

A Meta-Perspective on the Evaluation of Full-Day Kindergarten during the First Two Years of Implementation

An integrative, evaluation report that was informed by:

The Social Program Evaluation Group – Queen’s University

*Final Report: Evaluation of the Implementation of the Ontario Full-Day Early Learning Kindergarten Program, Fall 2012;*¹

The Offord Centre for Child Studies – McMaster University

*The Full Day Kindergarten Early Learning Program Final Report, October 2012;*² and

The Ministry of Education, Government of Ontario

October 2013



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- ¹ The integrative report includes information primarily from Section 1 – Case Study Findings contained in the report from the Social Program Evaluation Group at Queen’s University. Section 2 – Quantitative Findings are not included here as they were limited to the first year of the evaluation. Since the time of the final report provided by Queen’s, year 2 data has been made available through participating school boards and has been analyzed by the Ministry of Education. The report from Queen’s University was intended to inform government and is not intended to reflect the direction of the government. It is released as a companion document to accompany the integrative report.
 - ² The Offord Centre for Child Studies at McMaster University provided leadership to data collection processes for the Early Development Instrument (EDI) and provided associated data sets to the Ministry of Education for the 2010–11 and 2011–12 collections of the EDI. The report provided by McMaster offers a detailed account of the findings across grades for populations of children. The Ministry of Education was responsible for data analyses associated with the longitudinal results. The report submitted by McMaster University was intended to inform government and does not reflect the direction of the government. It is released as a companion document to accompany the integrative report.

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Introduction

In 2009, Dr. Charles Pascal released his report as the Special Advisor to the Premier on Early Learning, *With Our Best Future in Mind: Implementing Early Learning in Ontario*. The report makes recommendations to move Ontario closer to an integrated, seamless early years system. Based on the advice presented in the report, the government introduced full-day kindergarten for Ontario's four- and five-year olds beginning in September 2010. A primary goal for the introduction of full-day kindergarten was to impact 2009 developmental assessments that indicated that "27 per cent of children in Ontario (and a similar percentage across Canada) are vulnerable when they enter grade 1 – they have learning, health, and behaviour problems that are likely to interfere with their academic achievement and ability to get along with others".³

The program is designed to give children a strong start in school and in life by helping them to develop valuable skills that give them every opportunity to succeed at school. Full-day kindergarten is being phased in over a five-year period, with full implementation in September 2014. In September 2013, approximately 184,000 four- and five-year-olds (i.e., 75% of all kindergarten children) are enrolled in full-day kindergarten programs across Ontario. At full implementation, it is estimated that 265,000 children will be enrolled in full-day kindergarten.

Full-day kindergarten is unique. In full-day kindergarten classrooms, certified teachers and registered early childhood educators work together in educator teams to deliver a full day of inquiry, play-based learning guided by the principles set out in *The Full-Day Early Learning – Kindergarten Program (Draft Version, 2010–11)*. Full-day kindergarten also involves integrated before- and after-school programs (where there is parental demand) delivered in schools by school boards or licensed child care providers. Before- and after-school programs are intended to be a support for working parents and to parents interested in returning to the workforce and/or the pursuit of further study. There is no other jurisdiction in Canada that provides such programming for four- and five-year-olds.

The vision of full-day kindergarten has been informed by a body of evidence that demonstrates that children's early experiences have profound and long-lasting influences on their development and on the kind of learner they become.⁴

3 Pascal, C. (2009). *With Our Best Future in Mind*. p. 58.
See <http://www.oeyc.ca/pdf%20files/Charles%20Pascal%20Report.pdf>

4 Center on the Developing Child at Harvard University (2009). *In Brief: The Science of Early Childhood Development*.
See http://developingchild.harvard.edu/index.php/resources/briefs/inbrief_series/inbrief_the_science_of_ecd/

Full-day kindergarten milestones at a glance

Full-day kindergarten for all four- and five-year-olds in Ontario is being phased in over a five-year period, 2010–2014.

