# EARLY DEVELOPMENT INSTRUMENT 

NWT Baseline Results for the<br>2012, 2013 and 2014 School Years

## TECHNICAL REPORT

## SEPTEMBER 2014

This report is a compilation of information provided by the Offord Centre for Child Studies, McMaster University. It describes the Early Development Instrument (EDI), provides statistics about the data collection and presents the results of the study.

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## BACKGROUND

A teacher-completed instrument called the Early Development Instrument (EDI) was developed at the Offord Centre for Child Studies at McMaster University to measure children's ability to meet age appropriate developmental expectations at school entry. The Early Development project focuses on the outcomes for children as a health-relevant, measurable concept that has long-term consequences for individual outcomes and population health. The data derived from the collection of the EDI facilitates and encourages community, provincial, national and international monitoring of the developmental health of our young learners.

The EDI was finalized in 2000 in Ontario, Canada and has since become a population-level research tool utilized to various degrees in all Canadian provinces and territories. By the end of 2013, Ontario, Manitoba, British Columbia, Saskatchewan, Alberta, Prince Edward Island, New Brunswick, Nova Scotia, Newfoundland and Labrador, Yukon, Northwest Territories, and Quebec will have collected data at the provincial/territorial-level at least once and Nunavut will have collected data on some of their children.

Current findings from the administration of EDI in Canada show that in most jurisdictions, $25 \%$ or more of children entering kindergarten are vulnerable in at least one aspect of their development. Further 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 much about a person's lifelong health, learning and behaviour.

The EDI is designed to be a tool to increase the mobilization of communities and policy makers in order to bring a positive impact on children's development in their local areas (Figure 1). Understanding the state of children's development at the level of the population, that is for all children, is foundational to mobilizing stakeholders towards change.


Figure 1 The role of EDI.

## EDI Developmental Areas (Domains)

The Early Development Instrument measures children's developmental health at school entry by asking questions covering five different areas of their early development, also referred to as "domains" (Figure 2).


Figure 2 The five developmental areas

Physical Health \& Well-Being - includes gross and fine motor skills - e.g., holding a pencil, running on the playground, motor coordination, and adequate energy levels for classroom activities.

Social Competence - includes curiosity about the world, eagerness to try new experiences, knowledge of standards of acceptable behaviour in a public place, ability to control own behaviour, cooperation with others, following rules, and ability to play and work with other children.

Emotional Maturity - includes ability to reflect before acting, a balance between too fearful and too impulsive, and ability to deal with feelings at the age appropriate level, and empathic response to other people's feelings.

Language and Cognitive Development - includes reading awareness, age appropriate reading, writing and numeracy skills, board games, and ability to understand similarities and differences, and to recite back specific pieces of information from memory.

Communication Skills and General Knowledge - includes skills to communicate needs and wants in socially appropriate ways, symbolic use of language, story-telling, and age appropriate knowledge about the life and world around.

## EDI Outcomes

The average EDI scores for each developmental area - Physical Health and Well-Being, Social Competence, Emotional Maturity, Language and Cognitive Development, and Communication Skills and General Knowledge - are divided into categories representing the highest scores to the lowest scores in the community (Figure 3). The cut-off for each group is based on a Canadian wide sample referred to as Normative II (or Norm II).


Figure 3 EDI categories representing scores

## On track (Top)

The total group of children who score in the highest 25 th percentile of the distribution.

## On track (Middle)

The total group of children who score between the 75th and 25th percentiles of the distribution.

## Not on track (At risk)

The total group of children who score between the lowest 10th and 25 th percentiles of the distribution.

## Not on track (Vulnerable)

The total group of children who score below the lowest 10th percentile of the distribution.

## PROCESS OVERVEW

The Northwest Territories (NWT) has collected data annually from the EDI at a territorial level since 2012. In 2012 and 2013, the data were reported on in comparison to both the Canadian Normative II and the yearly NWT cohort. Due to the small population size of the NWT, it was recommended that the territory should collect three years of data before compiling a territorial baseline dataset. The current report describes the composition of the NWT Baseline dataset, with demographic statistics and comparative analyses between the three years.

