

EDI in Ontario  
Over Time

# REPORT

---





---

# CONTENT

INTRODUCTION	01
CONTEXT	
Number of Children in Analysis	04
Demographics	05
EDI SCORES	
Domain Scores	06
Cut-Offs	08
Distributions of EDI Scores	09
Vulnerability	11
Subdomains	13
Multiple Challenge Index	26
CONCLUSION	27

---



# 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, measurable 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 (MCYS) 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 I, and are used to determine the 10th percentile cut-offs for subsequent reporting for all cycles.

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

A full report on the [Cycle IV](#) 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 four provincial collections of the EDI in Ontario.

A one-page summary of this report is [available online](#).

---

# Long-Term Trends

---



## Vulnerability is trending lower in two domains

- Language & Cognitive Development (6.7% in Cycle IV vs. 9.6% in Cycle I)
- Communication Skills & General Knowledge (10.2% in Cycle IV vs. 12.1% in Cycle I)

## Vulnerability is trending higher in three domains

- Physical Health and Well-Being (16.1% in Cycle IV vs. 12.9% in Cycle I)
- Social Competence (10.7% in Cycle IV vs. 9.3% in Cycle I)
- Emotional Maturity (12.3% in Cycle IV vs. 10.3% in Cycle I)



# NUMBER OF CHILDREN IN ANALYSIS

## Children without Special Needs

	Cycle I Count (%)	Cycle II Count (%)	Cycle III Count (%)	Cycle IV Count (%)
Total Completed EDIs	124,866	120,302	129,071	135,937
Excluded from Analysis*	11,543 (9.2%)	9,386 (7.8%)	9,577 (7.4%)	10,079 (7.4%)
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%)

\*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 I Count (%)	Cycle II Count (%)	Cycle III Count (%)	Cycle IV Count (%)
Total Number of Children with Special Needs	4,422 (3.5%)	4,408 (3.7%)	5,017 (3.9%)	5,686 (4.2%)
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%)

\*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.

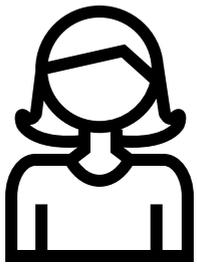


# DEMOGRAPHICS

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

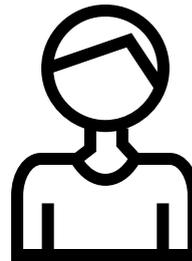
The following information includes children that are in senior kindergarten, have not been identified by teachers as having special needs, have been in class for more than one month, and have a minimum number of items completed on the EDI questionnaire.

## Girls



Cycle I	56,038 (49.4%)
Cycle II	54,856 (49.5%)
Cycle III	59,155 (49.5%)
Cycle IV	62,328 (49.5%)

## Boys



Cycle I	57,056 (50.3%)
Cycle II	56,018 (50.5%)
Cycle III	60,335 (50.5%)
Cycle IV	63,530 (50.5%)

## Children Considered ELL or FSL



Cycle I	13,024 (11.5%)
Cycle II	13,333 (12.0%)
Cycle III	14,390 (12.0%)
Cycle IV	14,397 (11.4%)

## Average Age (In Years)



Cycle I	5.7
Cycle II	5.7
Cycle III	5.7
Cycle IV	5.7

## Average Days Absent



Cycle I	4.6
Cycle II	4.7
Cycle III	5.5
Cycle IV	9.0



# 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**

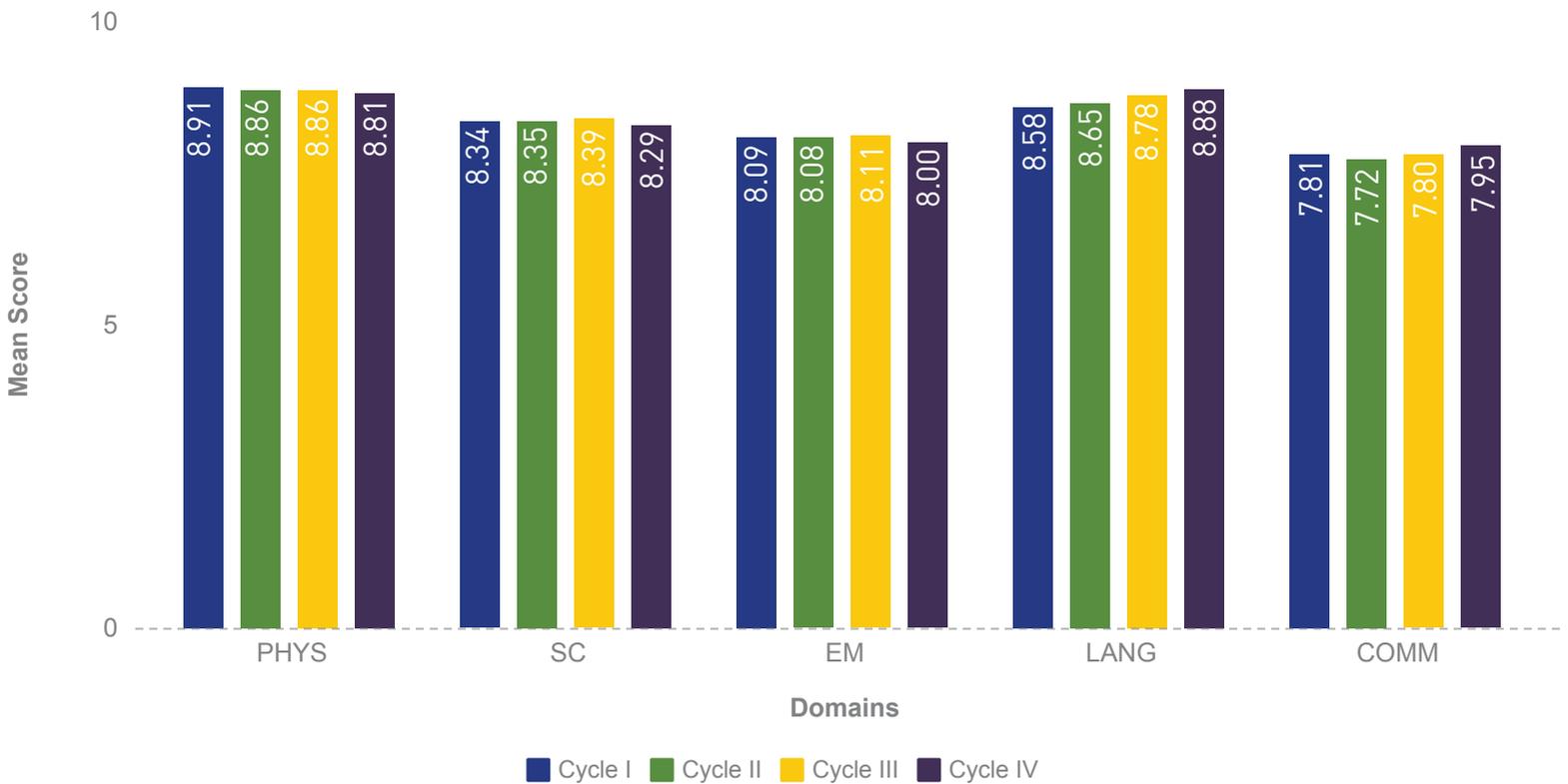
assesses children's ability to communicate in socially appropriate ways, use language and story-telling, and age-appropriate knowledge of life and the world around them.

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



# DOMAIN SCORES

EDI Mean Scores

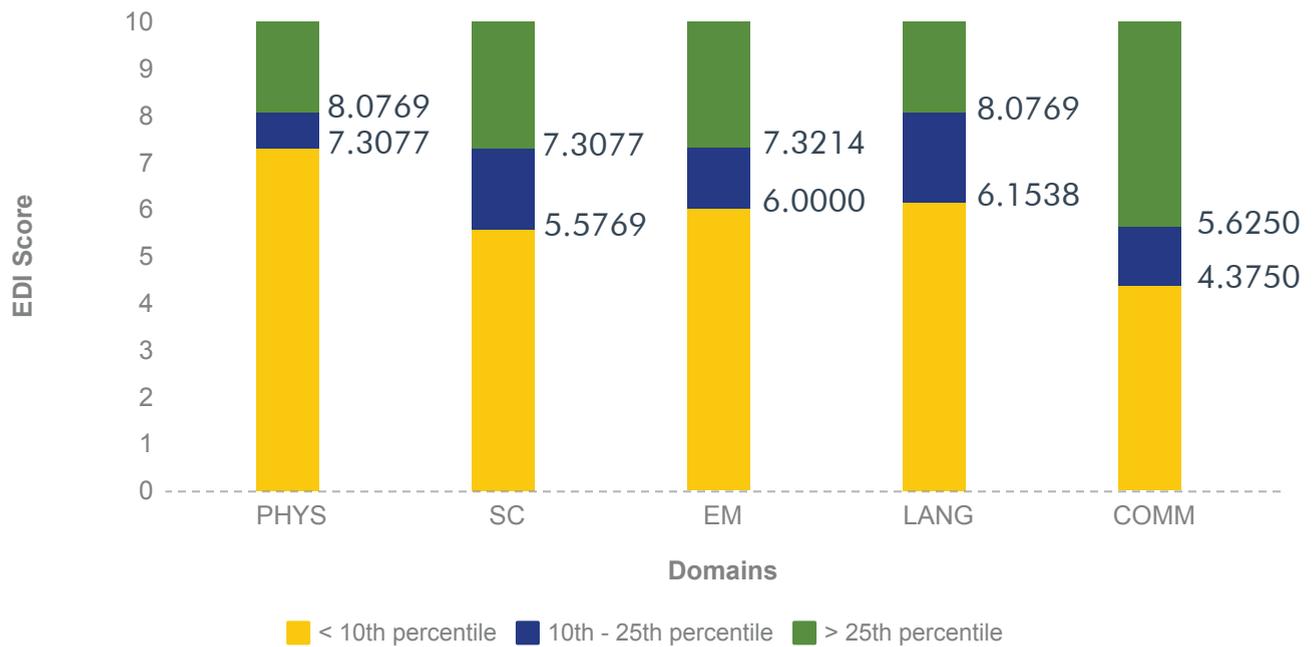


Domain	Cycle I Mean (SD)	Cycle II Mean (SD)	Cycle III Mean (SD)	Cycle IV Mean (SD)
Physical Health & Well-Being	8.91 (1.27)	8.86 (1.28)	8.86 (1.29)	8.81 (1.33)
Social Competence	8.34 (1.79)	8.35 (1.78)	8.39 (1.78)	8.29 (1.87)
Emotional Maturity	8.09 (1.48)	8.08 (1.49)	8.11 (1.49)	8.00 (1.59)
Language & Cognitive Development	8.58 (1.73)	8.65 (1.71)	8.78 (1.63)	8.88 (1.56)
Communication Skills & General Knowledge	7.81 (2.52)	7.72 (2.52)	7.80 (2.49)	7.95 (2.43)