- **September 2010:** 35,000 four- and five-year-olds participate in the program – approximately 15% of Ontario’s total kindergarten population.
- **September 2011:** 50,000 four- and five-year-olds – approximately 20% of Ontario’s total kindergarten population.
- **September 2012:** 122,000 four- and five-year-olds – approximately 49% of Ontario’s total kindergarten population.
- **September 2013:** 184,000 four- and five-year-olds – approximately 75% of Ontario’s total kindergarten population.
- **September 2014:** Full-day kindergarten is fully implemented and available to all of Ontario’s four- and five-year-olds attending publicly-funded schools. At full implementation, it is estimated that 265,000 children will be enrolled.

The Evaluation of Full-Day Kindergarten

The implementation of full-day kindergarten (FDK) in 2010 was accompanied by the launch of a two-year (2010–11; 2011–12) evaluation strategy focused on two objectives:

1. To identify early indicators of effective practices related to the impact of full-day kindergarten; and,
2. To inform program delivery moving forward through to full implementation.

The evaluation was conducted through a collaborative partnership that included The Social Program Evaluation Group at Queen’s University,⁵ The Offord Centre for Child Studies at McMaster University,⁶ and the Ministry of Education. The findings contained in the current integrative report include those reported by the Social Program Evaluation Group at Queen’s University in their report entitled *Final Report: Evaluation of the Implementation of the Ontario Full-Day Early Learning Kindergarten Program, Fall 2012*, findings included in *The Full Day Kindergarten Early Learning Program Final Report, October 2012* provided by The Offord Centre for Child Studies at McMaster University, and information available through the Ministry of Education. The reports from the external members of the evaluation team are available at <http://www.edu.gov.on.ca/childcare/theresearchisin.html> as companion pieces to this document.

5 Value of agreement with Queen’s University – \$231,435

6 Value of agreement with McMaster University – \$259,280

Method

The Ministry of Education secured the participation of 125⁷ schools from 18 school boards for the evaluation. Of these 125 schools, 42 schools began offering full-day kindergarten in 2010-11 (2 Year FDK group); 41 schools began offering full-day kindergarten in 2011-12 (1 Year FDK group); and 42 schools did not offer full-day kindergarten during the two-year evaluation period (0 Year FDK group – traditional kindergarten group – control). The control group was matched with the 2 Year FDK group based on school board, geographical proximity, socio-economic indicators, and school size. From these 125 schools, 16 case studies were selected. A complete listing of participating school boards and schools is found in Appendix A, Tables 1 and 2. A description of the school selection process is provided in the final report from The Offord Centre for Child Studies, page 4.

Measures

The following measures were used across the 125 participating schools.

Measure	Purpose
Early Development Instrument (EDI)*	The EDI measures the following developmental domains: physical, social-emotional, cognition, and language development. The EDI also includes a measure of communication skills and general knowledge. Teacher ratings of students with informed consent were collected over two school years. Funding was provided to school boards for teacher release time to complete the EDI.
Information available through the Ontario Student Information System (OnSIS)	Linkages between OnSIS variables (e.g., FDK and non-FDK, special needs/special education needs designation) and the EDI were established. This provided the Ministry of Education with a full-day kindergarten cohort, beginning with students in the first year of implementation.

* Note that the EDI has been in use in Ontario for the past decade and is used in pan-Canadian and international reporting; it is a UNESCO-reviewed and UNICEF-recommended measure of development for children entering Grade 1 (see <http://unesdoc.unesco.org/images/0021/002157/215729e.pdf> and http://www.unicef.ca/sites/default/files/imce_uploads/DISCOVER/OUR%20WORK/ADVOCACY/DOMESTIC/POLICY%20ADVOCACY/DOCS/unicef_report_card_11.pdf, for UNESCO and UNICEF, respectively).

⁷ The final number of participating schools is 125, one less than was reported in *The Full Day Kindergarten Early Learning Program Final Report*, October 2012.

Qualitative data was secured using the methods described below for the 16 case studies.