The NWT Baseline is meant to give both a territorial comparative reference as well as territorial context to the EDI data. This allows school boards, schools, communities, and neighbourhoods to examine their EDI results in comparison to the rest of their territory. All eight school divisions participated in the EDI collection from 2012 to 2014.Table 1 provides a breakdown of the number of children per school board per year that participated in the EDI collection.

Table 1
Breakdown of the Number of Children per District Education Authority per Year

| School Division | Year |  |  | Total |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 | 2013 | 2014 |  |
| Beaufort-Delta | 105 | 123 | 116 | 344 |
| Sahtu | 48 | 43 | 42 | 133 |
| Tlicho | 52 | 75 | 65 | 192 |
| Dehcho | 37 | 37 | 42 | 116 |
| South Slave | 121 | 103 | 93 | 317 |
| Commission scolaire francophone TNO | 23 | 17 | 21 | 61 |
| Yellowknife Catholic Schools | 113 | 89 | 113 | 315 |
| Yellowknife Education District No 1 | 173 | 172 | 162 | 507 |
| Total | 672 | 659 | 654 | 1985 |

## Number of Children in Analyses

Figure 4 provides an illustration of the flow of EDI questionnaires from when they are received to the final valid number of questionnaires used for analysis.


Figure 4 The flow of EDI questionnaires leading to the final valid number used

1. Total EDIs completed
2. Questionnaires for children in class more than 1 month
3. Questionnaires for children in class for less than 1 month or otherwise excluded
a. in class <1 month
b. moved out of class
c. moved out of school
d. other
e. Registered non-attender
f. JK class assignment or missing class assignment
4. Questionnaires for children with no Special Needs (SN)
5. Questionnaires for children missing or indicated as $S N$
6. Questionnaires missing SN assignation
7. SN questionnaires missing data for more than 1 domain
8. Questionnaires valid for analyses in reports for children with Special Needs
9. Non SN questionnaires missing data for more than 1 domain
10. Questionnaires valid for analyses in reports for children without Special Needs

## Demographic Comparisons

Comparisons across the three years for a variety of demographic variables were conducted to determine if there were differences in the compositions of the three data sets. Comparisons of demographic variables were performed using contingency table analyses (using chi-squares) and analysis of variance (ANOVA). Only the children that were in class for more than one month, had a kindergarten class assignment, and met the criteria for a valid questionnaire were used in these analyses. All of the comparisons (with the exception of the special needs comparison) were conducted with children who did not have a special needs assignation.

The first demographic comparison was between genders (Table 2). There were no significant differences between the three years in the percentages of girls and boys ( $p=.707$ ).

Table 2
Demographic Comparison - Gender

|  | 2012 |  | 2013 |  | 2014 |  | Total |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Girls | Count | $\%$ | Count | $\%$ | Count | $\%$ | Count | $\%$ |
| Boys | 269 | $48 \%$ | 289 | $50 \%$ | 298 | $51 \%$ | 856 | $50 \%$ |
| Total | 559 | $52 \%$ | 289 | $50 \%$ | 291 | $49 \%$ | 869 | $50 \%$ |

The percentage of children with English/French as a second language was examined across the three years (Table 3). There was a significant relationship between the years and E/FSL status ( $p=.010$ ).

Table 3
Demographic Comparison - English/French as a First Language

|  | 2012 |  | 2013 |  | 2014 |  | Total |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Count | $\%$ | Count | $\%$ | Count | $\%$ | Count | $\%$ |
| Non E/FSL status | 538 | $96 \%$ | 533 | $92 \%$ | 555 | $94 \%$ | $\mathbf{1 6 2 6}$ | $\mathbf{9 4 \%}$ |
| E/FSL status | 20 | $4 \%$ | 45 | $8 \%$ | 34 | $6 \%$ | 99 | $\mathbf{6 \%}$ |
| Total | $\mathbf{5 5 8}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{5 7 8}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{5 8 9}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{1 7 2 5}$ | $\mathbf{1 0 0 \%}$ |

Special needs status is another variable that was analysed to determine if there was a relationship between special needs and year (Table 4). The results revealed that that were no significant differences in the proportions of children with special needs across the three implementation years ( $p=.202$ ).

