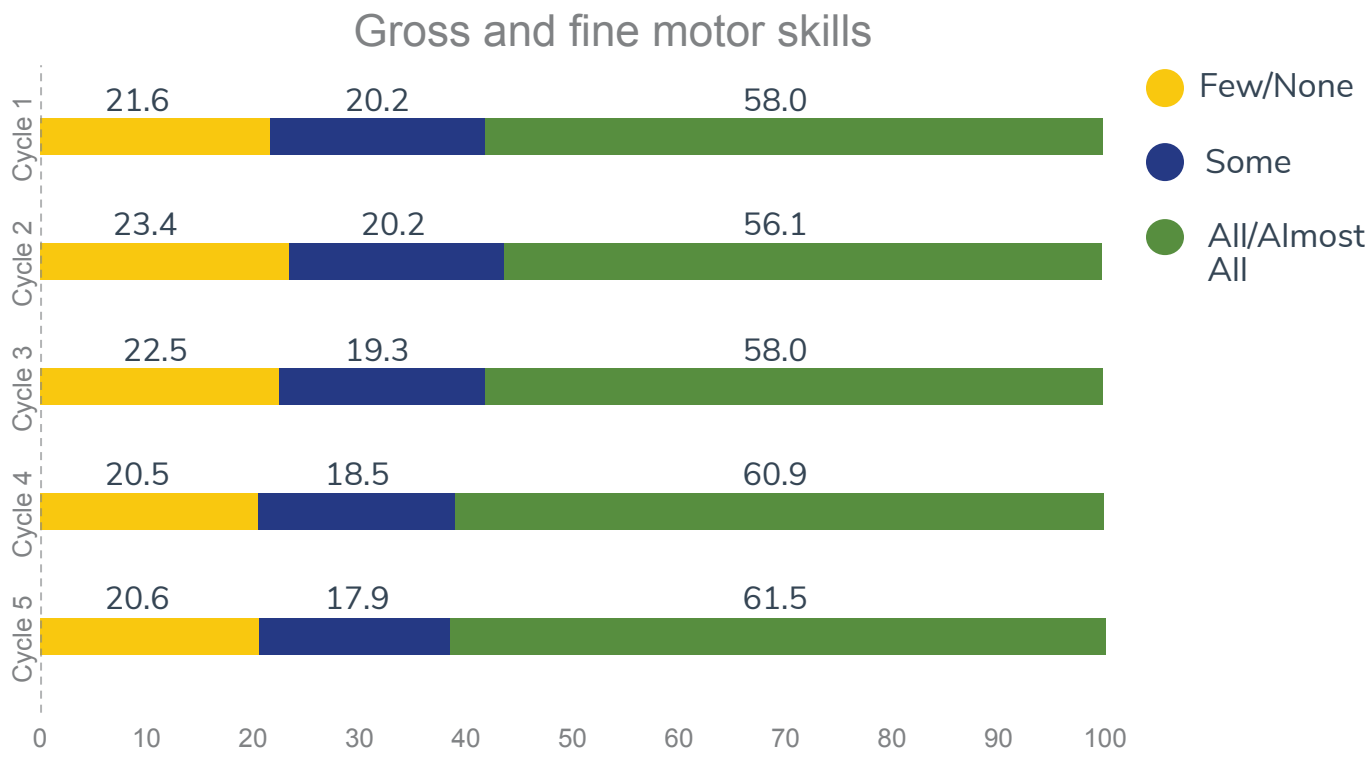
- Communication skills and general knowledge