Method	Purpose
Classroom activity with children	Children with informed consent participated in a classroom activity geared to elicit student perspectives on kindergarten and its role in their lives.
Interviews with teachers, early childhood educators, and principals	In Year 1, semi-structured interviews were used to elicit the perspective of educators and administrators on the impact of FDK. Note that these interviews occurred on a voluntary participation basis and only at case study sites. In Year 2, this information was secured through site visits and through online survey methods.
Focus groups with parents	Parent volunteers provided their perspectives on the impact of FDK in focus group format.
Telephone interviews with community education partners	Community education partners (e.g., child care providers, public health agencies, children service agencies) volunteered their perspectives on FDK through semi-structured telephone interviews. Community education partners were identified at the local school level.

Data Yield

All data was collected using informed consent. Data for the Early Development Instrument (EDI) was collected in the spring of Junior Kindergarten (Spring 2011) and again in the spring of Senior Kindergarten (Spring 2012).

The first year of data collection for the EDI yielded the participation of 4008 children (JK = 2424;⁸ SK = 1584). In year two, data from 4570 children were collected (JK = 2237; SK = 2333).

Of the preceding participants, longitudinal data for the EDI (i.e., data points from both JK and SK) were available for 690⁹ children: 257 children who were in full-day kindergarten for both JK and SK; 223 children who were in a traditional kindergarten program in JK and in full-day kindergarten in SK; and 210 children who were not in a full-day kindergarten program in either JK or SK.^{10,11} Only those children with valid data (as defined and provided by The Offord Centre for Child Studies) were included in the longitudinal analyses. The gender distribution for the longitudinal participants was comparative, with 52% girls and

8 In *The Full Day Kindergarten Early Learning Program Final Report, October 2012*, 2423 JK students are reported. Note that the Ministry worked with school boards and the Education Statistics and Analysis Branch to validate the data from the reports, which may result in slight variations between the reports and the present document.

9 Longitudinal sample sizes for the Abecedarian Project and the High/Scope Perry Preschool Study were N = 104 and N = 123, respectively.

10 Some of the 2333 SK students may have been new to schools participating in the FDK evaluation; some may have provided informed consent in JK but not SK; both possibilities result in non-inclusion in the longitudinal sample. Only those students with informed consent (for both JK and SK) and whose EDI data were identified as valid were included in the analysis.

11 36 children who changed schools and moved to a school participating in the FDK evaluation continued their participation in the study. Children in the 2 Years FDK group must have attended an FDK school in both years of kindergarten; children in the 1 Year FDK group must have attended an FDK school in SK; and children in the 0 Years FDK group must have attended a non-FDK school in both years of kindergarten.

48% boys; chi-square analysis revealed no significant differences between the distribution of girls and boys across the three kindergarten groups (FDK for 2 Years; FDK for 1 Year; FDK for 0 Years). The average age of participants was 4.94 (SD = 0.28) in JK and 5.8 (0.29) in SK; there were no age differences across the three kindergarten groups for either JK or SK.

This longitudinal cohort of children includes children with special needs/special education needs (4.0%), children who have self-identified as belonging to one of Ontario's First Nations, Métis, and Inuit communities (0.8%), and children whose first language is not English or French (23.8%). The three kindergarten groups (FDK for 2 Years; FDK for 1 Year; FDK for 0 Years) did not differ in the proportion of children with special needs/special education needs. For children whose first language is neither English nor French, the 1 Year FDK group had a significantly higher proportion of children identified as low on at least one EDI domains as compared to the other two kindergarten groups.¹²

Information sources from the 16 case studies included:

- interviews with 35 school administrators
- interviews with 91 educators
- surveys from 42 educators (year 1 only)
- online surveys from 125 educators (year 2 only)
- review of 500+ classroom documents
- visits to 48 kindergarten classrooms
- 60 classroom observations (note that two visits were conducted for classrooms that transitioned from non-FDK in year 1 to FDK in year 2)
- responses from 300+ kindergarten children
- review of more than 1000 photos
- interviews with 80 parents
- interviews with 19 community partners

¹² Comparative analyses could not be conducted for the distribution of Ontario's First Nations, Métis, and Inuit communities due to low cell counts.