Table 4
Demographic Comparison - Special Needs

|  | 2012 |  | 2013 |  | 2014 |  | Total |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Count | $\%$ | Count | $\%$ | Count | $\%$ | Count | $\%$ |
| No SN status | 558 | $96 \%$ | 578 | $95 \%$ | 589 | $97 \%$ | 1725 | $96 \%$ |
| SN status | 21 | $4 \%$ | 28 | $5 \%$ | 16 | $3 \%$ | 65 | $4 \%$ |
| Total | 579 | $100 \%$ | 606 | $100 \%$ | 605 | $100 \%$ | 1790 | $100 \%$ |

The mean age of children at time of EDI completion was compared across the three years using a oneway ANOVA. There was a significant difference in age between the three cohorts ( $p=.004$ ), with the children from 2012 being significantly older than the 2013 children ( $p=.010$ ) and the 2014 children ( $p=.015$ ). Due to the age differences between the three years, the dates of completion were examined. The dates of completion in 2012 ranged from February 17th to April 23rd, in 2013 the dates of completion ranged from February 4th to April 12th, and in 2014 the dates of completion ranged from February 5th to March 31st. This demonstrates that the EDI was completed almost a month later in 2012 than in 2014, and helps to explain the age differences between the three years (Table 5).

Table 5
Demographic Comparison - Age

| Year | Count | Mean age | Std. <br> Deviation | Minimum | Maximum |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2012 | 557 | 5.75 | 0.33 | 5.14 | 7.22 |
| 2013 | 577 | 5.69 | 0.31 | 5.11 | 6.99 |
| 2014 | 589 | 5.7 | 0.3 | 5.15 | 6.94 |
| Total | $\mathbf{1 7 2 3}$ | $\mathbf{5 . 7 1}$ | $\mathbf{0 . 3 1}$ | $\mathbf{5 . 1 1}$ | $\mathbf{7 . 2 2}$ |

The proportion of children who attended French Immersion was also compared across the three implementations (Table 6). There were no significant differences in the percentages of children who attended French Immersion across the three years ( $p=.102$ ).

Table 6
Demographic Comparison - Children who Attended French Immersion

|  | 2012 |  | $\mathbf{2 0 1 3}$ |  | $\mathbf{2 0 1 4}$ | Total |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Did not attend French <br> Immersion | 446 | $81 \%$ | 494 | $85 \%$ | 481 | $82 \%$ | $\mathbf{1 4 2 1}$ | $\mathbf{8 3 \%}$ |
| Attended French <br> Immersion | 104 | $19 \%$ | 84 | $15 \%$ | 108 | $18 \%$ | $\mathbf{2 9 6}$ | $\mathbf{1 7 \%}$ |
| Total | $\mathbf{5 5 0}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{5 7 8}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{5 8 9}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{1 7 1 7}$ | $\mathbf{1 0 0 \%}$ |

There was a significant relationship between the percentage of children who were repeating a grade and year $(p=.006)$, with the lowest percentage of children repeating a grade in 2013 (Table 7).

Table 7
Demographic Comparison - Children who Repeated a Grade

|  | $\mathbf{2 0 1 2}$ |  | $\mathbf{2 0 1 3}$ |  | $\mathbf{2 0 1 4}$ |  | Total |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Did not repeat a grade | 537 | $97 \%$ | 568 | $98 \%$ | 559 | $95 \%$ | $\mathbf{1 6 6 4}$ | $\mathbf{9 7 \%}$ |
| Repeated a grade | 18 | $3 \%$ | 10 | $2 \%$ | 30 | $5 \%$ | $\mathbf{5 8}$ | $\mathbf{3 \%}$ |
| Total | $\mathbf{5 5 5}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{5 7 8}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{5 8 9}$ | $\mathbf{1 0 0 \%}$ | $\mathbf{1 7 2 2}$ | $\mathbf{1 0 0 \%}$ |

## Regional Comparisons

This section provides a comparative summary of the Yellowknife, the regional centres (Inuvik, Fort Smith, and Hay River), and the remaining small communities ( 28 communities). Tables 8-11 contain descriptive information comparing these groups for the combined years of 2012, 2013, and 2014.

