The Early Development Instrument Report

2018-2019

Winnipeg RHA

Transcona

The EDI Measures:

Physical Health and Well-being
Children are healthy, independent and rested each day

Social Competence
Children play and get along with others, share and show self-confidence

Emotional Maturity
Children are able to concentrate on tasks, help others, show patience and are not often aggressive or angry

Language and Thinking Skills
Children are interested in reading and writing, can count and recognize numbers and shapes

Communication Skills and General Knowledge
Children can tell a story, communicate with adults and other children

Manitoba

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The Offord Centre for Child Studies owns the Early Development Instrument (EDI), licenses its use, and maintains a repository of results to monitor national and international norms.

For more information on the Offord Centre for Child Studies and the EDI, visit:
https://edi.offordcentre.com/

EDI and the Early Years video:
https://edi.offordcentre.com/resources/edi-and-the-early-years-video/

The Science of Early Child Development (SECD), created by Red River College, is a knowledge translation and mobilization initiative designed to make current research accessible to anyone interested in learning more about the impact of early experience on lifelong health and well-being. For more information, visit:
https://www.scienceofecd.com/

A snapshot of children's developmental health at school entry

Research is increasingly discovering that what happens in early childhood plays a big role in lifelong health, well-being, and learning. By the time a child enters kindergarten, more brain connections will have been made than between kindergarten and adulthood. Positive experiences during this time can help the brain develop in healthy ways. Negative experiences are harmful to brain development and can have lasting impacts. As early childhood lays the foundation for the future, it is very important that we do everything we can to support healthy development.

A teacher-completed survey, called the Early Development Instrument (EDI), was developed at the Offord Centre for Child Studies at McMaster University. Its purpose was to measure children's ability to meet age-appropriate developmental expectations at school entry (kindergarten). By using the EDI to collect information on children's needs and strengths (at a group level), we can understand where children need the most help. Research using the EDI has found that children identified as being vulnerable in kindergarten are more likely to demonstrate poor school performance in later years. We cannot assume children with difficulties early on will simply grow out of their problems. There is a real risk their difficulties early on in school will predict difficulties later in life, both in school and beyond.

Thankfully, many common problems faced by children are preventable, or can at least be improved, with the help of early recognition and management. Providing help early on is likely to be more effective and less costly than providing help later in life. That is because the brain is developing rapidly at this early age, which provides a unique opportunity to make the biggest positive impact. By identifying and addressing areas of need during the early years, we can increase the chances of children reaching their greatest potential.

What the EDI Measures

The EDI measures children's ability to meet age-appropriate developmental expectations across five domains. The *Vulnerable*, *At Risk* and *On Track* results focus on the five domains. The five domains are further divided into 16 subdomains. The subdomain results show the percentage of children who have met few or none of the developmental expectations in each of the 16 subdomains, as described in the table below.

5 Domains	16 Sub-Domains	The description of children who have met few or none of the developmental expectations
Physical Health and Well-being *(13 survey questions)*	Physical readiness for school	These children have at least sometimes experienced being unprepared for the school day (e.g., being dressed inappropriately for the weather; or coming to school late, hungry, and/or tired).
	Physical Independence	These children range from those who have not developed one of the following three skills: independence, handedness and coordination, and/or they suck their thumb, to those who have not developed any of the skills and suck their thumb.
	Gross and fine motor skills	These children have difficulty performing skills requiring gross and fine motor competence, and have poor overall energy levels and physical skills.
Social Competence *(26 survey questions)*	Overall social competence	These children have average to poor overall social skills and low self-confidence, and they are rarely able to play with various children and interact cooperatively.
	Responsibility and respect	These children only sometimes or never accept responsibility for actions, show respect for others and for property, demonstrate self-control, and they are rarely able to follow rules and take care of materials.
	Approaches to learning	These children only sometimes or never work neatly or independently. In addition, they are rarely able to solve problems or follow class routines, and they do not easily adjust to changes in routines.
	Readiness to explore new things	These children only sometimes or never show curiosity about the world, and are rarely eager to explore new books, toys and games.
Emotional Maturity *(30 survey questions)*	Prosocial and helping behaviour	These children never or almost never show most of the helping behaviours; they do not help someone hurt, sick or upset; and they do not invite bystanders to join in.
	Anxious and fearful behaviour	These children *often show* most of the anxious behaviours; they could be worried, unhappy, nervous, sad or excessively shy, or indecisive; and they can be upset when dropped off at school.
	Aggressive behaviour	These children *often show* most of the aggressive behaviours; they get into physical fights, kick or bite others, take other people's things, are disobedient or have temper tantrums.
	Hyperactive and inattentive behaviour	These children *often show* most of the hyperactive behaviours; they could be restless, distractible, impulsive; they fidget and have difficulty settling to activities.
Language and Thinking Skills *(26 survey questions)*	Basic literacy	These children do not have most of the basic literacy skills; they have problems with identifying letters or attaching sounds to them, or rhyming; they may not know writing direction (left to right), and how to write their own name.
	Interest in literacy or numeracy, and uses memory	These children may not show interest in books and reading, or math and number games, or both; and they may have difficulty remembering things.
	Advanced literacy	These children have only up to one of the advanced literacy skills; they cannot read or write simple words or sentences, and they rarely write voluntarily.
	Basic numeracy	These children have marked difficulty with numbers, and cannot count, compare or recognize numbers; they may not be able to name all of the shapes; and they may have difficulty with time concepts.
Communication Skills and General Knowledge *(8 survey questions)*	Communication skills and general knowledge	These children have difficulty speaking and understanding the language of instruction; participating in imaginative play; communicating their own needs in understandable ways; and have difficulty in answering questions about the world.