Results and Interpretations

Objective 1: To identify early indicators of effective practices related to the impact of full-day kindergarten.

Findings from the Early Development Instrument (EDI)¹³

Based on the EDI scores provided in the dataset analyzed by The Offord Centre for Child Studies at McMaster University, each child with valid EDI data was classified as vulnerable (scoring at or below the 10th percentile) or not (scoring above the 10th percentile) on each of the EDI domains: Physical Health and Well-Being; Social Competence; Emotional Maturity; Language and Cognitive Development; and Communication Skills and General Knowledge. Children were also classified as being vulnerable (i.e., with scores at or below the 10th percentile) on at least 1 or more EDI domains and on at least 2 or more EDI domains.

The frequency with which children were identified as scoring in the 10th percentile was counted for the JK and SK years. The percent difference between JK and SK was calculated, along with the percent change for each of the three groups (2 Years FDK, 1 Year FDK – in SK, and 0 Years FDK). All quantitative analyses were conducted using IBM SPSS v. 21.

This report documents the first findings generated from the prospective cohort study of full-day kindergarten. The Ministry of Education will continue to evaluate the impact of full-day kindergarten as these three cohorts of children (i.e., 2 Years FDK; 1 Year FDK; 0 Years FDK) move forward in their educational experiences in publicly-funded schools. The information that is provided is descriptive and intended to highlight patterns observed in the data – for full-day kindergarten students, for children entering full-day kindergarten, and for those children who were not enrolled in FDK. Readers are reminded that full-day kindergarten was first available in schools where there were significant challenges. The longitudinal analyses includes children who entered FDK in 2010-11 when approximately 35,000 children began kindergarten in FDK classrooms – 15% of all children eligible to attend kindergarten in Ontario.

¹³ The companion document entitled *The Full Day Kindergarten Early Learning Program Final Report, October 2012* provides a comprehensive overview of findings generated from cross-sectional analyses of data from the EDI. The findings will not be repeated here. Interested readers are referred to the companion document. Cross-sectional analyses examine data based on a point in time. In the case of full-day kindergarten, cross-sectional analysis included children in their JK year (in one of three groups – 2 Years FDK; 1 Year FDK; and 0 Years FDK) and children in their SK year in one of the three groups, and comparisons were made between the groups. Groups within year were compared to one another. The results from longitudinal analyses that are presented in this document reflect the recommended approach documented in *The Full Day Kindergarten Early Learning Program Final Report, October 2012*, p. 87.

The summary of the longitudinal analysis (n = 690) is presented below:

Percentage of Children Identified as Vulnerable on EDI Domains

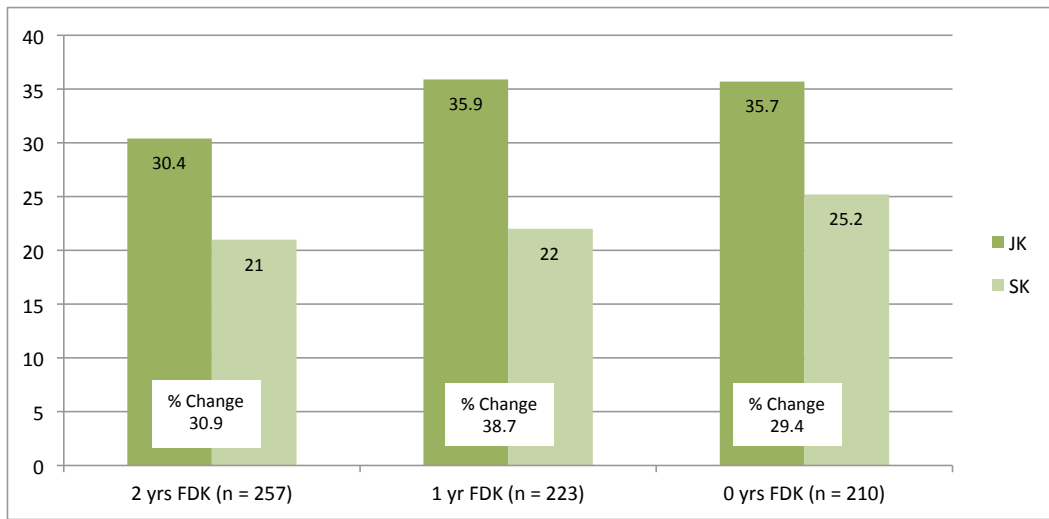
EDI Domain	2 Years FDK (n = 257)				*1 Year FDK (n = 223)				0 Years FDK (n = 210)			
	JK	SK	% Difference	% Change (JK-SK)	JK	SK	% Difference	% Change (JK-SK)	JK	SK	% Difference	% Change (JK-SK)
Physical Health and Well-Being	19.9	9.8	10.1	50.8	20.2	12.1	8.1	40.1	16.7	14.8	1.9	11.4
Social Competence	9.3	5.8	3.5	37.6	11.7	6.7	5.0	42.7	12.9	10.5	2.4	18.6
Emotional Maturity	14.4	11	3.4	23.6	13	7.2	5.8	44.6	14.8	10.6	4.2	28.4
Language and Cognitive Development	4.3	4.3	0.0	0.0	15.7	4	11.7	74.5	15.8	7.1	8.7	55.1
Communication Skills and General Knowledge	8.9	5.8	3.1	34.8	17.5	7.6	9.9	56.6	13.3	10.5	2.8	21.1
Low on 1+ domain	30.4	21	9.4	30.9	35.9	22	13.9	38.7	35.7	25.2	10.5	29.4
Low on 2+ domain	12.8	8.6	4.2	32.8	18.8	9.4	9.4	50.0	18.6	13.3	5.3	28.5

Notes:

1. N = 690; percent reported is "Valid Percent" reported using SPSS
2. A child is considered vulnerable if their scores place them at or below the 10th percentile
3. A child is low in a domain if their scores place them at or below the 10th percentile
4. *FDK in SK
5. Children in the 2 Year FDK group had benefited from JK in the fall and winter terms at the time of measurement
6. % change = ((% difference between JK and SK)/% in JK) × 100
7. Final analyses have resulted in slight variations from the preliminary release due to coding irregularities. The average variation in preliminary vs final numbers is 0.5%; SD = 0.46 (range = 0.01 to 1.0). Any variance from the release of preliminary numbers did not result in changes to the results.

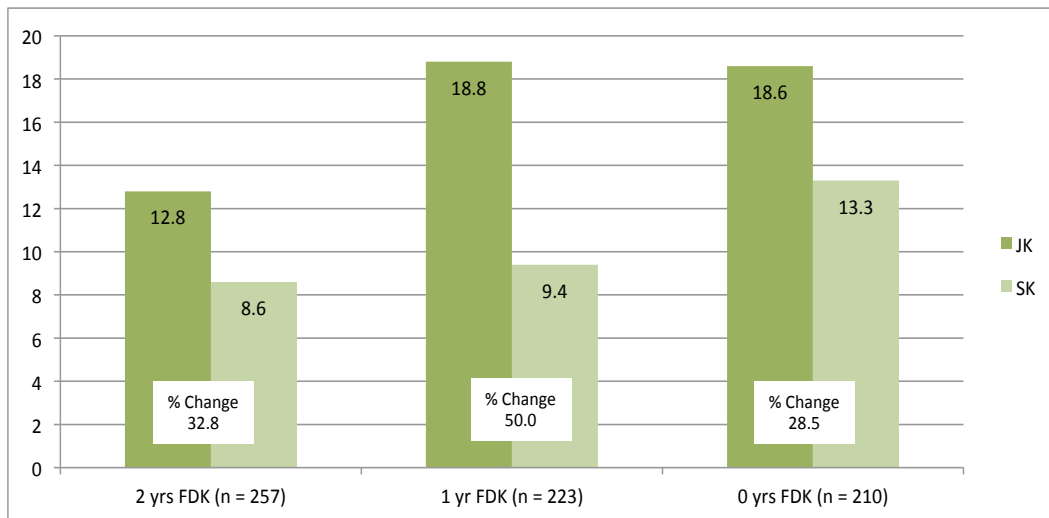
Full-Day Kindergarten: Reducing Vulnerability in Ontario’s Students