Table 8
Regional Comparison - Completed, Special Needs, Status and Valid

|  | Yellowknife N | Regional Centres N | Small Communities <br> N |
| :---: | :---: | :---: | :---: |
| Completed EDIs |  |  |  |
| Total completed EDIs | 822 | 447 | 716 |
| Special Needs |  |  |  |
| Children with Special Needs | 19 | 21 | 45 |
| Status |  |  |  |
| In class more than 1 month | 793 | 403 | 625 |
| In class less than 1 month | 3 | 4 | 33 |
| Moved class | 8 | 1 | 4 |
| Moved schools | 12 | 26 | 28 |
| Other | 3 | 2 | 13 |
| Registered Non-attender | 3 | 11 | 13 |
| Valid for analyses (In class more than 1 month \& Non-Special needs and K class assignment) |  |  |  |
| Valid for analyses | 769 | 384 | 572 |

Table 9
Regional Comparison - Gender

|  | Yellowknife | Regional Centres | Small Communities |
| :--- | :---: | :---: | :---: |
|  | $\mathbf{N}$ | $\mathbf{N}$ | $\mathbf{N}$ |
| Girl | 381 | 196 | 279 |
| Boy | 388 | 188 | 293 |

Table 10
Regional Comparison - English/French

|  | Yellowknife | Regional Centres | Small Communities |
| :--- | :---: | :---: | :---: |
|  | $\mathbf{N}$ | $\mathbf{N}$ | $\mathbf{N}$ |
| E/FSL | 71 | 17 | 11 |
| French Immersion | 235 | 60 | 1 |

Table 11
Regional Comparison - Age

|  | Yellowknife | Regional Centres | Small Communities |
| :--- | :---: | :---: | :---: |
| Mean Age | 5.68 | 5.74 | 5.74 |

## Mean Domain Scores

Table 12 displays the average domain scores for each of the cohorts. The domain scores were compared using a multivariate ANOVA, controlling for age. There were significant differences between the years for all five domains: Physical Health \& Well-Being ( $p=.032$ ), Social Competence ( $p=.005$ ), Emotional Maturity ( $p=.001$ ), Language \& Cognitive Development ( $p<.001$ ), and Communication Skills \& General Knowledge ( $p<.001$ ).

Table 12
Mean Domain Scores

|  | 2012 |  |  | 2013 |  |  | 2014 |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | SD | Count | Mean | SD | Count | Mean | SD | Count | Mean | SD | Count |
| Physical Health \& Well-Being | 8.43 | 1.5 | 555 | 8.24 | 2 | 577 | 8.16 | 1.8 | 583 | 8.27 | 1.7 | 1715 |
| Social Competence | 8.23 | 1.8 | 555 | 8.1 | 2 | 577 | 7.85 | 2.1 | 583 | 8.06 | 2.0 | 1715 |
| Emotional Maturity | 7.83 | 1.7 | 555 | 7.74 | 2 | 577 | 7.44 | 1.8 | 583 | 7.67 | 1.8 | 1715 |
| Language \& Cognitive Development | 8.31 | 2.0 | 555 | 7.74 | 2 | 577 | 7.62 | 2.3 | 583 | 7.88 | 2.2 | 1715 |
| Communication Skills \& General Knowledge | 7.65 | 2.7 | 555 | 7.25 | 3 | 577 | 6.99 | 3.0 | 583 | 7.29 | 2.8 | 1715 |

Post Hoc analyses revealed that many of the significant differences in the mean domain scores are between the 2012 and 2014 cohorts. In the Physical Health \& Well-Being domain, the 2012 cohort had significantly higher domain scores than the 2014 cohort ( $p=.020$ ). There were no other significant differences between the three cohorts in this domain. Similarly, the only difference between years in the Social Competence domain was between 2012 and 2014, with the 2012 cohort having significantly higher scores ( $p=.003$ ). In the Emotional Maturity domain, the 2012 cohort again had higher scores than the 2014 cohort ( $p=.001$ ), but the 2013 cohort also had significantly higher scores than the 2014 cohort ( $p=.010$ ). The 2012 cohort had significantly higher Language and Cognitive Development domain scores than both 2013 ( $p<.001$ ) and 2014 ( $p<.001$ ). Lastly, similar to Language and Cognitive Development domain, the 2012 cohort had significantly higher Communication Skills and General Knowledge domain scores than both the 2013 cohort ( $p=.044$ ) and the 2014 cohort ( $p<.001$ ).