# CUT-OFFS

## EDI Cut-Off Scores

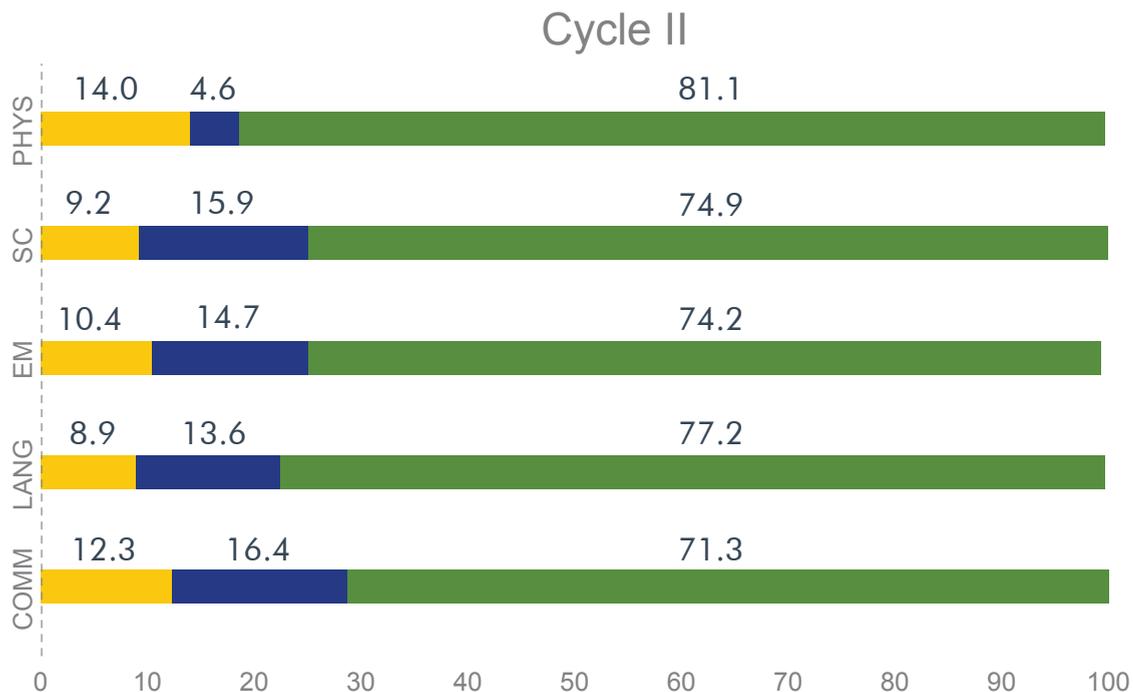
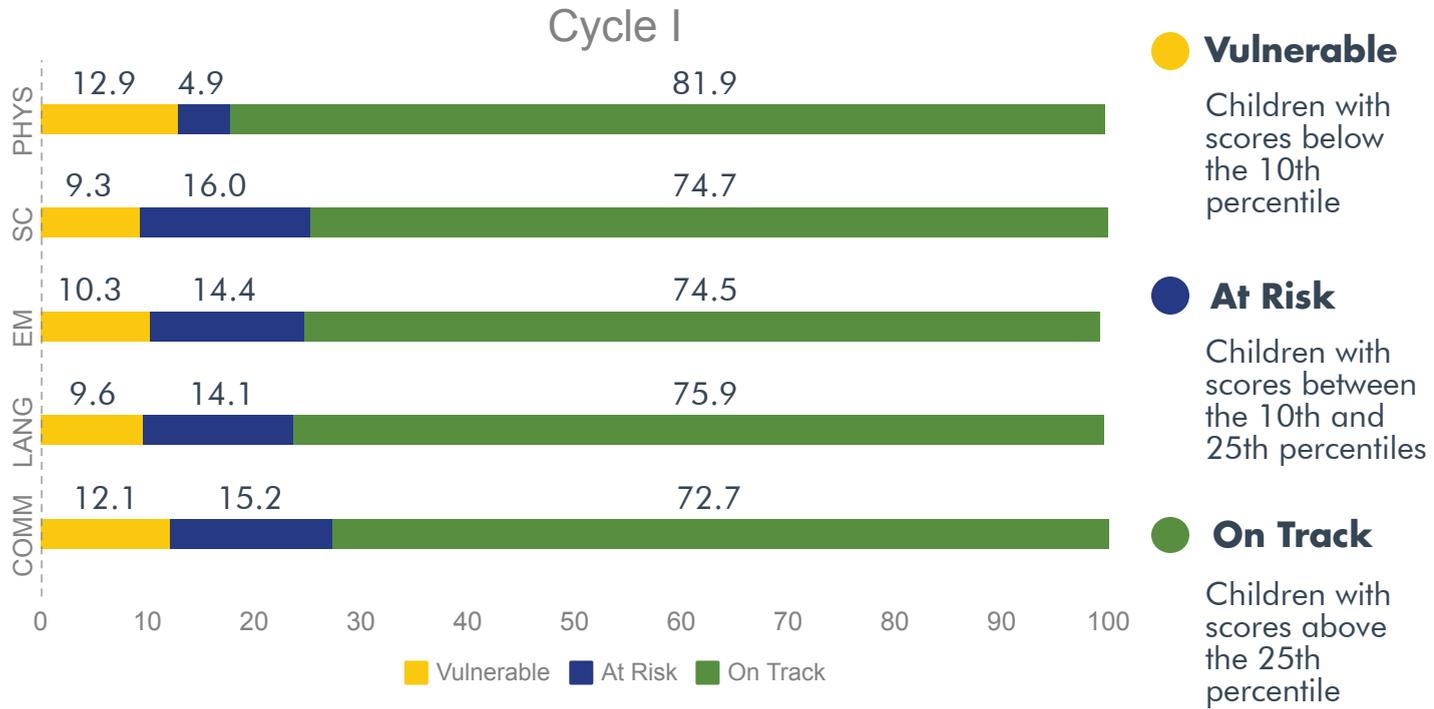


Domain	10th Percentile Cut-Off	25th Percentile Cut-Off
Physical Health & Well-Being	7.3077	8.0769
Social Competence	5.5769	7.3077
Emotional Maturity	6.0000	7.3214
Language & Cognitive Development	6.1538	8.0769
Communication Skills & General Knowledge	4.3750	5.6250