% Vulnerable – Low on at Least 1 EDI Domain



Full-Day Kindergarten: Reducing Vulnerability for Ontario’s Most Vulnerable

% Vulnerable – Low on at Least 2 or More EDI Domains



Readers who prefer to view the findings in figure format are encouraged to see Figures 1–5 in Appendix B.

The results suggest that there are early indicators of effective practices as measured by the Early Developmental Instrument (EDI) in a longitudinal sample. Children who attended full-day kindergarten for two years demonstrated the least vulnerability across the 3 groups; this trend was evident across all developmental domains. Compared to 2009 risk estimates of 27% presented in *With Our Best Future in Mind*, of children who had attended 2 years of full-day kindergarten 21% were identified as vulnerable entering Grade 1. This evidence suggests that full-day kindergarten, and the effective practices within it, is having a positive impact on reducing risk for children in Ontario.

For Ontario's most vulnerable students (i.e., those children with scores falling at the 10th percentile or lower in two or more domains) improved development is pronounced with transitioning from non-FDK in JK to FDK in SK. Compared to a change of 28.5% for children who had no involvement with full-day kindergarten, the 1 Year FDK group showed a 50% change, a difference of 21.5% – a 75% advantage over non-FDK students.¹⁴

Observed Vulnerability by Language of Instruction

Patterns evident in the combined longitudinal sample of children in English- and French-language schools remain salient when separate analyses are conducted by language of instruction. Students in the 2 Year FDK group always demonstrated less vulnerability, regardless of language, than was the case in either the 1 Year FDK group or the 0 FDK group.

Analysis of the longitudinal data (n = 690), divided by language of instruction, is presented below.

¹⁴ The change was 28.5% and 50% for the non-FDK and 1 Year FDK groups, respectively. The difference = 21.5%. To quantify the impact, the % difference (21.5%) divided by the starting point (28.5%) = 75%.

Percentage of Children Identified as Vulnerable on EDI Domains by Language of Instruction

English Language

EDI Domain	2 Years FDK (n = 161 JK and 119 SK)				*1 Year FDK (n = 168 JK and 166 SK)				0 Years FDK (n = 84 JK and 77 SK)			
	JK	SK	% Difference	% Change (JK-SK)	JK	SK	% Difference	% Change (JK-SK)	JK	SK	% Difference	% Change (JK-SK)
Physical Health and Well-Being	25.5	15.1	10.4	40.8	22.6	10.2	12.4	54.9	25.0	18.2	6.8	27.2
Social Competence	12.4	10.1	2.3	18.5	12.5	7.8	4.7	37.6	19.0	10.4	8.6	45.3
Emotional Maturity	17.4	12.6	4.8	27.6	14.9	9.0	5.9	39.6	14.3	7.8	6.5	45.5
Language and Cognitive Development	5.0	5.0	0.0	0.0	14.9	3.6	11.3	75.8	16.7	5.2	11.5	68.9
Communication Skills and General Knowledge	10.6	7.6	3.0	28.3	19.6	7.8	11.8	60.2	11.9	5.2	6.7	56.3
Low on 1+ domain	36.0	27.7	8.3	23.1	37.5	20.5	17.0	45.3	36.9	22.1	14.8	40.1
Low on 2+ domain	16.1	10.9	5.2	32.3	20.2	9.6	10.6	52.5	22.6	13.0	9.6	42.5