## NWT Baseline Cut-Points

The tables below present information about the baseline (Table 13), as well as the Norm II percentile cut-points (Table 14). They comprise information about the number of children who are in the baseline, the mean domain scores and standard deviation as well as the minimum and maximum scores. The percentile columns are the cut-points. The 10th percentile column contains the cut-points which are the NWT cut-points used to determine vulnerability rates. The 25 th percentile column contains the cutpoints which are used to determine children who are at risk. The Norm II cut-points are also included to provide a comparison.

Table 13
Baseline Descriptive Statistics

|  | Count |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Valid | Missing | Mean | SD | Min | Max |
|  | 1725 | 0 | 8.265 | 1.7330 | 0 | 10 |
|  <br> Well-Being | 1725 | 0 | 8.045 | 1.9972 | 0 | 10 |
| Social Competence | 1720 | 5 | 7.665 | 1.7519 | 0.5 | 10 |
| Emotional Maturity | 1720 | 5 | 7.878 | 2.2118 | 0 | 10 |
| Language \& Cognitive <br> Development <br>  <br> General Knowledge | 1725 | 0 | 7.275 | 2.8422 | 0 | 10 |

Table 14
Baseline Cut-Points

|  | NWT Percentiles |  |  |  | Norm II Percentiles |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{1 0}$ | $\mathbf{2 5}$ | $\mathbf{5 0}$ | $\mathbf{7 5}$ | $\mathbf{1 0}$ | $\mathbf{2 5}$ | $\mathbf{5 0}$ | $\mathbf{7 5}$ |
| Physical Health \& Well-Being | 5.7692 | 7.3077 | 8.8462 | 9.6154 | 7.0833 | 8.0769 | 9.2308 | 10.0000 |
| Social Competence | 5.0000 | 6.9231 | 8.6538 | 9.6154 | 5.5769 | 7.3077 | 9.0000 | 9.8077 |
| Emotional Maturity | 5.1667 | 6.6667 | 8.1034 | 8.9914 | 6.0000 | 7.1667 | 8.3333 | 9.1667 |
| Language \& Cognitive <br> Development | 4.6154 | 6.5385 | 8.8462 | 9.6154 | 5.7692 | 7.6923 | 9.2000 | 9.6154 |
|  <br> General Knowledge | 3.1250 | 5.0000 | 8.1250 | 10.0000 | 4.3750 | 5.6250 | 8.7500 | 10.0000 |

## 2012-2014 RESULTS

## EDI Domain Scores

The EDI was completed for 769 non-special needs Kindergarten children in Yellowknife, 384 children in the Regional Centres, and 572 children in the small communities. Table 15 illustrates the domain scores for the three groups. Figure 5 depicts these group domain means in comparison to the Norm II domain scores.

Table 15
Comparison of Domain Scores

|  | Yellowknife | Regional Centres | Small <br> Communities |
| :--- | :---: | :---: | :---: |
| Physical Health \& Well-Being | 8.57 | 8.59 | 7.63 |
| Social Competence | 8.42 | 8.38 | 7.32 |
| Emotional Maturity | 7.9 | 7.84 | 7.23 |
| Language \& Cognitive Development | 8.19 | 8.41 | 7.09 |
| Communication Skills \& General Knowledge | 7.61 | 7.83 | 6.45 |



Figure 5 Comparison of EDI domain means

## Vulnerable Children

"Vulnerable" describes the children who score low (below the 10th percentile cut-off of the comparison population) on any of the five domains. Table 16 illustrates the percentage of who fell below the 10th percentile cut-off based on the Normative II cut-offs, as well as children that are vulnerable on at least one or on at least two domains. These are compared to the percentages for the Normative II Cohorts.