PHYSICAL HEALTH & WELL-BEING



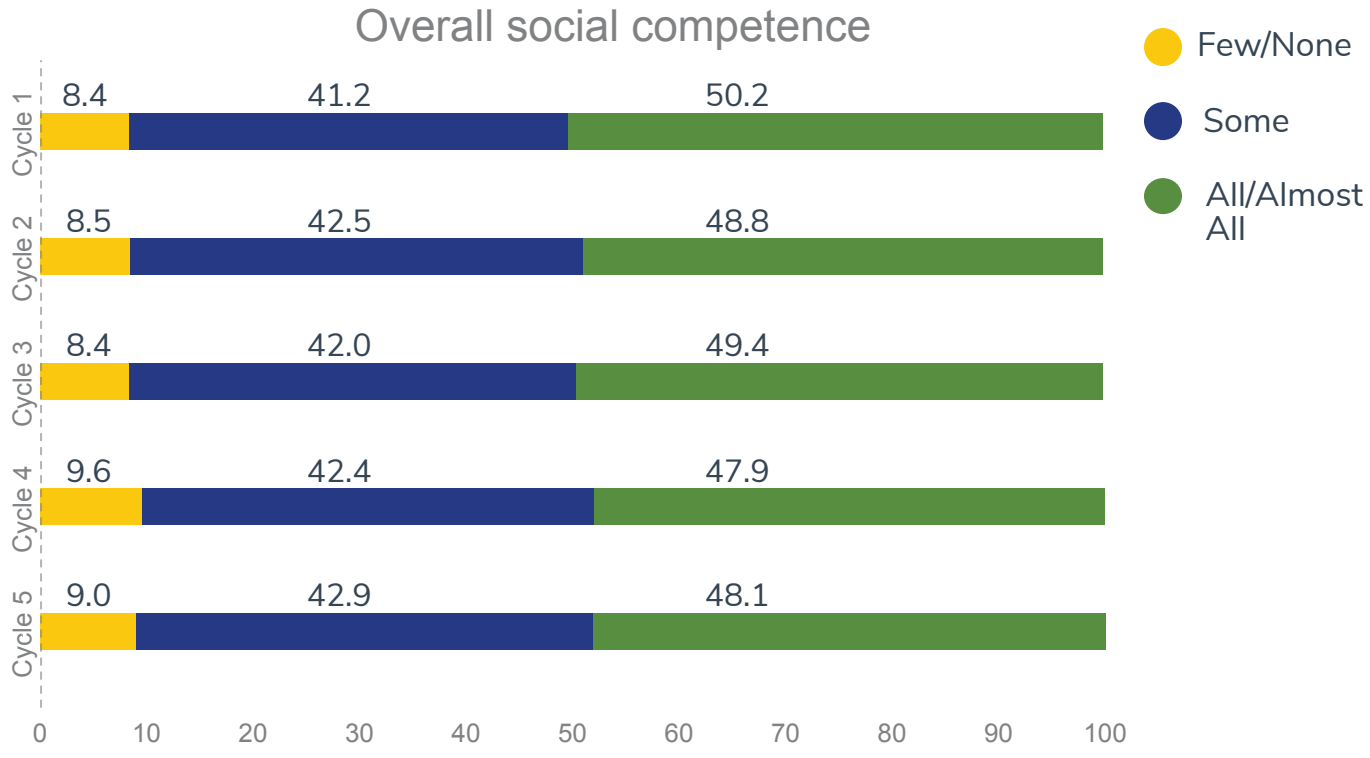


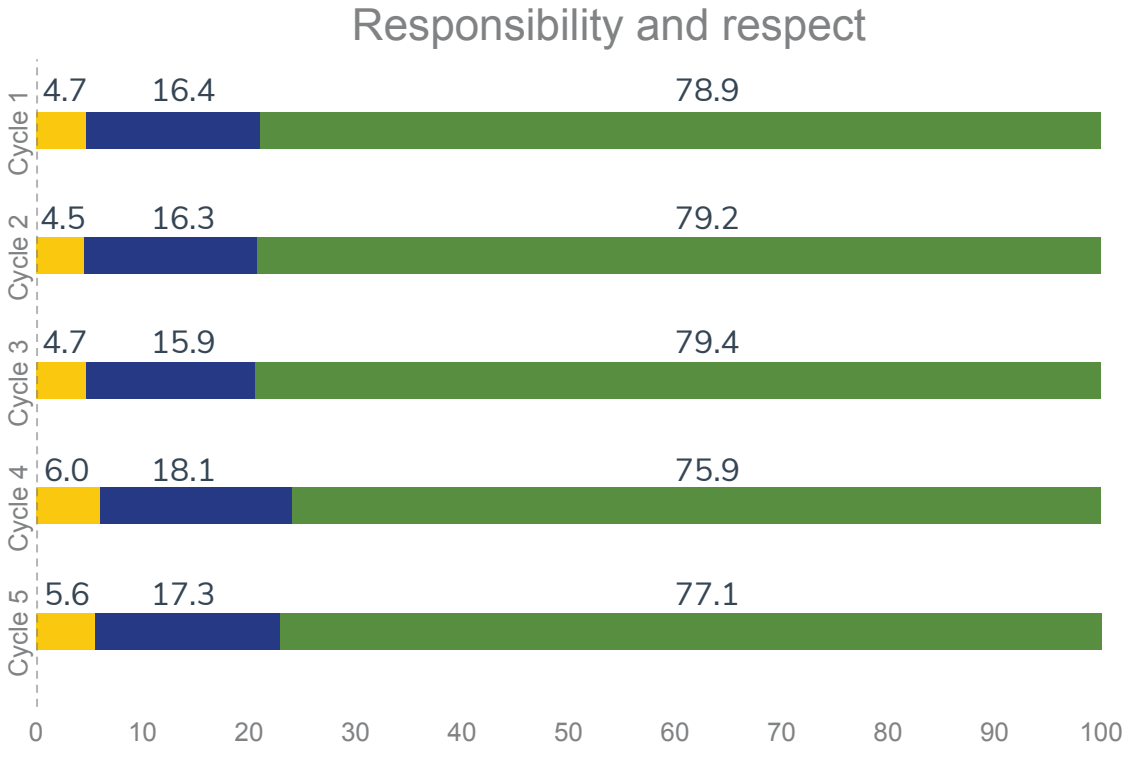
PHYSICAL HEALTH & WELL-BEING



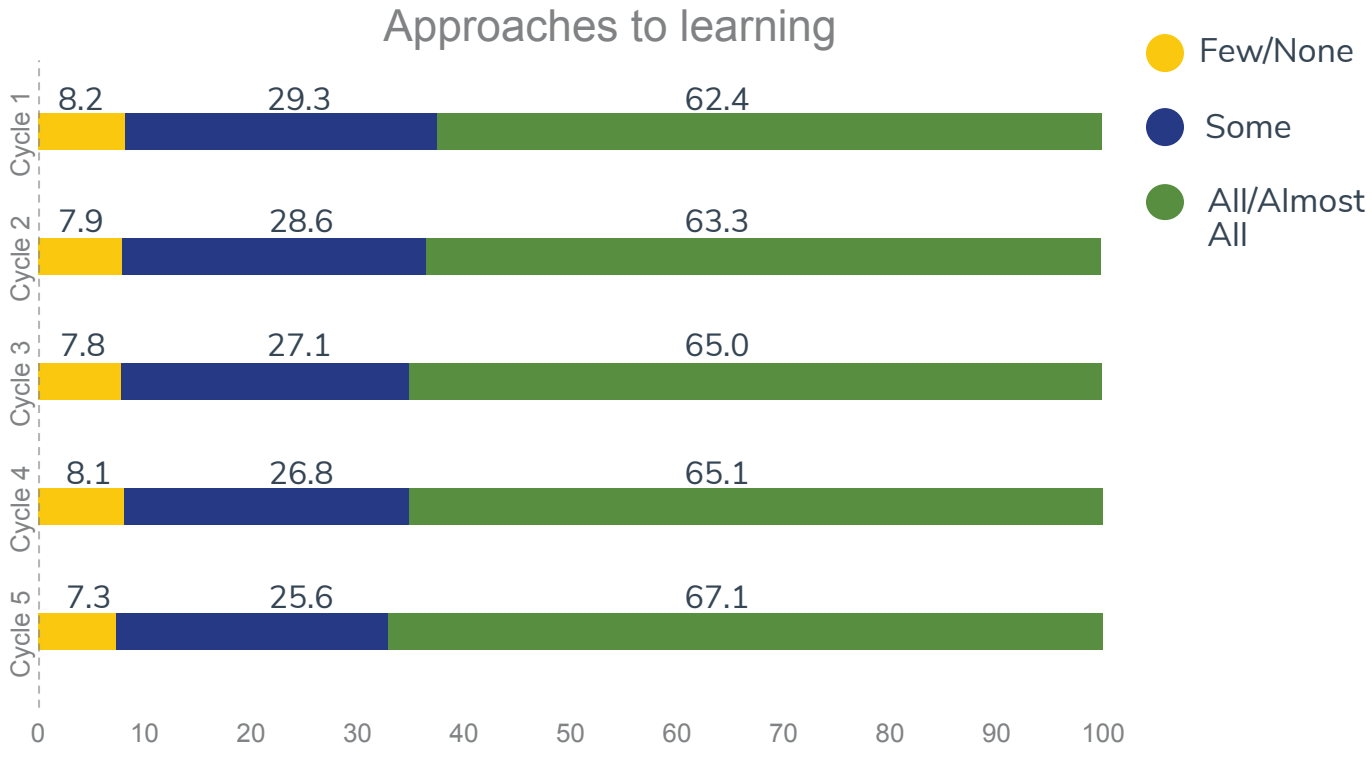
Subdomain	Meeting Expectations	Cycle 1 %	Cycle 2 %	Cycle 3 %	Cycle 4 %	Cycle 5 %
Physical readiness for the school day	Few/None	3.1	3.2	3.7	4.8	5.2
	Some	NA	NA	NA	NA	NA
	All/Almost All	96.6	96.5	96.1	95.1	94.8
Physical independence	Few/None	8.8	9.0	8.4	10.1	9.5
	Some	NA	NA	NA	NA	NA
	All/Almost All	90.8	90.7	91.4	89.9	90.4
Gross and fine motor skills	Few/None	21.6	23.4	22.5	20.5	20.6
	Some	20.2	20.2	19.3	18.5	17.9
	All/Almost All	58.0	56.1	58.0	60.9	61.5