Interpreting Results

The EDI measures children's ability to meet age-appropriate developmental expectations across five domains. The EDI questionnaire is completed by teachers for each one of their kindergarten children. Using the teacher's responses, each child is given a score for each of the five domains. These individual scores are then aggregated so children can be assessed as groups only. These grouped scores are then divided into three different percentile categories*:

1. **Vulnerable** is the percentage of children who score below the 10th percentile of the Canadian baseline sample. *Vulnerable* represents a group of children who are struggling, including those whose struggles may not be apparent. This group represents children for whom cost effective, universal preventive programs are likely to make a difference.

2. **At Risk** is the percentage of children with scores between the 10th and 25th percentiles of the Canadian baseline sample. At Risk represents a group of children who are not in the *vulnerable* range at the time of the EDI assessment, but whose scores are still lower than expected for children that age.

3. **On Track** is the percentage of children with scores above the 25th percentile of the Canadian baseline sample. *On Track* represents a group of children whose scores signify that they are meeting age appropriate developmental expectations.

For each of the five domains, the Canadian baseline sample acts like a point on a ruler or benchmark that Manitoba's results are measured against. Results that are *similar* to the Canadian baseline sample are interpreted as expected news: *Vulnerable* (10 per cent), *At Risk* (15 per cent), and *On Track* (75 per cent). Results that are *different* from the Canadian baseline sample can reveal domains of strength or need. For example, any domain that has more than 10 per cent of children who are *Vulnerable* (higher than the

Canadian baseline sample) may be interpreted as a domain of need. Similarly, the higher the percentage of children who are *At Risk*, the more concern. Alternatively, the higher the percentage of children who are *On Track*, the better. Note: Interpretation tips are provided throughout the report.

The five domains are further divided into 16 subdomains, representing more specific skills and behaviours. In contrast to the domain results, the subdomain results are distribution-free (i.e., they are not based on the distribution of scores found in the Canadian baseline sample). Rather, each subdomain has been assigned a cut-off score by the creators of the EDI. This assigned cut-off score is different for each subdomain. Each assigned cut-off score determines the percentage of children who are considered to have met few or none of the developmental expectations in that particular subdomain.

Exploring subdomains is an important step in determining the areas of development that are influencing the vulnerability rates (i.e., the percentage of vulnerable children) in various domains. Subdomains in which a large percentage of children are doing poorly can be used to inform the action needed to address children's weakness.

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*Prior to 2018/19, EDI reports grouped scores into the following percentile categories: 1) "Not Ready": the percentage of children who score in the bottom 10th percentile of the Canadian baseline sample; 2) "Mid-range": the percentage of children with scores in the 11th-69th percentile; and 3) "Very Ready": the percentage of children with scores in the top 30th percentile.

Questionnaire Information

This table shows the number of questionnaires completed, the number of invalid questionnaires, the number of students with special needs, and the number of questionnaires that are used in the analyses throughout the rest of this report.

Questionnaire information Count / (%)	2010/11	2012/13	2014/15	2016/17	2018/19	Manitoba 2018/19
Completed Questionnaires	331	417	410	429	498	14,297
Invalid Questionnaires*	5 (2%)	15 (4%)	14 (3%)	15 (3%)	17 (3%)	567 (4%)
Students with Special Needs**	9 (3%)	9 (2%)	13 (3%)	19 (4%)	23 (5%)	709 (5%)
Questionnaires Used in the Analyses***	317 (96%)	393 (94%)	383 (93%)	395 (92%)	459 (92%)	13,047 (91%)

*Invalid Questionnaires: Questionnaires with missing data in key categories. This includes children who have been in school less than one month, missing special needs and incomplete questionnaires.