Table 16
Percentage of Vulnerable Children

|  | Yellowknife | Regional <br> Centres | Small <br> Communities |
| :--- | :---: | :---: | :---: |
| Physical Health \& Well-Being | Norm II | Norm II | Norm II |
| Social Competence | $14.82 \%$ | $16.93 \%$ | $35.14 \%$ |
| Emotional Maturity | $8.32 \%$ | $10.16 \%$ | $22.90 \%$ |
| Language \& Cognitive Development | $11.18 \%$ | $15.10 \%$ | $25.35 \%$ |
| Communication Skills \& General Knowledge | $12.48 \%$ | $11.46 \%$ | $27.62 \%$ |
| Low on 1 or more domains | $13.00 \%$ | $15.10 \%$ | $29.02 \%$ |
| Low on 2 or more domains | $29.26 \%$ | $32.81 \%$ | $53.50 \%$ |



Figure 6 Percentage of vulnerable children

## EDI Subdomains

Each of the five domains is divided into sub-domains, except for Communication Skills and General Knowledge. Scores for domains and sub-domains on the EDI vary from 0 to 10 . Some sub-domains represent skills that a child in kindergarten, based on his or her developmental age, is expected to have mastered already (e.g., physical independence). Other subdomains represent areas of development that are still emerging (e.g., prosocial behaviour). There are a total of 16 subdomains, and the percentages of children in each subdomain category by group are presented in Tables 17-21. These percentages are compared to the Norm II.

Table 17
Subdomains - Physical Health and Well-Being

|  | Yellowknife | Regional Centres | Small Communities | Norm II |
| :---: | :---: | :---: | :---: | :---: |
| Physical readiness for school day |  |  |  |  |
| Meeting all or almost all of the developmental expectations | 94.50\% | 91.10\% | 74.70\% | 96.30\% |
| Some of the developmental expectations | N/A | N/A | N/A | N/A |
| Meeting few or none of the developmental expectations | 5.50\% | 8.90\% | 25.30\% | 3.40\% |
| Physical independence |  |  |  |  |
| Meeting all or almost all of the developmental expectations | 85.70\% | 84.40\% | 77.30\% | 90.10\% |
| Some of the developmental expectations | N/A | N/A | N/A | N/A |
| Meeting few or none of the developmental expectations | 14.30\% | 15.60\% | 22.60\% | 9.60\% |
| Gross and fine motor skills |  |  |  |  |
| Meeting all or almost all of the developmental expectations | 57.00\% | 62.20\% | 44.90\% | 53.70\% |
| Some of the developmental expectations | 17.30\% | 15.40\% | 21.90\% | 21.70\% |
| Meeting few or none of the developmental expectations | 25.70\% | 22.40\% | 33.00\% | 24.40\% |

Table 18
Subdomains - Social Competence

|  | Yellowknife | Regional Centres | Small Communities | Norm II |
| :---: | :---: | :---: | :---: | :---: |
| Overall social competence |  |  |  |  |
| Meeting all or almost all of the developmental expectations | 47.90\% | 56.50\% | 37.10\% | 48.20\% |
| Some of the developmental expectations | 44.00\% | 34.60\% | 44.80\% | 42.90\% |
| Meeting few or none of the developmental expectations | 8.10\% | 8.90\% | 18.20\% | 8.80\% |
| Responsibility and respect |  |  |  |  |
| Meeting all or almost all of the developmental expectations | 78.50\% | 76.60\% | 59.40\% | 78.60\% |
| Some of the developmental expectations | 16.30\% | 17.20\% | 25.50\% | 16.50\% |
| Meeting few or none of the developmental expectations | 5.20\% | 6.30\% | 15.00\% | 4.80\% |
| Approaches to learning |  |  |  |  |
| Meeting all or almost all of the developmental expectations | 64.60\% | 61.70\% | 42.70\% | 62.50\% |
| Some of the developmental expectations | 27.60\% | 30.50\% | 35.30\% | 29.20\% |
| Meeting few or none of the developmental expectations | 7.80\% | 7.80\% | 21.90\% | 8.10\% |
| Readiness to explore new things |  |  |  |  |
| Meeting all or almost all of the developmental expectations | 84.10\% | 87.20\% | 71.00\% | 77.40\% |
| Some of the developmental expectations | 14.00\% | 12.00\% | 24.30\% | 19.20\% |
| Meeting few or none of the developmental expectations | 1.80\% | 0.80\% | 4.40\% | 3.00\% |