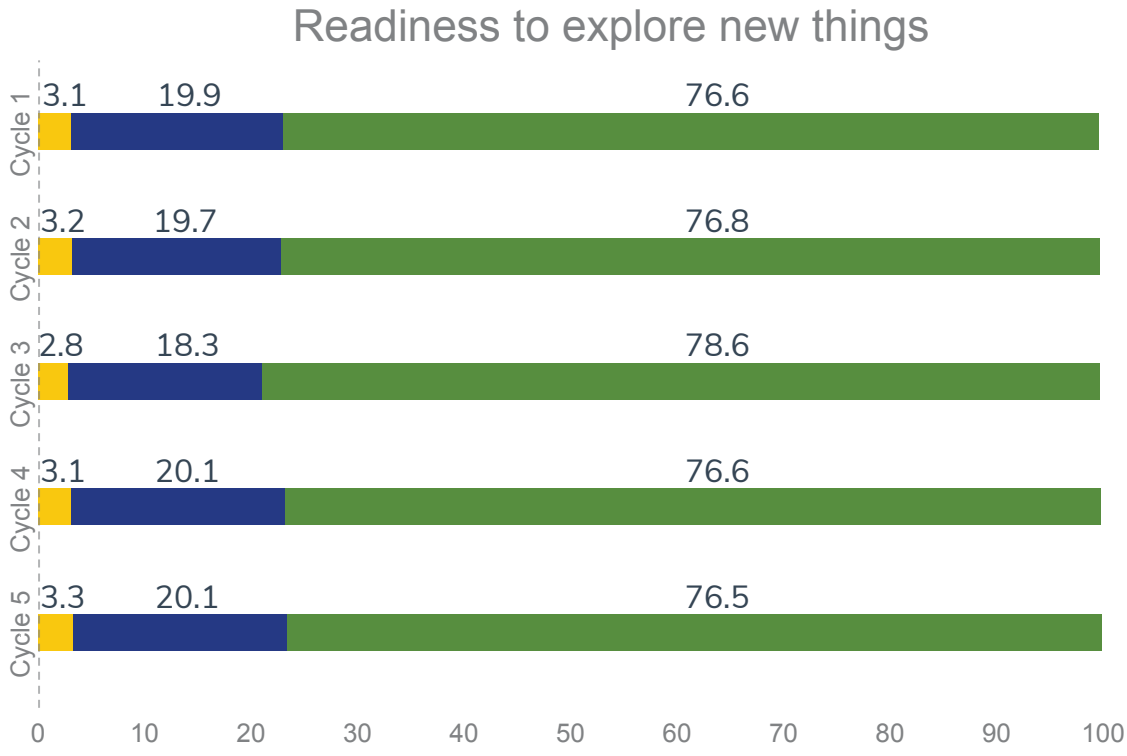
SOCIAL COMPETENCE





SOCIAL COMPETENCE

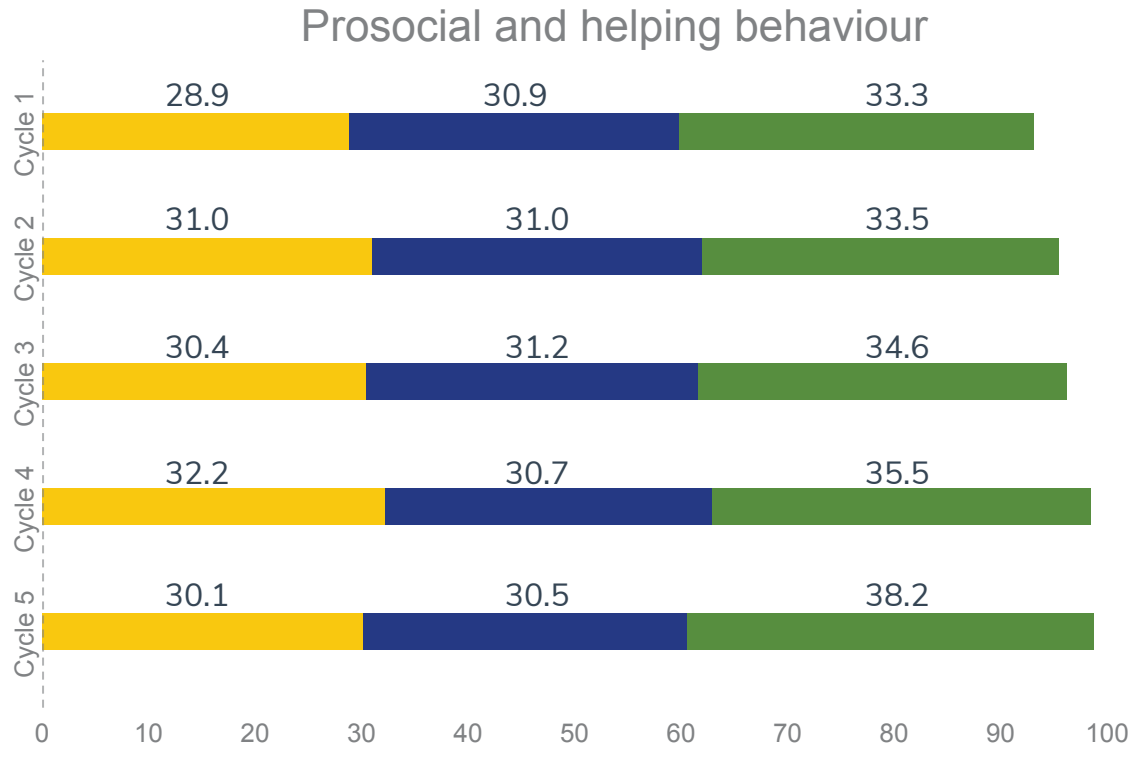


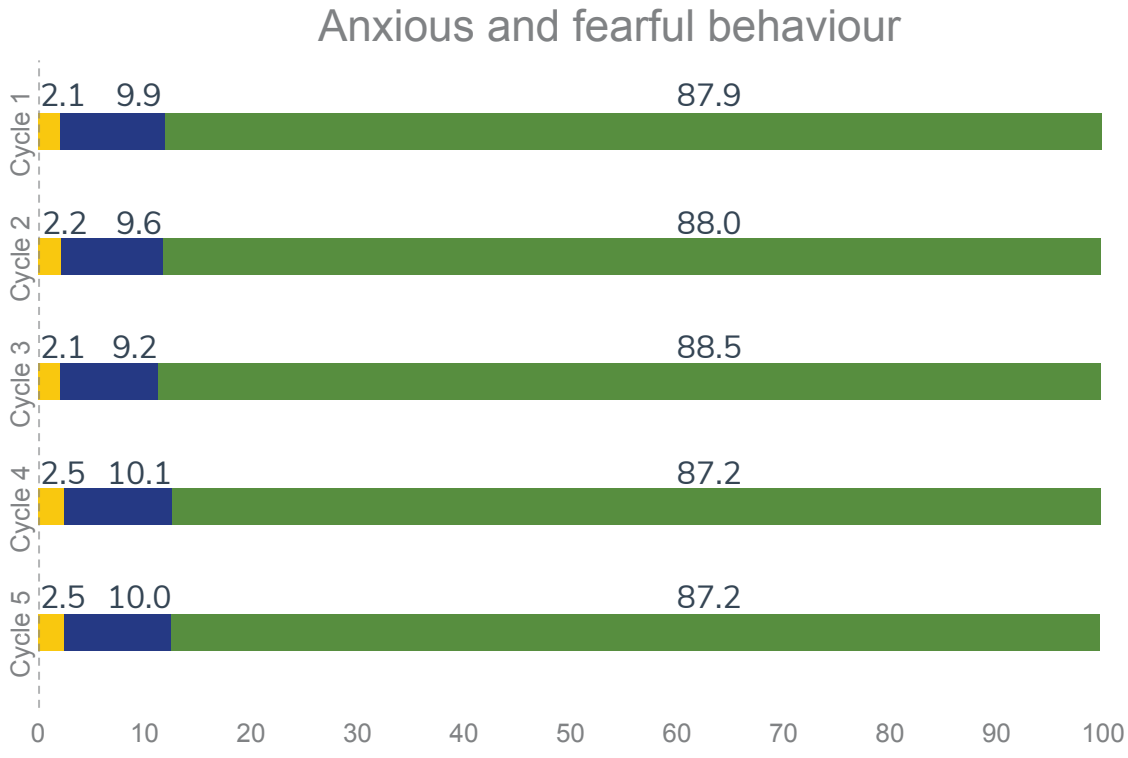


SOCIAL COMPETENCE

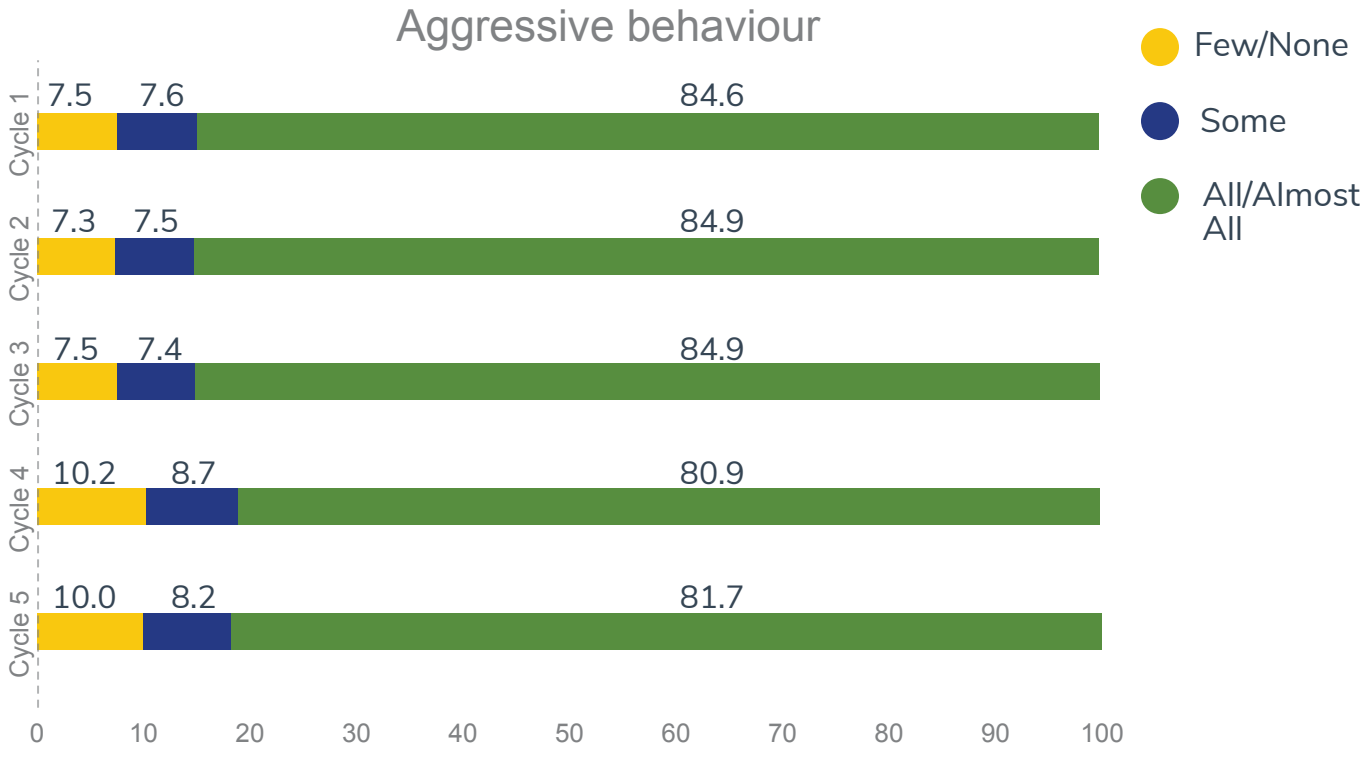
Subdomain	Meeting Expectations	Cycle 1 %	Cycle 2 %	Cycle 3 %	Cycle 4 %	Cycle 5 %
Overall social competence	Few/None	8.4	8.5	8.4	9.6	9.0
	Some	41.2	42.5	42.0	42.4	42.9
	All/Almost All	50.2	48.8	49.4	47.9	48.1
Responsibility and respect	Few/None	4.7	4.5	4.7	6.0	5.6
	Some	16.4	16.3	15.9	18.1	17.3
	All/Almost All	78.9	79.2	79.4	75.9	77.1
Approaches to learning	Few/None	8.2	7.9	7.8	8.1	7.3
	Some	29.3	28.6	27.1	26.8	25.6
	All/Almost All	62.4	63.3	65.0	65.1	67.1
Readiness to explore new things	Few/None	3.1	3.2	2.8	3.1	3.3
	Some	19.9	19.7	18.3	20.1	20.1
	All/Almost All	76.6	76.8	78.6	76.6	76.5