**Students with Special Needs: The EDI is designed to measure the developmental trajectories of typically developing children in the early years. For comparability reasons, children with special needs are excluded from analysis.

***Questionnaires used in the analyses: This count *omits* Invalid Questionnaires and Students with Special Needs.

Student Information

This table provides student information on the EDI collection. It is based on the number of *questionnaires used in the analyses.*

Student information Count / (%)	2010/11	2012/13	2014/15	2016/17	2018/19	Manitoba 2018/19
Students who are female	168 (53%)	208 (53%)	197 (51%)	178 (45%)	225 (49%)	6,450 (49%)
Students who are male	149 (47%)	185 (47%)	186 (49%)	217 (55%)	234 (51%)	6,596 (51%)
Average age of students	5.7 years	5.7 years	5.7 years	5.7 years	5.7 years	5.7 years
Students with EAL* (English as an additional language)	10 (3%)	25 (7%)	22 (6%)	16 (4%)	36 (8%)	1,800 (14%)
Students with FAL** (French as an additional language)	8 (67%)	2 (22%)	1 (17%)	6 (46%)	4 (29%)	250 (46%)
Students who are New Canadians (immigrated within the last two years)	12 (4%)	12 (3%)	10 (3%)	20 (5%)	15 (3%)	730 (6%)
Students who are identified as Indigenous (by their teacher)	39 (12%)	37 (9%)	40 (10%)	46 (12%)	45 (10%)	2,446 (19%)
Students (without special needs) in the assessment process***	27 (9%)	49 (12%)	51 (13%)	41 (10%)	42 (9%)	1,512 (12%)

*(EAL): English as an additional language is applicable only to children in English or Immersion schools.

**(FAL) French as an additional language is applicable only to children in French schools.

***Students in the assessment process include: 1) students currently receiving assessment; 2) students needing further assessment; 3) students on the waiting list to receive assessment

Vulnerable 0-10th percentile	At Risk 10th-25th percentile	On Track 25th-100th percentile

5 Domain Results - <u>Vulnerable</u>

Vulnerable By Domain:

This table shows the percentage of children *Vulnerable* in each domain. *Vulnerable* is the percentage of children who score below the 10th percentile of the Canadian baseline sample.

Interpretation Tips: Low percentages are preferable. The higher the percentage of children who are *Vulnerable*, the more concern. Any domain that has more than 10 percent of children (higher than the Canadian baseline sample) may be interpreted as a domain of need. If you identify a domain of need, then look more closely at the associated subdomain results on page 11 to help provide more detail. You can also compare your results to Manitoba. Ideally, you would like to see your percentages similar to the rest of Manitoba, or lower.

Vulnerable by Domain (%)	2010/11	2012/13	2014/15	2016/17	2018/19	Manitoba 2018/19
Physical Health and Well-being	9%	13%	12%	8%	11%	13%
Social Competence	8%	14%	11%	5%	7%	9%
Emotional Maturity	11%	13%	14%	8%	12%	12%
Language and Thinking Skills	6%	11%	10%	6%	9%	12%
Communication Skills and General Knowledge	11%	12%	13%	10%	11%	14%
Low percentages are preferable. The higher the percentage of children who are *Vulnerable*, the more concern. Any domain above 10% may be interpreted as a domain of need.						

Vulnerable across Multiple Domains

This table shows the percentage of children *Vulnerable* on at least one and at least two domains. These results are used as a measure of overall vulnerability.

Interpretation Tips: Low percentages are preferable: The higher the percentage of children who are *Vulnerable*, the more concern. The 10 per cent marker is no longer applicable, because we are looking at more than one domain at a time. You can also compare your results to Manitoba. Ideally, you would like to see your percentages similar to the rest of Manitoba, or lower.

Vulnerable across Multiple Domains (%)	2010/11	2012/13	2014/15	2016/17	2018/19	Manitoba 2018/19
Vulnerable on at least ONE domain	23%	28%	30%	21%	26%	30%
Vulnerable on at least TWO domains	12%	17%	17%	10%	14%	16%
Low percentages are preferable. The 10% marker is no longer applicable.						

5 Domain Results – <u>Vulnerable</u>

Vulnerable Group Comparisons*:

The tables below show the vulnerability rates for 1) Female and Male, 2) Children who are Older and Younger than the mean age, and 3) Children who are Indigenous and Non-Indigenous (as identified by their teacher).

Interpretation Tips: Low percentages are preferable. When interpreting group comparisons, it is important to take the sample size (count) of each group into consideration. In smaller communities, large differences in vulnerability rates between groups may only represent a few children.