Table 19
Subdomains - Emotional Maturity

|  | Yellowknife | Regional <br> Centres | Small <br> Communities | Norm II |
| :--- | :--- | :---: | :---: | :---: |
| Prosocial and helping behaviour |  |  |  |  |
| Meeting all or almost all of the <br> developmental expectations <br> Some of the developmental <br> expectations | $28.20 \%$ | $32.00 \%$ | $30.80 \%$ | $31.90 \%$ |
| Meeting few or none of the <br> developmental expectations | $33.60 \%$ | $40.40 \%$ | $26.00 \%$ | $30.10 \%$ |
| Anxious and fearful behaviour | $38.00 \%$ | $24.70 \%$ | $41.40 \%$ | $30.40 \%$ |
| Meeting all or almost all of the <br> developmental expectations | $89.90 \%$ | $82.60 \%$ | $73.60 \%$ | $87.20 \%$ |
| Some of the developmental <br> expectations | $7.20 \%$ | $12.20 \%$ | $19.20 \%$ | $10.40 \%$ |
| Meeting few or none of the <br> developmental expectations | $3.00 \%$ | $5.20 \%$ | $6.10 \%$ | $2.30 \%$ |
| Aggressive behaviour | $82.80 \%$ | $79.40 \%$ | $69.90 \%$ | $84.40 \%$ |
| Meeting all or almost all of the <br> developmental expectations <br> Some of the developmental | $8.30 \%$ | $8.10 \%$ | $11.70 \%$ | $7.70 \%$ |
| expectations <br> Meeting few or none of the <br> developmental expectations | $8.80 \%$ | $12.50 \%$ | $18.00 \%$ | $7.60 \%$ |
| Hyperactivity and inattention | $75.60 \%$ | $68.00 \%$ | $55.10 \%$ | $72.30 \%$ |
| Meeting all or almost all of the <br> developmental expectations <br> Some of the developmental <br> expectations | $11.70 \%$ | $14.30 \%$ | $16.40 \%$ | $14.70 \%$ |
| Meeting few or none of the <br> developmental expectations | $12.70 \%$ | $17.70 \%$ | $28.10 \%$ | $12.80 \%$ |

Table 20
Subdomains - Language and Cognitive Development

|  | Yellowknife | Regional <br> Centres | Small <br> Communities | Norm II |
| :--- | :---: | :---: | :---: | :---: |
| Basic literacy |  |  |  |  |
| Meeting all or almost all of the <br> developmental expectations <br> Some of the developmental <br> expectations | $57.90 \%$ | $73.20 \%$ | $47.60 \%$ | $70.30 \%$ |
| Meeting few or none of the <br> developmental expectations | $25.60 \%$ | $15.40 \%$ | $19.80 \%$ | $18.80 \%$ |
| Interest in literacy / numeracy and memory | $16.50 \%$ | $11.50 \%$ | $32.20 \%$ | $10.60 \%$ |
| Meeting all or almost all of the | $79.20 \%$ | $78.90 \%$ | $61.00 \%$ | $73.30 \%$ |
| developmental expectations | $11.10 \%$ | $10.40 \%$ | $13.10 \%$ | $10.50 \%$ |
| Some of the developmental <br> expectations | $9.80 \%$ | $10.70 \%$ | $25.00 \%$ | $14.60 \%$ |
| Meeting few or none of the <br> developmental expectations | $70.40 \%$ | $75.30 \%$ | $51.60 \%$ | $69.70 \%$ |
| Advanced literacy | $11.30 \%$ | $9.40 \%$ | $9.80 \%$ | $10.90 \%$ |
| Meeting all or almost all of the <br> developmental expectations | $18.10 \%$ | $15.40 \%$ | $38.30 \%$ | $17.00 \%$ |
| Some of the developmental <br> expectations | $63.80 \%$ | $60.90 \%$ | $47.60 \%$ | $79.20 \%$ |
| Meeting few or none of the <br> developmental expectations <br> Basic numeracy | $14.40 \%$ | $14.10 \%$ | $12.20 \%$ | $7.70 \%$ |
| Meeting all or almost all of the <br> developmental expectations <br> Some of the developmental <br> expectations | $21.20 \%$ | $25.00 \%$ | $39.20 \%$ | $12.50 \%$ |
| Meeting few or none of the <br> developmental expectations |  |  |  |  |