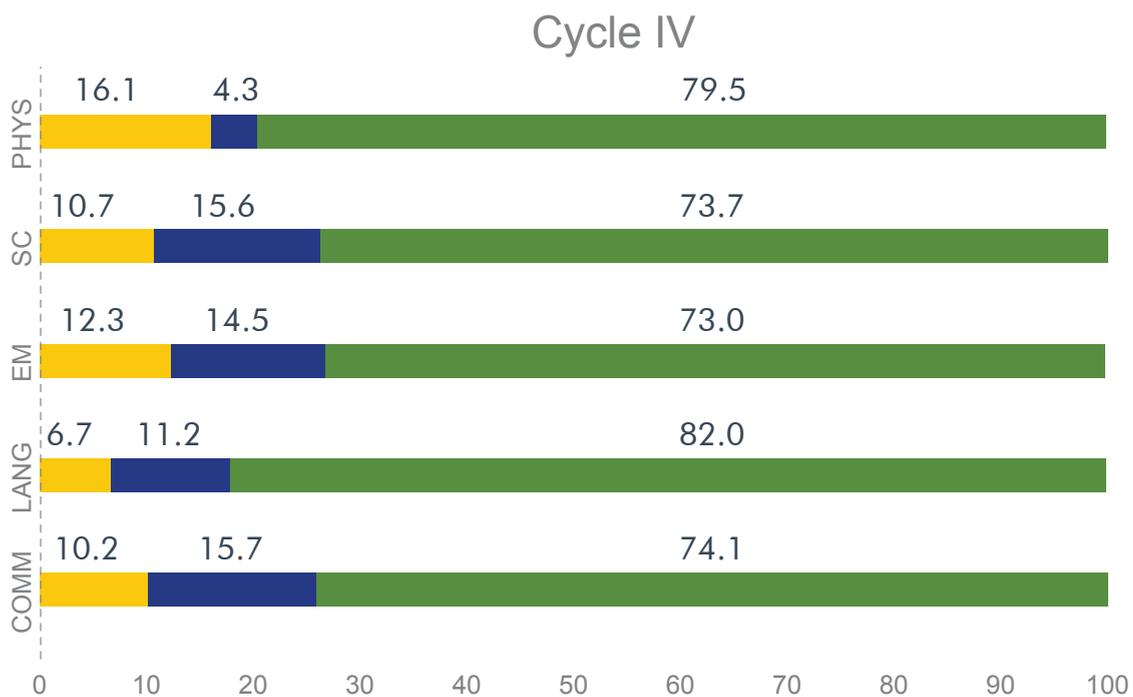
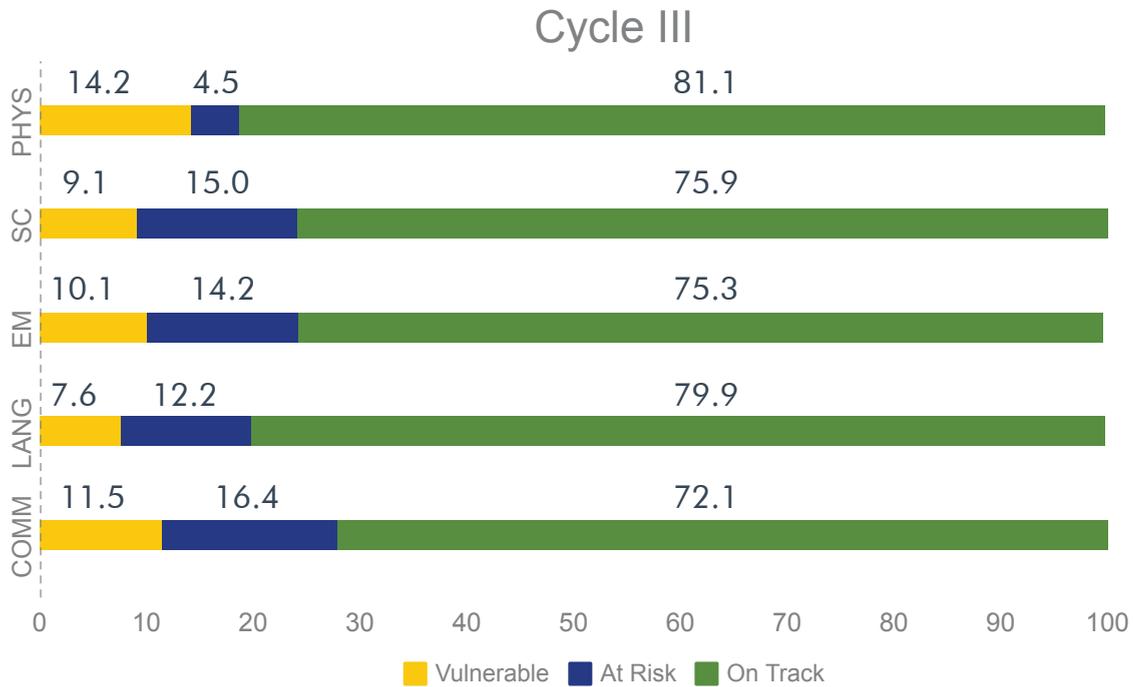
# DISTRIBUTION OF EDI SCORES

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





# DISTRIBUTION OF EDI SCORES



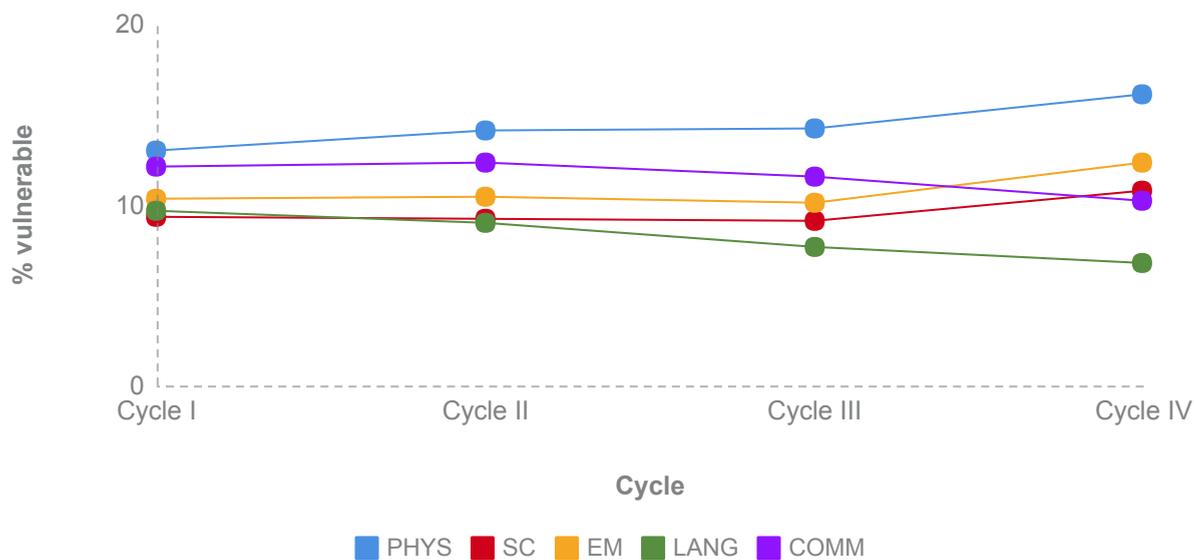


# VULNERABILITY

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.

Percentage of Children Vulnerable by Domain

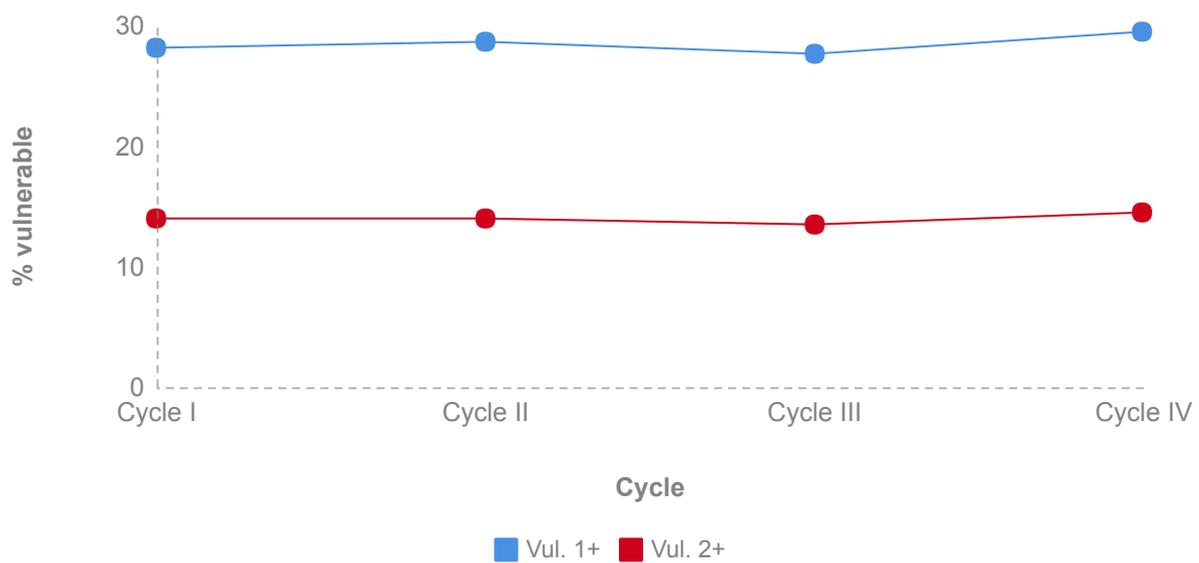


Domain	Cycle I %	Cycle II %	Cycle III %	Cycle IV %
Physical Health & Well-Being	12.9	14.0	14.2	16.1
Social Competence	9.3	9.2	9.1	10.7
Emotional Maturity	10.3	10.4	10.1	12.3
Language & Cognitive Development	9.6	8.9	7.6	6.7
Communication Skills & General Knowledge	12.1	12.3	11.5	10.2



# VULNERABILITY

Percentage of Children Vulnerable



Domain	Cycle I %	Cycle II %	Cycle III %	Cycle IV %
Vulnerable on ONE or more domains	28.0	28.5	27.6	29.4
Vulnerable on TWO or more domains	13.9	14.0	13.4	14.4



# SUBDOMAINS

---

Exploring subdomains can help determine the areas of development influencing vulnerabilities and strengths in each domain. For example, subdomains in which a large percentage of children are doing poorly can be used to inform the action needed to address children's weaknesses.

Some subdomains represent skills that a child in kindergarten is expected to have mastered already (e.g., physical independence). Other subdomains represent areas of development that are still emerging (e.g., prosocial behaviour).