Although understanding overall vulnerability is important, it does not tell the whole story. Comparing children based on certain demographics, such as sex, age, and language status, is an effective way of understanding how contextual factors may be influencing EDI vulnerability rates.

When comparing children based on certain demographics, it is important to remember that the development of children is influenced by many factors. These factors include the ongoing impact of historical experiences and exposure to toxic stressors such as poverty, unemployment, inadequate housing and family/ community violence.

Vulnerable Group Comparison Sex (%)	Your Site 2018/19		Manitoba 2018/19	
	Female	Male	Female	Male
Physical Health and Well-being	7%	15%	9%	16%
Social Competence	4%	11%	6%	13%
Emotional Maturity	7%	17%	7%	17%
Language and Thinking Skills	8%	11%	10%	15%
Communication Skills and General Knowledge	8%	13%	11%	18%
Count	225	234	6,450	6,596

Vulnerable Group Comparison Age (%)	Your Site 2018/19		Manitoba 2018/19	
	Older	Younger	Older	Younger
Physical Health and Well-being	10%	12%	11%	15%
Social Competence	10%	5%	8%	11%
Emotional Maturity	14%	10%	10%	14%
Language and Thinking Skills	6%	13%	9%	16%
Communication Skills and General Knowledge	8%	14%	12%	17%
Count	237	222	6,478	6,566

Vulnerable Group Comparison Indigenous Status (%)	Your Site 2018/19		Manitoba 2018/19	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Physical Health and Well-being	22%	10%	27%	9%
Social Competence	18%	7%	19%	7%
Emotional Maturity	26%	11%	21%	10%
Language and Thinking Skills	16%	9%	28%	8%
Communication Skills and General Knowledge	18%	10%	25%	12%
Count	45	393	2,446	10,246

*Prior to 2018/19, EDI reports used average scores to show group comparison results, rather than vulnerability rates.

Vulnerable 0-10th percentile	At Risk 10th-25th percentile	On Track 25th-100th percentile

5 Domain Results – <u>Vulnerable</u>

Vulnerable Group Comparisons*:

The tables below show the vulnerability rates for 1) Children with and without EAL Status, 2) Children with and without FAL Status, and 3) Children who are new and not new Canadians (immigrated to Canada within the last two years).

Interpretation Tips: Low percentages are preferable. When interpreting group comparisons, it is important to take the sample size (count) of each group into consideration. In smaller communities, large differences in vulnerability rates between groups may only represent a few children.

EAL: English as an Additional Language. A child for whom English is not their first language and who needs additional instruction in English. **EAL is applicable only to children in English or Immersion schools.**

FAL: French as an Additional Language. A child for whom French is not their first language and who needs additional instruction in French. **FAL is applicable only to children in Francophone schools.**

Some of the group comparisons may be labeled as Not Applicable (N/A) or are missing from the analyses because the groups were too small (under seven students) to retain confidentiality.

Vulnerable Group Comparison EAL Language Status (%)	Your Site 2018/19		Manitoba 2018/19	
	EAL	Not EAL	EAL	Not EAL
Physical Health and Well-being	19%	11%	12%	13%
Social Competence	11%	7%	14%	9%
Emotional Maturity	14%	12%	14%	12%
Language and Thinking Skills	14%	9%	17%	12%
Communication Skills and General Knowledge	39%	9%	35%	11%
Count	36	409	1,800	10,708

Vulnerable Group Comparison FAL Language Status (%)	Your Site 2018/19		Manitoba 2018/19	
	FAL	Not FAL	FAL	Not FAL
Physical Health and Well-being	N/A	0%	9%	4%
Social Competence	N/A	0%	7%	2%
Emotional Maturity	N/A	0%	10%	4%
Language and Thinking Skills	N/A	0%	8%	3%
Communication Skills and General Knowledge	N/A	0%	20%	6%
Count	N/A	10	250	289

Vulnerable Group Comparison New Canadian Status (%)	Your Site 2018/19		Manitoba 2018/19	
	New Canadian	Not New Canadian	New Canadian	Not New Canadian
Physical Health and Well-being	13%	11%	11%	13%
Social Competence	13%	7%	13%	9%
Emotional Maturity	13%	12%	13%	12%
Language and Thinking Skills	20%	9%	17%	12%
Communication Skills and General Knowledge	40%	10%	35%	13%
Count	15	430	730	12,112

*Prior to 2018/19, EDI reports used average scores to show group comparison results, rather than vulnerability rates.