Table 21
Subdomains - Communication Skills and General Knowledge

|  | Yellowknife | Regional <br> Centres | Small <br> Communities | Norm II |
| :--- | :---: | :---: | :---: | :---: |
| Communication Skills and General Knowledge |  |  |  |  |
| Meeting all or almost all of the | $45.00 \%$ | $50.50 \%$ | $33.40 \%$ | $45.60 \%$ |
| developmental expectations | $25.00 \%$ | $23.20 \%$ | $21.50 \%$ | $24.60 \%$ |
| Some of the developmental <br> expectations | $30.00 \%$ | $26.30 \%$ | $44.90 \%$ | $29.70 \%$ |
| Meeting few or none of the <br> developmental expectations |  |  |  |  |

A "challenge" ability range was identified within each sub-domain, based on the range of scores. For each sub-domain, zero ( 0 ), equivalent to a child having no ability in all items within the sub-domain, was the lower boundary. The "challenge" cut-off boundary (i.e., the one below which a child would be classified as having the challenge) was based on a mix of poor and average scores.

Analysis of the distribution of the number of challenges in one or more sub-domain indicated that having scores below the challenge ability in 9 or more pointed to serious problems in multiple domains. Three of the 5 domains have 4 sub-domains, one has 3 , and the last one has 1 . Therefore experiencing challenges in 9 sub-domains means that they are from at least 3 of the major five developmental domains.

The Multiple Challenge Index $(\mathrm{MCl})$ is therefore an indicator of a child experiencing challenges in at least three EDI domains (Table 22).

Table 22
Percentage of Children with Multiple Challenges

|  | Yellowknife | Regional <br> Centres | Small <br> Communities | Norm II |
| :--- | :---: | :---: | :---: | :---: |
| Multiple challenges | $4.20 \%$ | $5.70 \%$ | $16.30 \%$ | $3.80 \%$ |

## SENSE OF IDENTITY QUESTIONNAIRE

The Sense of Identity Questionnaire (SIQ) is a unique measure constructed specifically for the kindergarten population in Northwest Territories. This new questionnaire was developed to be used in conjunction with the territory-wide implementation of the EDI. The SIQ adds useful and informative context within which the EDI results can be interpreted. Together, the EDI and SIQ will help to measure children's developmental health and contribute to evidence-based decision making across the Government of the Northwest Territories (GNWT).

Following completion of the EDI, the SIQ asks kindergarten teachers to answer eighteen questions which describe each child's sense of identity as a relationships with and/or connections to:

1. A sense of community and/or family;
2. A sense of place (The land, local community and/or the North); and
3. A sense of belonging.

Currently, the SIQ is still a relatively new initiative and requires further analysis in order to understand its full potential. Data that have been gathered from across the NWT will continue to be examined by experts at the Offord Center for Child Studies in collaboration with the Department of Education, Culture and Employment (ECE). However, preliminary findings suggest much can be learned from linking children's sense of identify with information on their development health. For instance, preliminary findings of the SIQ suggest that:

- Children with higher EDI scores tend to demonstrate a greater sense of identity;
- Children who are not vulnerable on the EDI tend to demonstrate a greater sense of identity;
- Older children tend to demonstrate a greater sense of identity than younger children;
- Girls tend to demonstrate a slightly greater sense of identity than boys; and
- Children with Aboriginal status tend to demonstrate a greater sense of community and/or family.