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



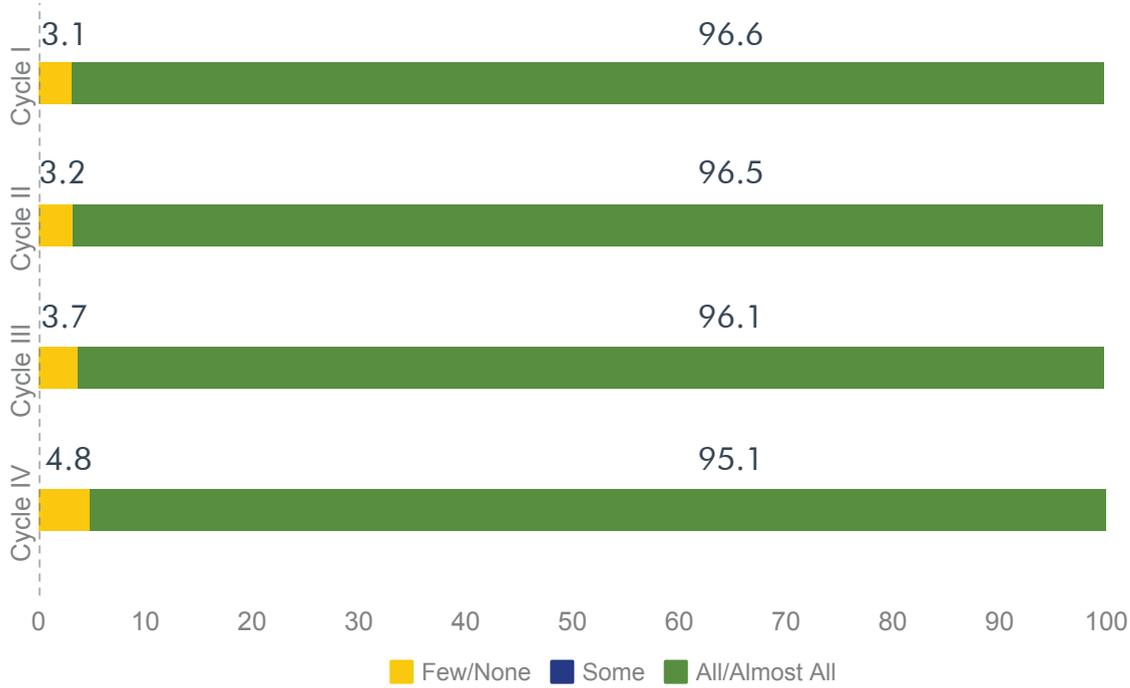
## Communication Skills & General Knowledge

- Communication skills and general knowledge

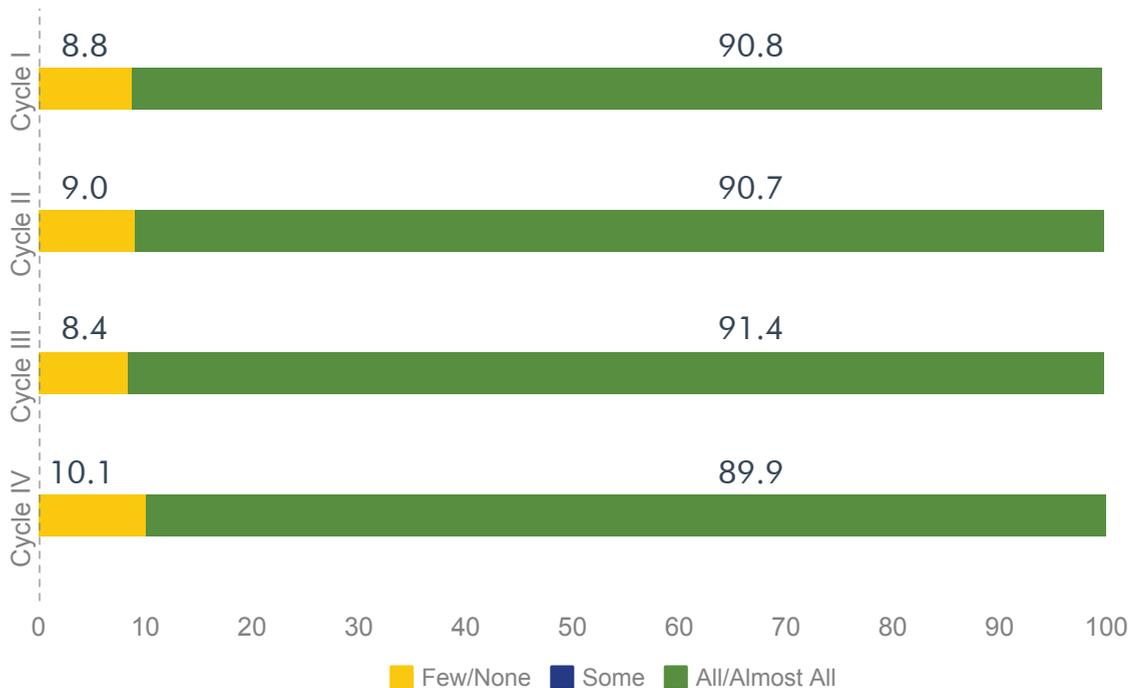


# PHYSICAL HEALTH & WELL-BEING

## Physical readiness for the school day

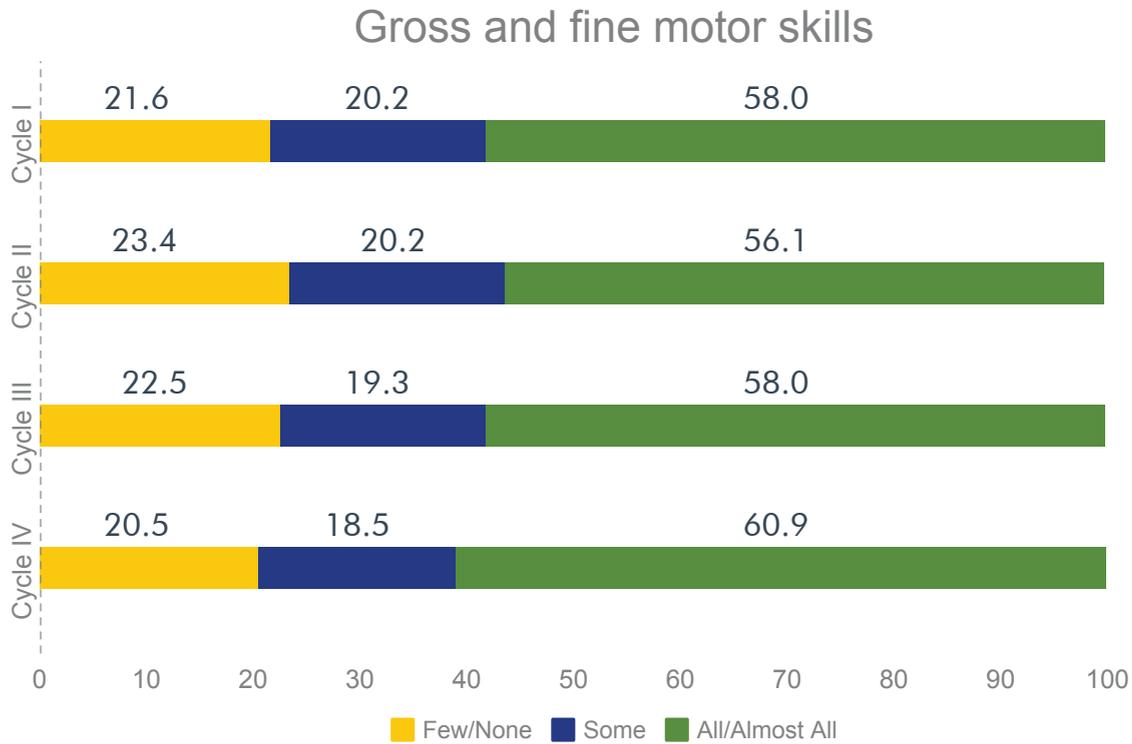


## Physical independence





# PHYSICAL HEALTH & WELL-BEING

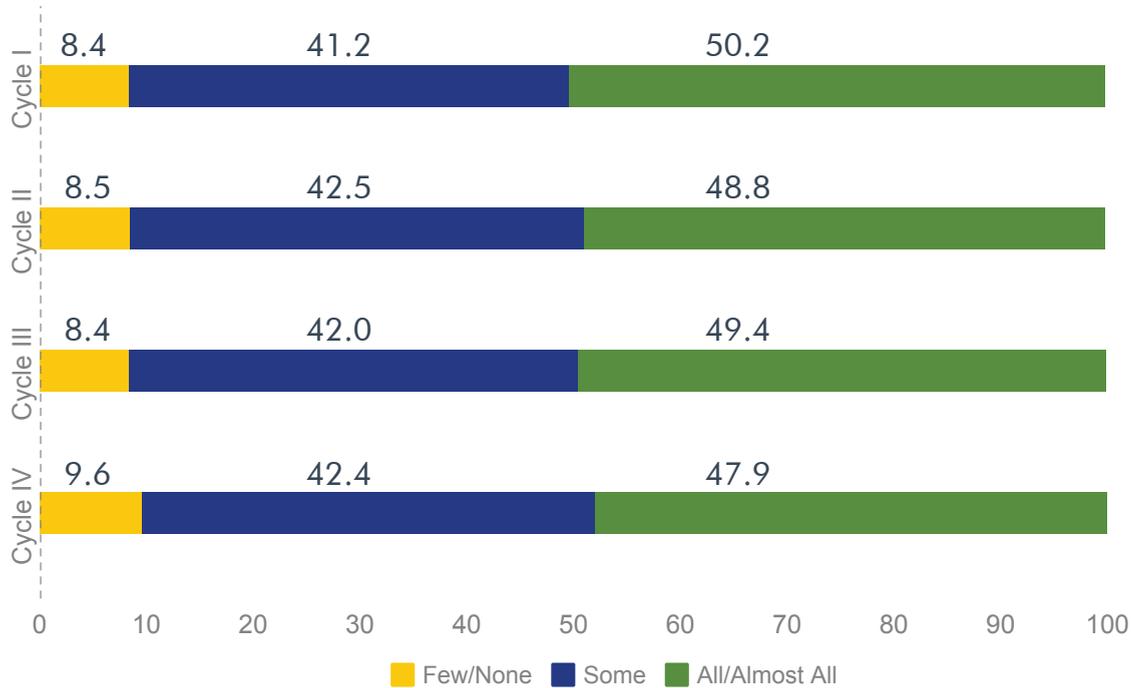


Subdomain	Meeting Expectations	Cycle I %	Cycle II %	Cycle III %	Cycle IV %
Physical readiness for the school day	Few/None	3.1	3.2	3.7	4.8
	Some	NA	NA	NA	NA
	All/Almost All	96.6	96.5	96.1	95.1
Physical independence	Few/None	8.8	9.0	8.4	10.1
	Some	NA	NA	NA	NA
	All/Almost All	90.8	90.7	91.4	89.9
Gross and fine motor skills	Few/None	21.6	23.4	22.5	20.5
	Some	20.2	20.2	19.3	18.5
	All/Almost All	58.0	56.1	58.0	60.9