Vulnerable	At Risk	On Track
0-10th percentile	10th-25th percentile	25th-100th percentile

5 Domain Results – At Risk

At Risk by Domain:

This table shows the percentage of children *At Risk* in each domain. *At Risk* is the percentage of children with scores between the 10th and 25th percentiles of the Canadian baseline sample.

Interpretation Tips: Low percentages are preferable. The higher the percentage of children who are *At Risk*, the more concern. You can also compare your results to Manitoba. Ideally, you would like to see your percentages similar to the rest of Manitoba, or lower.

At Risk by Domain (%)	2010/11	2012/13	2014/15	2016/17	2018/19	Manitoba 2018/19
Physical Health and Well-being	10%	7%	10%	5%	9%	10%
Social Competence	15%	12%	14%	13%	14%	14%
Emotional Maturity	17%	14%	10%	14%	12%	15%
Language and Thinking Skills	19%	17%	12%	14%	13%	15%
Communication Skills and General Knowledge	12%	18%	17%	14%	12%	17%
Low percentages are preferable. The higher the percentage of children who are *At Risk*, the more concern.						

Vulnerable	At Risk	On Track
0-10th percentile	10th-25th percentile	25th-100th percentile

5 Domain Results – On Track

On Track by Domain:

This table shows the percentage of children *On Track* in each domain. *On Track* is the percentage of children with scores above the 25th percentile of the Canadian baseline sample.

Interpretation Tips: High percentages are preferable. The higher the percentage of children who are *On Track*, the better. You can also compare your site to Manitoba. Ideally, you would like to see your percentages similar to the rest of Manitoba, or higher.

On Track by Domain (%)	2010/11	2012/13	2014/15	2016/17	2018/19	Manitoba 2018/19
Physical Health and Well-being	82%	80%	77%	87%	80%	77%
Social Competence	77%	74%	75%	82%	79%	76%
Emotional Maturity	72%	73%	75%	77%	75%	73%
Language and Thinking Skills	75%	72%	78%	79%	77%	73%
Communication Skills and General Knowledge	78%	70%	70%	77%	78%	69%
High percentages are preferable. The higher the percentage of children who are *On Track*, the better.						

16 Subdomain Results

The EDI measures children's ability to meet age-appropriate developmental expectations across five domains, which are further divided into 16 subdomains. Subdomain results identify the percentage of children who have met few or none of these developmental expectations.

Interpretation Tips: Low percentages are preferable. The higher the percentage of children who have met few or none of the developmental expectations, the more concern. The 10 per cent marker used in the *Vulnerable* results is *not* applicable here. In contrast to the domain results, which are based on the distribution of scores found in the Canadian baseline sample, the subdomain results are distribution-free. Please refer to the subdomain descriptions on page 3.

Subdomain Results (%)		2010/11	2012/13	2014/15	2016/17	2018/19	Manitoba 2018/19
Physical Health and Well-being	Physical readiness for school	3%	2%	3%	2%	3%	5%
	Physical independence	10%	10%	15%	9%	11%	12%
	Gross and fine motor skills	15%	28%	29%	17%	24%	27%
Social Competence	Overall social competence	5%	9%	7%	6%	7%	10%
	Responsibility and respect	5%	6%	4%	2%	3%	5%
	Approaches to learning	7%	8%	8%	5%	6%	9%
	Readiness to explore new things	1%	3%	2%	3%	2%	2%
Emotional Maturity	Prosocial and helping behaviour	42%	44%	35%	34%	38%	36%
	Anxious and fearful behaviour	4%	4%	6%	2%	3%	3%
	Aggressive behaviour	4%	7%	7%	4%	6%	7%
	Hyperactive and inattentive behaviour	14%	12%	14%	10%	10%	13%
Language and Thinking Skills	Basic literacy	11%	14%	9%	12%	13%	16%
	Interest in literacy or numeracy, and uses memory	10%	12%	15%	10%	14%	13%
	Advanced literacy	23%	28%	15%	20%	18%	22%
	Basic numeracy	13%	15%	13%	7%	14%	19%
Communication Skills and General Knowledge	Communication skills and general knowledge	22%	30%	31%	24%	22%	31%
Low percentages are preferable. The higher the percentage of children who have met few or none of the developmental expectations, the more concern.							
Multiple Challenge Index (MCI) The percentage of children who have met few or none of the developmental expectations on nine or more subdomains.		2%	6%	4%	2%	3%	5%

Healthy Child Manitoba Office produces four different levels of Early Development Instrument reports: school, school division, community and provincial. These reports (with the exception of school-level reports, which are the discretion of each school division to share), as well as other information on the EDI, are available on the Healthy Child Manitoba website:
www.manitoba.ca/healthychild/edi/index.html

Alternate formats available upon request