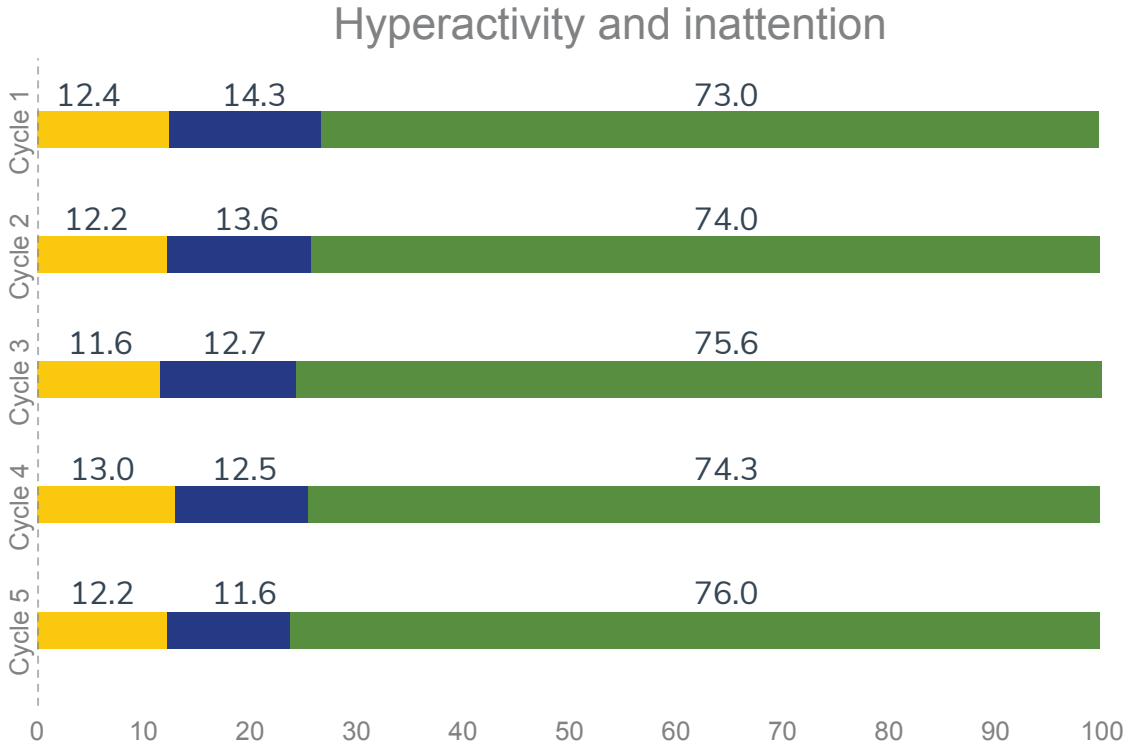
EMOTIONAL MATURITY





EMOTIONAL MATURITY

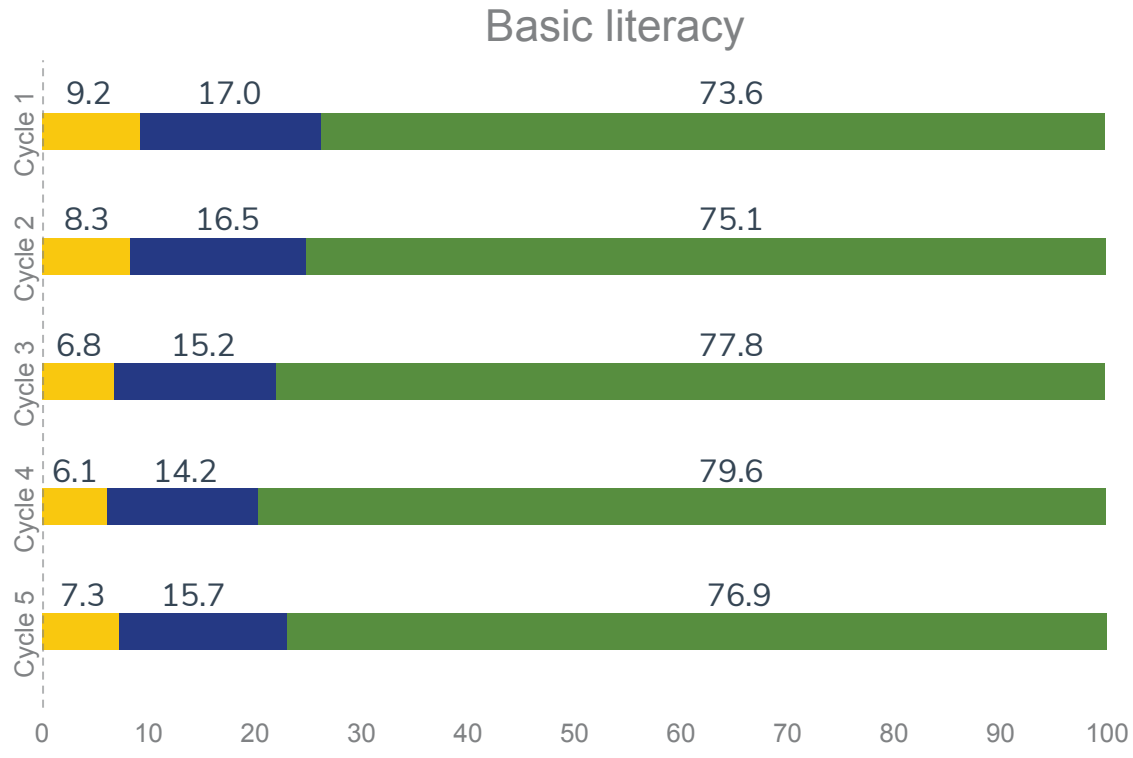


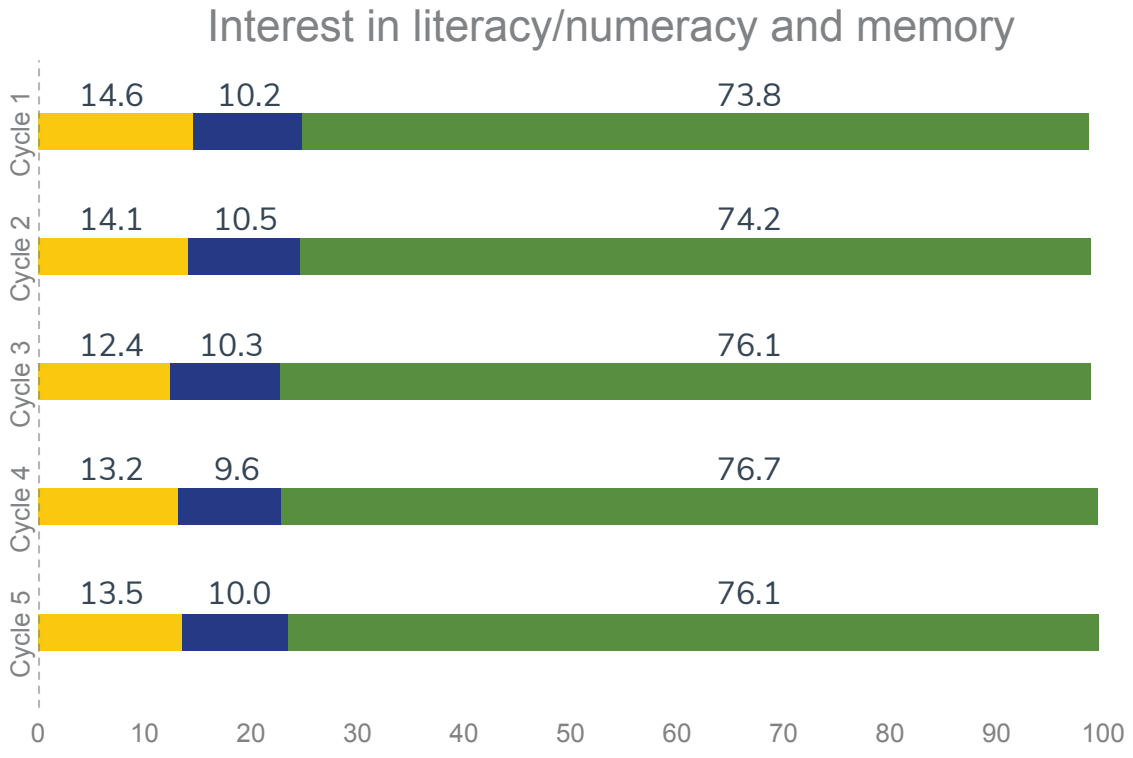


EMOTIONAL MATURITY

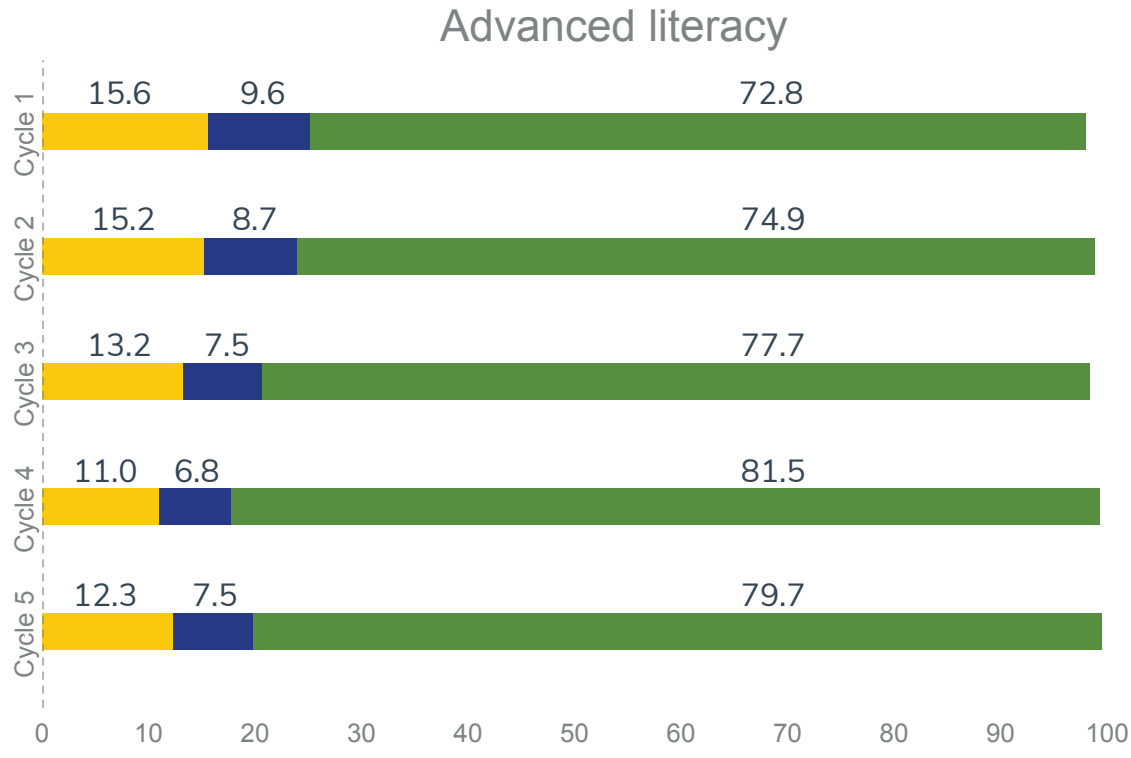
Subdomain	Meeting Expectations	Cycle 1 %	Cycle 2 %	Cycle 3 %	Cycle 4 %	Cycle 5 %
Prosocial and helping behaviour	Few/None	28.9	31.0	30.4	32.2	30.1
	Some	30.9	31.0	31.2	30.7	30.5
	All/Almost All	33.3	33.5	34.6	35.5	38.2
Anxious and fearful behaviour	Few/None	2.1	2.2	2.1	2.5	2.5
	Some	9.9	9.6	9.2	10.1	10.0
	All/Almost All	87.9	88.0	88.5	87.2	87.2
Aggressive behaviour	Few/None	7.5	7.3	7.5	10.2	10.0
	Some	7.6	7.5	7.4	8.7	8.2
	All/Almost All	84.6	84.9	84.9	80.9	81.7
Hyperactivity and inattention	Few/None	12.4	12.2	11.6	13.0	12.2
	Some	14.3	13.6	12.7	12.5	11.6
	All/Almost All	73.0	74.0	75.6	74.3	76.0