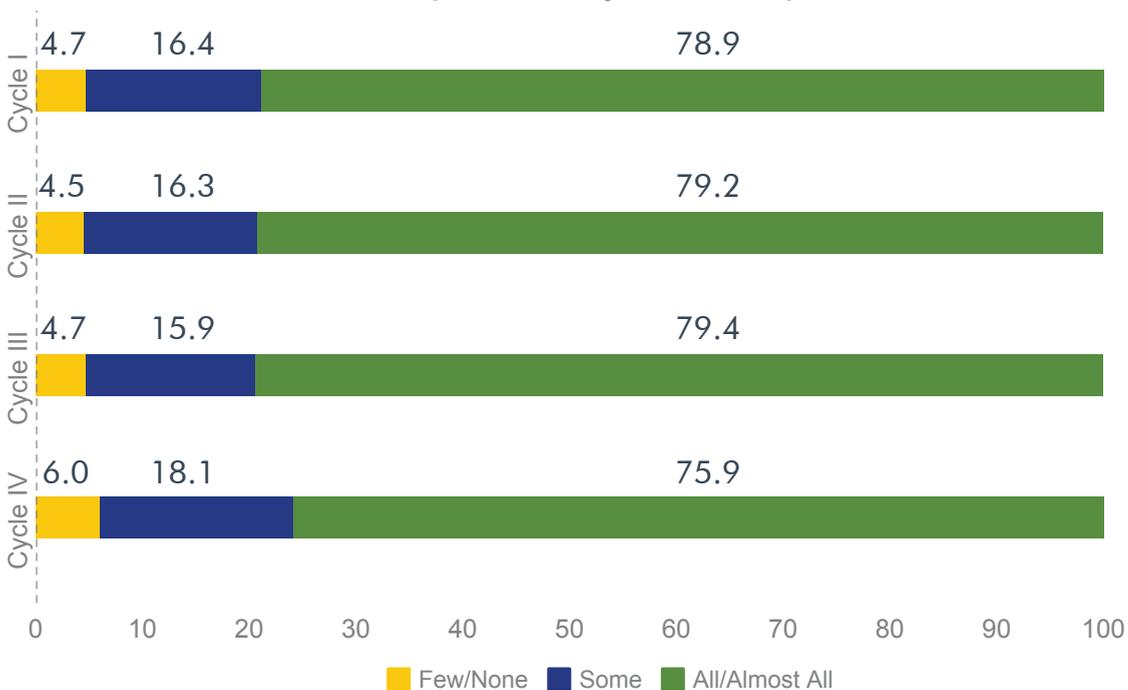


# SOCIAL COMPETENCE

## Overall social competence



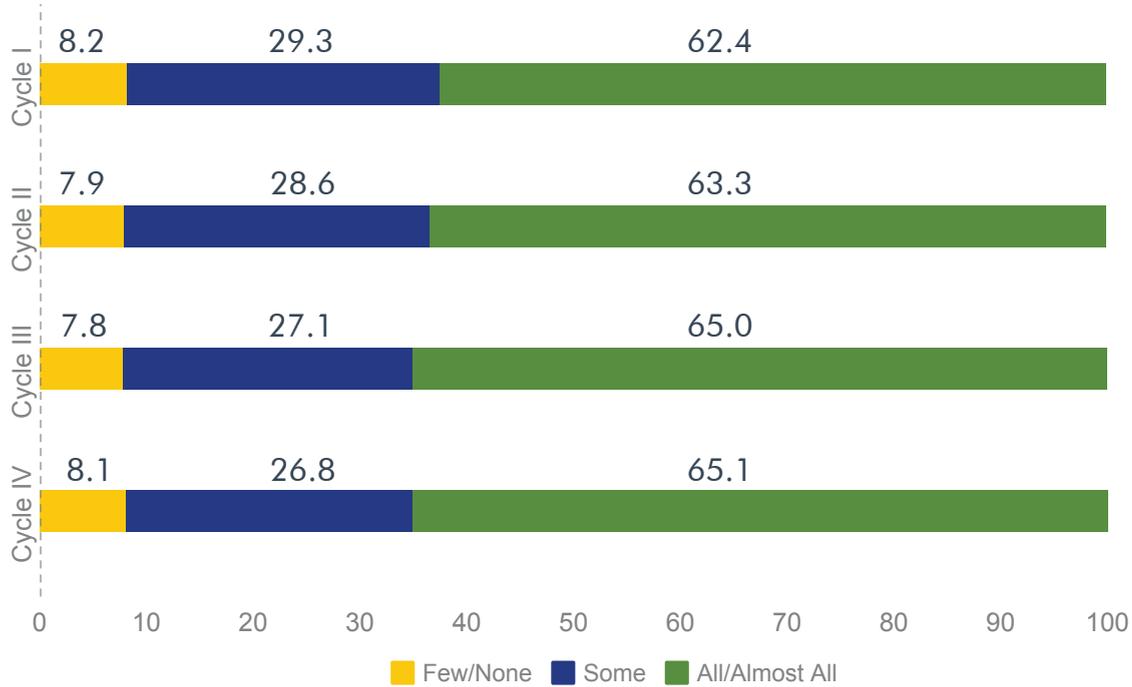
## Responsibility and respect



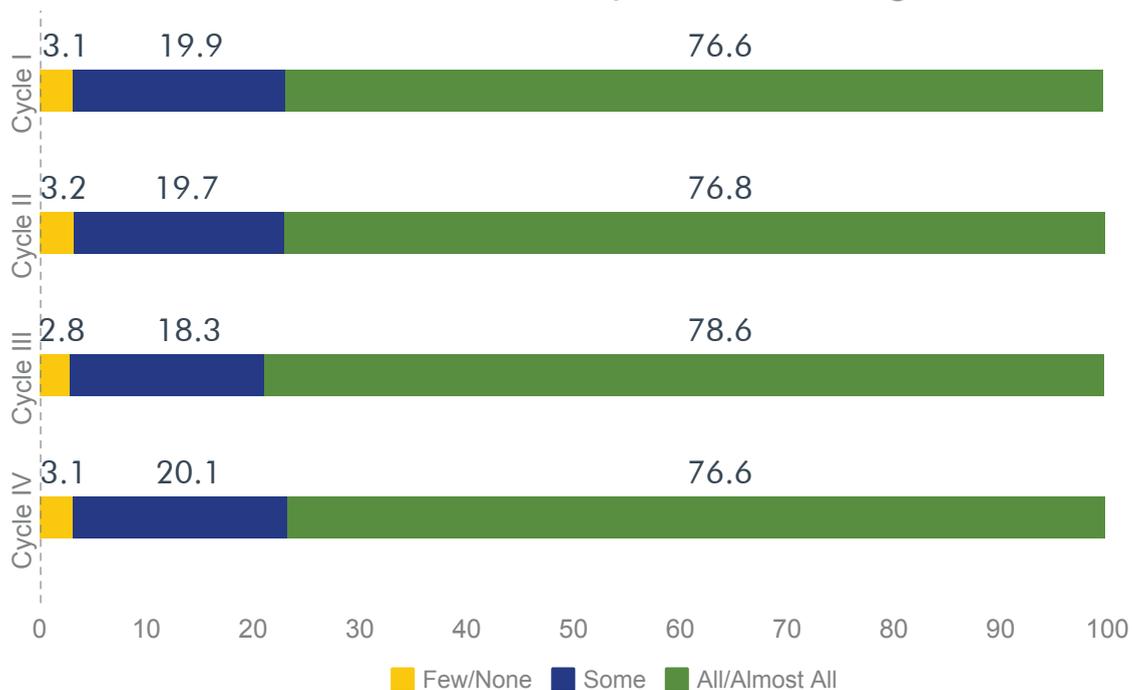


# SOCIAL COMPETENCE

## Approaches to learning



## Readiness to explore new things



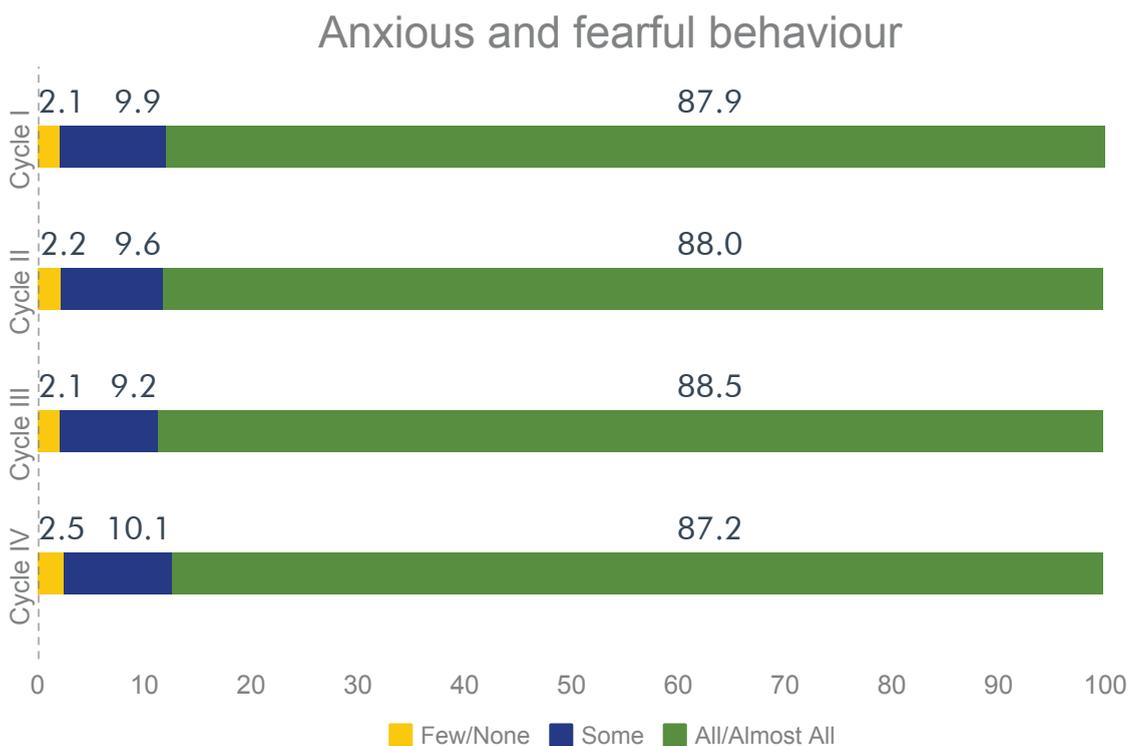
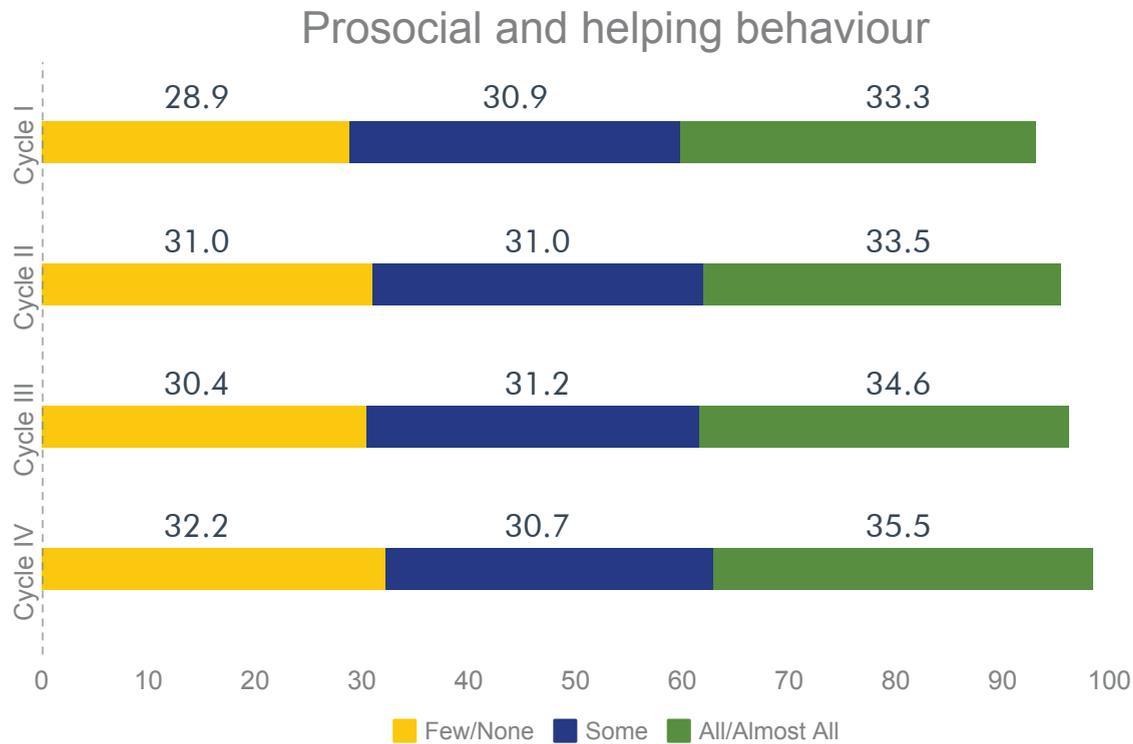


# SOCIAL COMPETENCE

Subdomain	Meeting Expectations	Cycle I %	Cycle II %	Cycle III %	Cycle IV %
Overall social competence	Few/None	8.4	8.5	8.4	9.6
	Some	41.2	42.5	42.0	42.4
	All/Almost All	50.2	48.8	49.4	47.9
Responsibility and respect	Few/None	4.7	4.5	4.7	6.0
	Some	16.4	16.3	15.9	18.1
	All/Almost All	78.9	79.2	79.4	75.9
Approaches to learning	Few/None	8.2	7.9	7.8	8.1
	Some	29.3	28.6	27.1	26.8
	All/Almost All	62.4	63.3	65.0	65.1
Readiness to explore new things	Few/None	3.1	3.2	2.8	3.1
	Some	19.9	19.7	18.3	20.1
	All/Almost All	76.6	76.8	78.6	76.6