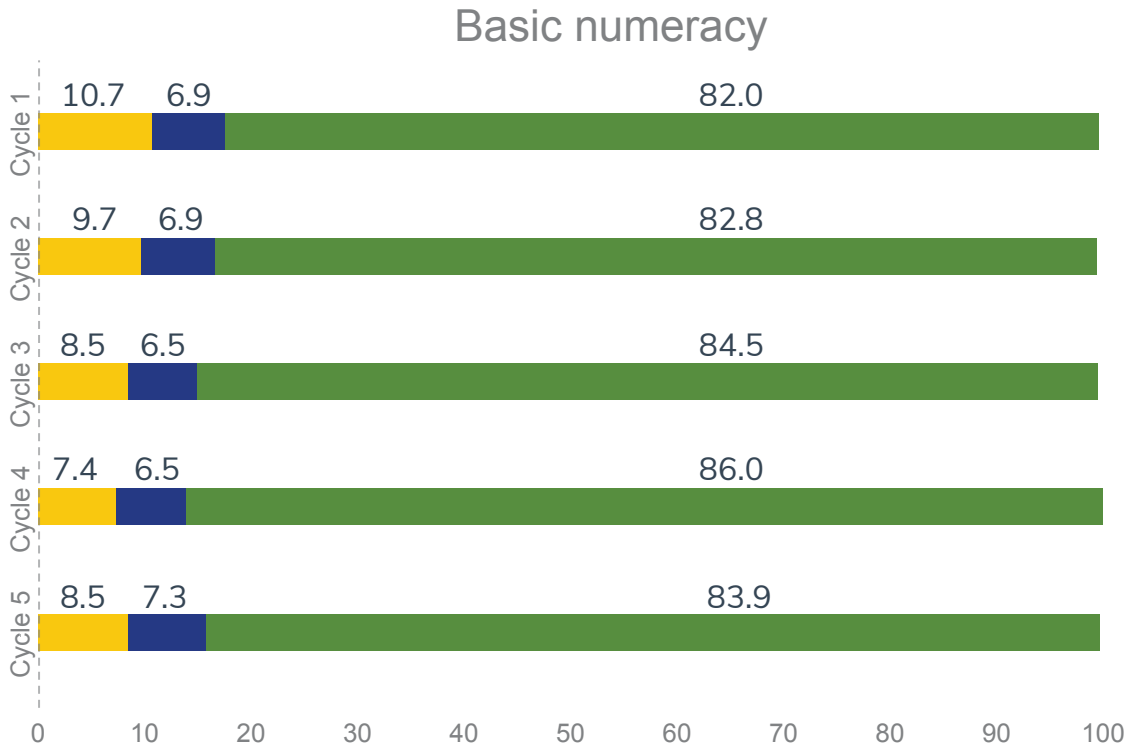
LANGUAGE & COGNITIVE DEVELOPMENT





LANGUAGE & COGNITIVE DEVELOPMENT

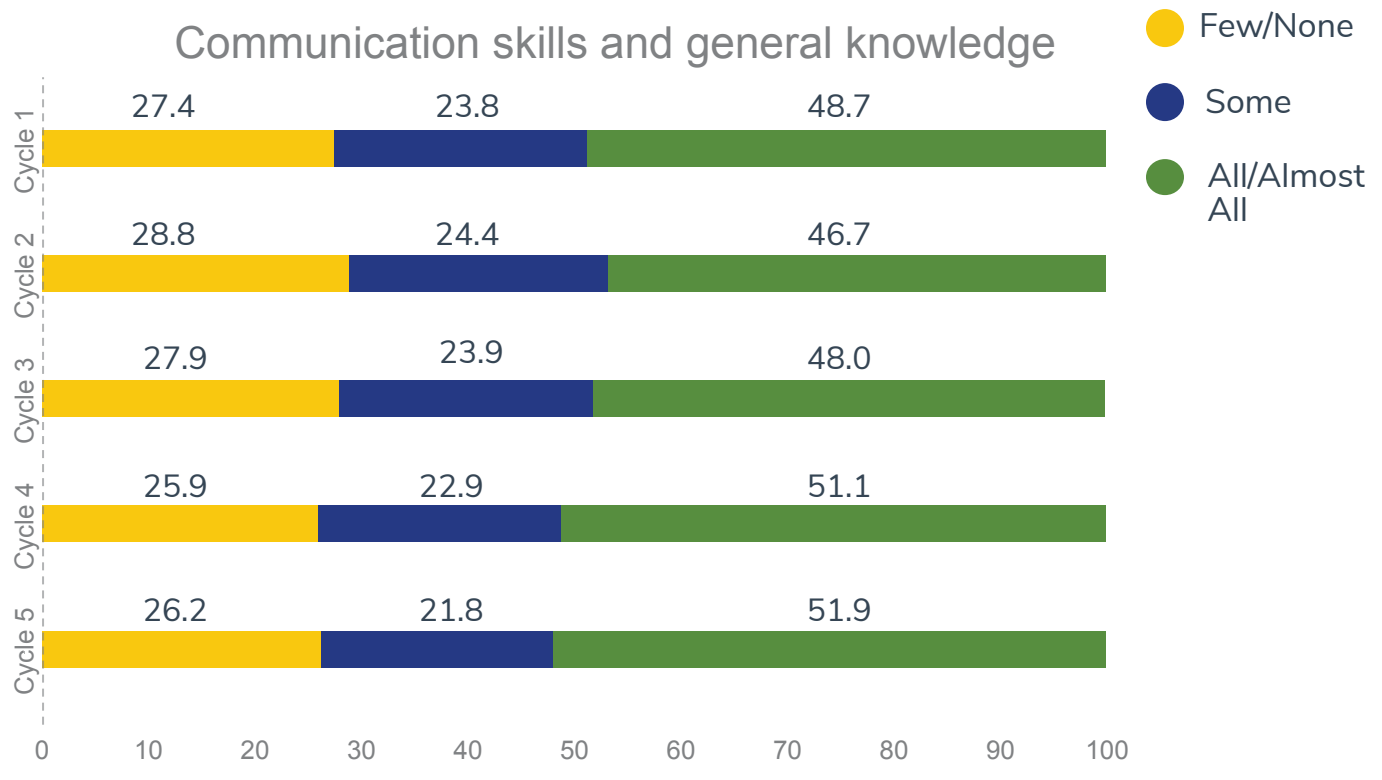




LANGUAGE & COGNITIVE DEVELOPMENT

Subdomain	Meeting Expectations	Cycle 1 %	Cycle 2 %	Cycle 3 %	Cycle 4 %	Cycle 5 %
Basic literacy	Few/None	9.2	8.3	6.8	6.1	7.3
	Some	17.0	16.5	15.2	14.2	15.7
	All/Almost All	73.6	75.1	77.8	79.6	76.9
Interest in literacy/ numeracy and memory	Few/None	14.6	14.1	12.4	13.2	13.5
	Some	10.2	10.5	10.3	9.6	10.0
	All/Almost All	73.8	74.2	76.1	76.7	76.1
Advanced literacy	Few/None	15.6	15.2	13.2	11.0	12.3
	Some	9.6	8.7	7.5	6.8	7.5
	All/Almost All	72.8	74.9	77.7	81.5	79.7
Basic numeracy	Few/None	10.7	9.7	8.5	7.4	8.5
	Some	6.9	6.9	6.5	6.5	7.3
	All/Almost All	82.0	82.8	84.5	86.0	83.9

COMMUNICATION SKILLS & GENERAL KNOWLEDGE



Subdomain	Meeting Expectations	Cycle 1 %	Cycle 2 %	Cycle 3 %	Cycle 4 %	Cycle 5 %
Communication skills and general knowledge	Few/None	27.4	28.8	27.9	25.9	26.2
	Some	23.8	24.4	23.9	22.9	21.8
	All/Almost All	48.7	46.7	48.0	51.1	51.9

MULTIPLE CHALLENGE INDEX

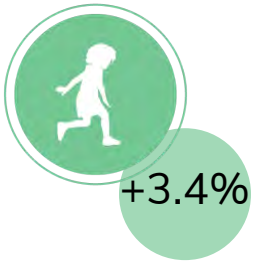
A child with scores below expectations on nine or more of the 16 subdomains is considered to have multiple challenges.

	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5
% with Multiple Challenges	3.6	3.5	3.3	3.5	3.4

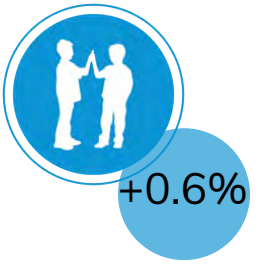
2018 implementation sees changes to some long-term trends

29.6%

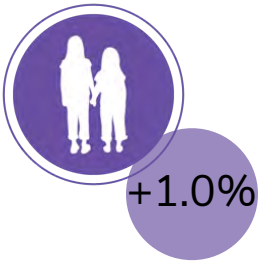