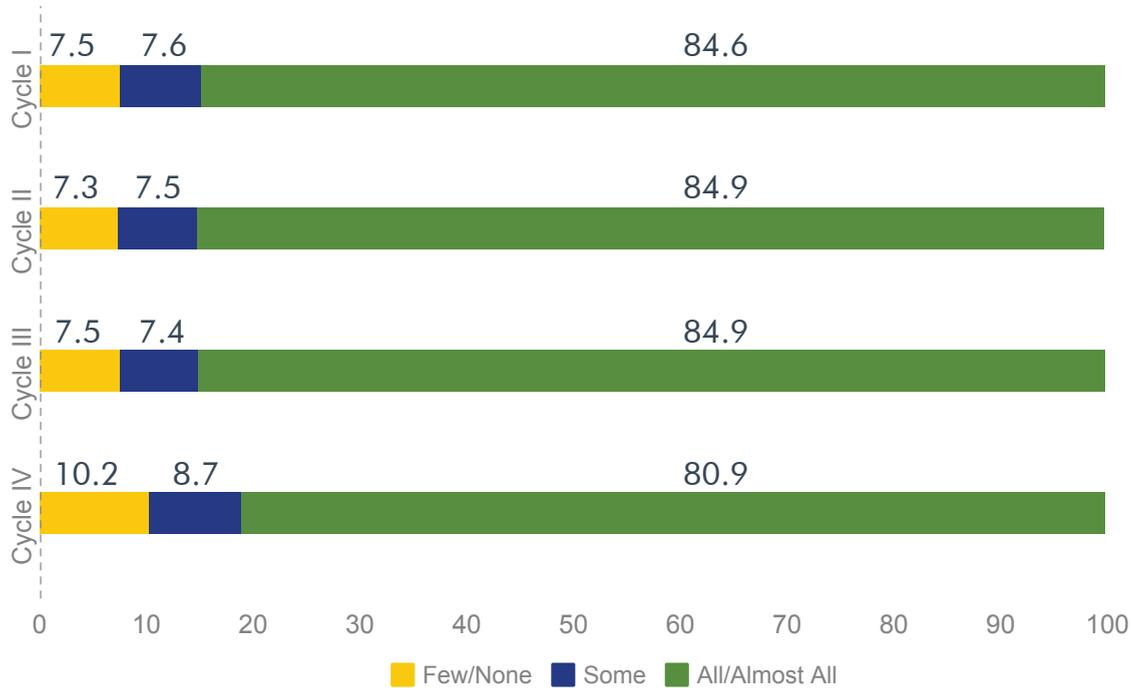
# EMOTIONAL MATURITY



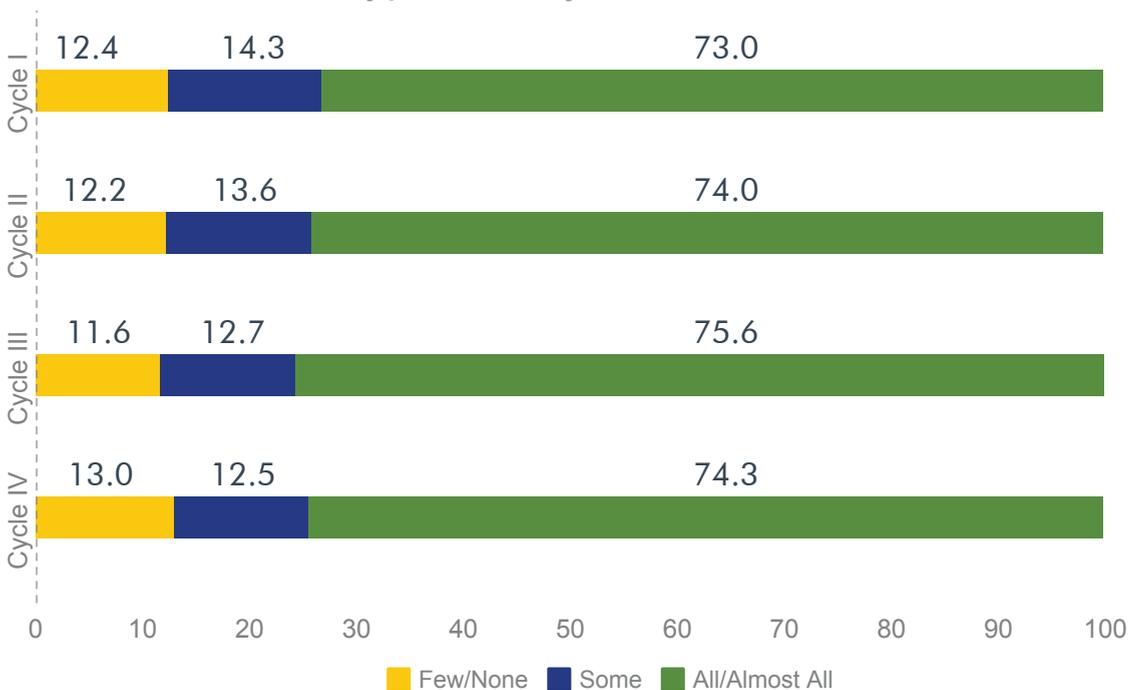


# EMOTIONAL MATURITY

## Aggressive behaviour



## Hyperactivity and inattention



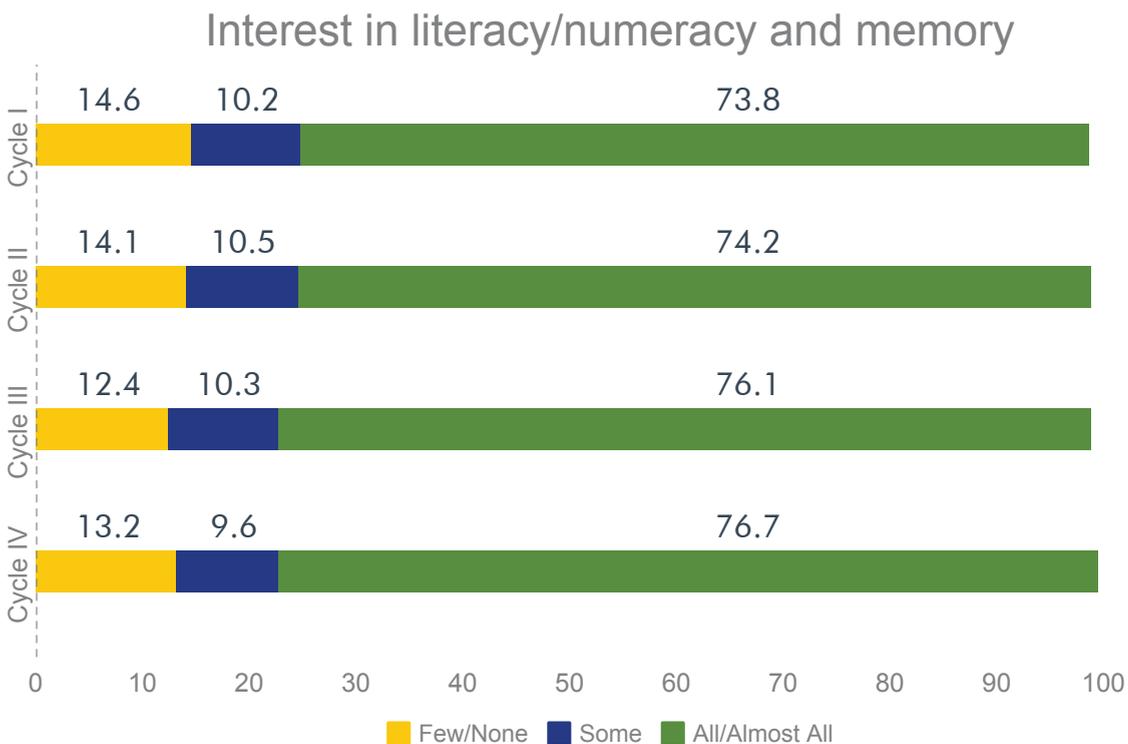
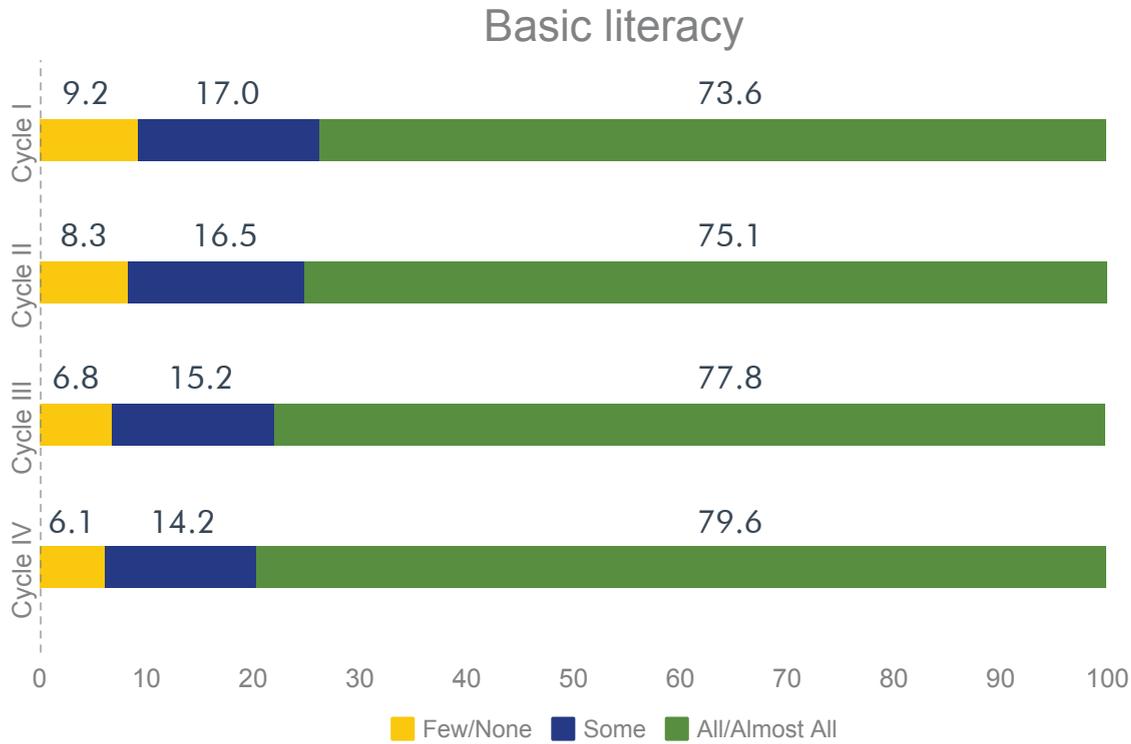


# EMOTIONAL MATURITY

Subdomain	Meeting Expectations	Cycle I %	Cycle II %	Cycle III %	Cycle IV %
Prosocial and helping behaviour	Few/None	28.9	31.0	30.4	32.2
	Some	30.9	31.0	31.2	30.7
	All/Almost All	33.3	33.5	34.6	35.5
Anxious and fearful behaviour	Few/None	2.1	2.2	2.1	2.5
	Some	9.9	9.6	9.2	10.1
	All/Almost All	87.9	88.0	88.5	87.2
Aggressive behaviour	Few/None	7.5	7.3	7.5	10.2
	Some	7.6	7.5	7.4	8.7
	All/Almost All	84.6	84.9	84.9	80.9
Hyperactivity and inattention	Few/None	12.4	12.2	11.6	13.0
	Some	14.3	13.6	12.7	12.5
	All/Almost All	73.0	74.0	75.6	74.3