29.6 percent of children in Ontario were vulnerable on one or more EDI domains in the most recent provincial cycle, a slight upwards trend over time. However, not all domains are increasing in vulnerability, and even for some that are, the latest implementation shows vulnerability moving closer to historic levels.



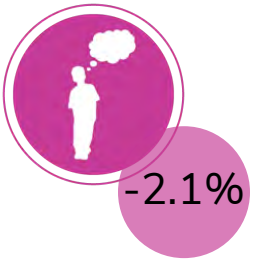
Physical Health & Well-Being



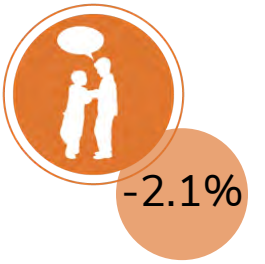
Social Competence



Emotional Maturity



Language & Cognitive Development



Communication Skills & General Knowledge

- Vulnerability continues to trend lower in the Communication Skills & General Knowledge domain. And although vulnerability is lower in the Language & Cognitive Development domain than it was in Cycle 1, there was movement back towards the Cycle 3 vulnerability level.
- Vulnerability continues to trend higher in the Physical Health & Well-Being domain.
- Vulnerability decreases from Cycle 4 to Cycle 5 in the Social Competence and Emotional Maturity domains move the rate closer to historic vulnerability levels.
- Increasing vulnerability is a concern as it can predict a child's lifelong health, learning, and behaviour.

There is no single cause of vulnerability and no simple solution. Children's healthy development starts at home, but early years services, child care, public health, schools and more all play a role.

That's why improving outcomes for children and their families is a matter of both lower level community-based solutions and higher-level government policy.

Early Development Instrument
www.edi.offordcentre.com