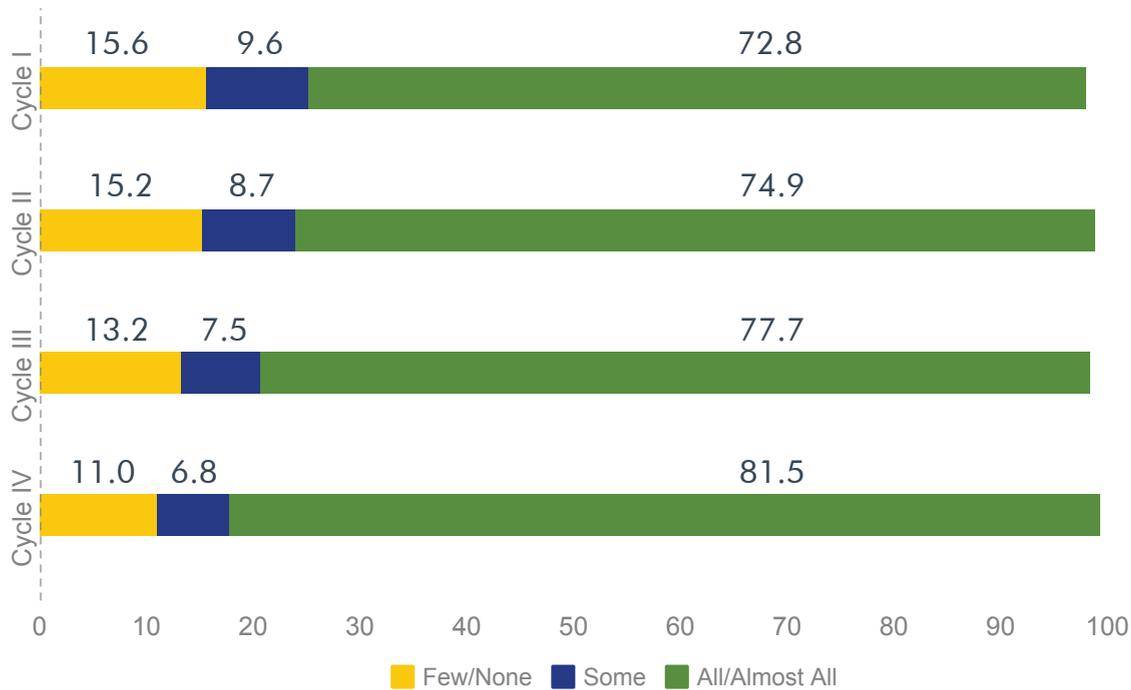
# LANGUAGE & COGNITIVE DEVELOPMENT



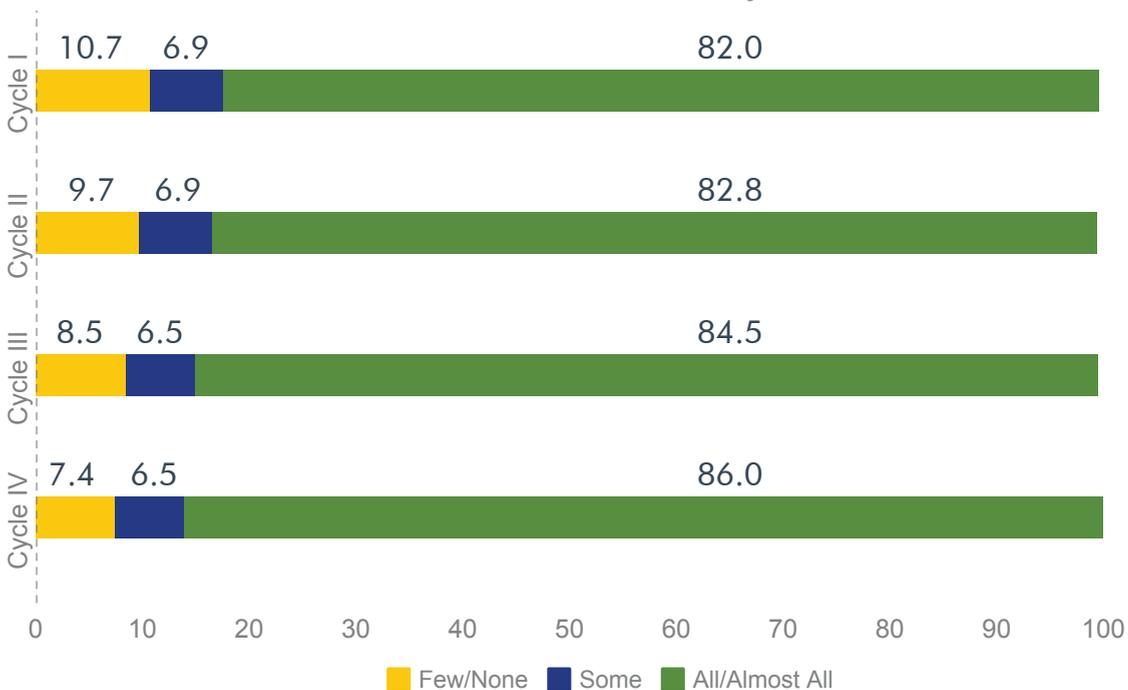


# LANGUAGE & COGNITIVE DEVELOPMENT

## Advanced literacy



## Basic numeracy



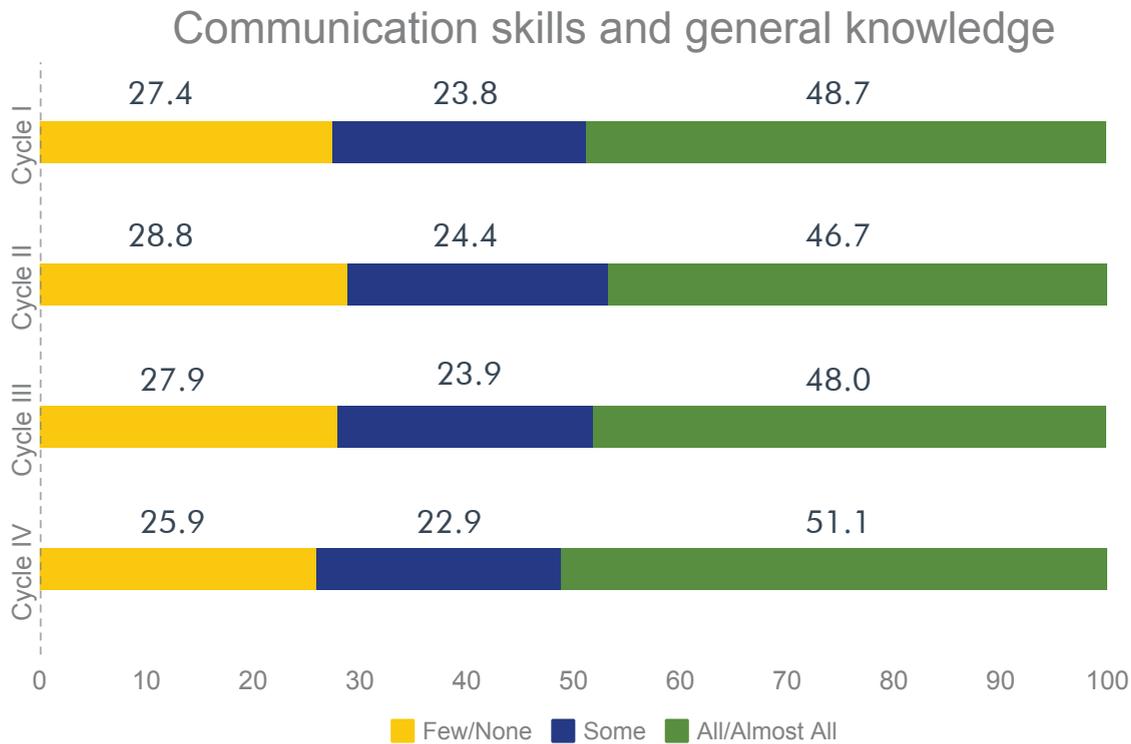


# LANGUAGE & COGNITIVE DEVELOPMENT

Subdomain	Meeting Expectations	Cycle I %	Cycle II %	Cycle III %	Cycle IV %
Basic literacy	Few/None	9.2	8.3	6.8	6.1
	Some	17.0	16.5	15.2	14.2
	All/Almost All	73.6	75.1	77.8	79.6
Interest in literacy/ numeracy and memory	Few/None	14.6	14.1	12.4	13.2
	Some	10.2	10.5	10.3	9.6
	All/Almost All	73.8	74.2	76.1	76.7
Advanced literacy	Few/None	15.6	15.2	13.2	11.0
	Some	9.6	8.7	7.5	6.8
	All/Almost All	72.8	74.9	77.7	81.5
Basic numeracy	Few/None	10.7	9.7	8.5	7.4
	Some	6.9	6.9	6.5	6.5
	All/Almost All	82.0	82.8	84.5	86.0



# COMMUNICATION SKILLS & GENERAL KNOWLEDGE



Subdomain	Meeting Expectations	Cycle I %	Cycle II %	Cycle III %	Cycle IV %
Communication skills and general knowledge	Few/None	27.4	28.8	27.9	25.9
	Some	23.8	24.4	23.9	22.9
	All/Almost All	48.7	46.7	48.0	51.1



# MULTIPLE CHALLENGE INDEX

---

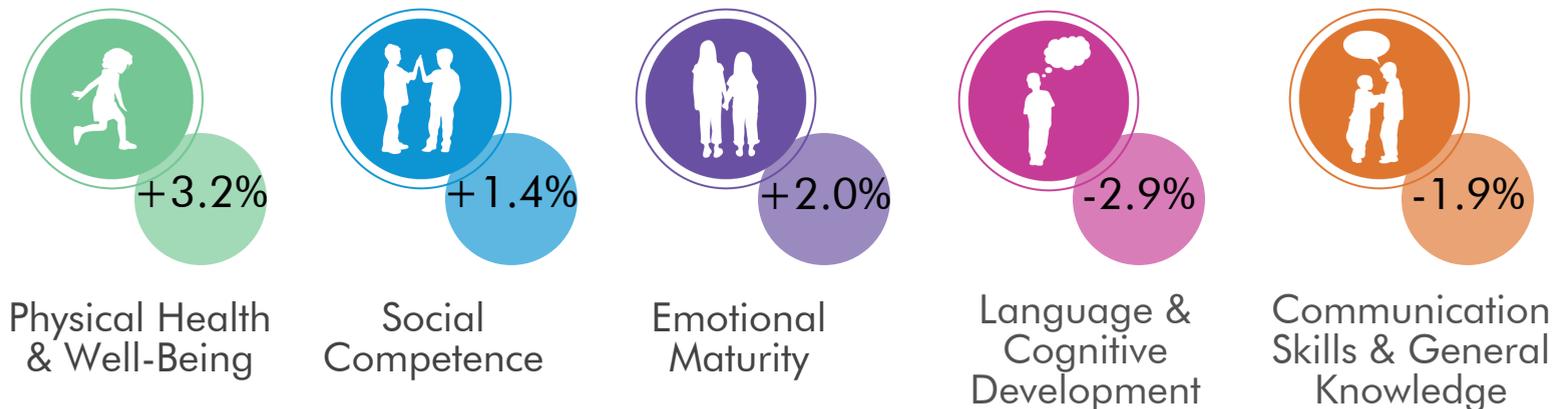
A child with scores below expectations on nine or more of the 16 subdomains is considered to have multiple challenges.

	Cycle I	Cycle II	Cycle III	Cycle IV
% with Multiple Challenges	3.6	3.5	3.3	3.5

# The long-term trend in EDI vulnerability in Ontario presents a complex picture

29.4%

29.4 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, this does not tell the whole story. Children are improving in certain areas of their development, but struggling in others.



- Vulnerability is trending lower in the areas of Language and Cognitive Development and Communication Skills and General Knowledge.
- Vulnerability is trending higher in the areas of Physical Health and Well-Being, Social Competence, and Emotional Maturity.
- Increasing vulnerability is a concern as it can predict a child's lifelong health, learning, and behaviour.

- Associations Between the Early Development Instrument at Age 5, and Reading and Numeracy Skills at Ages 8, 10 and 12: A Prospective Linked Data Study
- Predicting Early School Achievement With the EDI: A Longitudinal Population-Based Study
- Population-Level Associations between Preschool Vulnerability and Grade-Four Basic Skills
- Starting Early: Teaching, Learning and Assessment Linking Early-Childhood Development with Academic Outcomes—A Detailed Look

Ontario's long-term trend is similar to what we see in British Columbia, yet differs in many ways from the results in Manitoba. In Manitoba, vulnerability in the Emotional Maturity domain is trending lower and has remained largely stable in the Physical Health and Well-Being domain. In Ontario, these domains have the largest increases in vulnerability across all domains.

---

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](http://www.edi.offordcentre.com)