French Language

EDI Domain	2 Years FDK (n = 96)				*1 Year FDK (n = 55)				0 Years FDK (n = 126)			
	JK	SK	% Difference	% Change (JK-SK)	JK	SK	% Difference	% Change (JK-SK)	JK	SK	% Difference	% Change (JK-SK)
Physical Health and Well-Being	10.5	4.2	6.3	60.0	12.7	18.2	-5.5	43.3	11.1	11.9	-0.8	7.2
Social Competence	4.2	2.1	2.1	50.0	9.1	3.6	5.5	60.4	8.7	10.3	-1.6	18.4
Emotional Maturity	9.4	5.3	4.1	43.6	7.3	0.0	7.3	100.0	15.2	12.2	3.0	19.7
Language and Cognitive Development	3.2	5.2	-2.0	62.5	18.2	5.5	12.7	69.8	15.2	8.7	6.5	42.8
Communication Skills and General Knowledge	6.3	5.2	1.1	17.5	10.9	7.3	3.6	33.0	14.3	14.3	0.0	0.0
Low on 1+ domain	20.8	13.5	7.3	35.1	30.9	25.5	5.4	17.5	34.9	27.0	7.9	22.6
Low on 2+ domain	7.3	5.2	2.1	28.8	14.5	9.1	5.4	37.2	15.9	13.5	2.4	15.1

Notes:

- French-language schools have offered a full-day of learning in kindergarten since 2000. The implementation of FDK in French-language schools is associated with the implementation of *The Full-Day Early Learning – Kindergarten Program (Draft Version, 2010–11)* as well as the educator teams of certified teachers and registered early childhood educators
- A child is considered vulnerable if their scores place them at or below the 10th percentile
- A child is low in a domain if their scores place them at or below the 10th percentile
- Children in the 2 Years FDK group had benefited from JK in the fall and winter terms at the time of measurement
- *FDK in SK
- Group sizes vary between JK and SK for English-language schools. 42, 2, and 7 children studied in a language other than English or French (i.e., French Immersion) or the language of instruction could not be confirmed at the time of release for 2, 1, and 0 Years FDK groups, respectively
- $\% \text{ change} = ((\% \text{ difference between JK and SK}) / \% \text{ in JK}) \times 100$

This finding provides some initial insight into the roles of the inquiry, play-based program, along with the staffing model of certified teacher and registered early childhood educator (ECE) in the impact of FDK. French-language school boards have implemented a full day of learning in kindergarten since 2000. As such, in French-language school boards, the evaluation of FDK centres on the impact of program transformation, along with adding the expertise of both learning and development professions to kindergarten classrooms, rather than the increase in the instructional/school day. While the examination of the staffing model and the evaluation of the program document were not primary goals of the evaluation, with length of school day being equal, more favourable outcomes were noted for children in FDK versus non-FDK groups, regardless of instructional language.

The approach to data collection and analysis applied to the evaluation of full-day kindergarten highlights the important role for longitudinal monitoring. Cross-sectional reporting (i.e., how children in one year compare to a different group of children in another year) may not account for program outcomes, which, in turn, may lead to the under-valuing of promising approaches. As was evident in the evaluation of full-day kindergarten, a pattern of learning and development emerged when real change in real children was examined over time. In contrast, cross-sectional analysis (as outlined in *The Full Day Kindergarten Early Learning Program Final Report, October 2012*), while promising, did not allow for consideration of individual patterns over time. It is noteworthy that another longitudinal study in the province is showing findings that are consistent with the results reported here, with full-day kindergarten children demonstrating stronger language and number skills than their non-FDK counterparts (Pelletier, 2012).¹⁵

Findings from the Case Studies

The case study component of the evaluation was completed by The Social Program Evaluation Group at Queen's University. Consistent with the *Final Report: Evaluation of the Implementation of the Ontario Full-Day Early Learning Kindergarten Program, Fall 2012*, information gleaned from the case studies is organized around key themes, including Educator Teams, Professional Development, Play-based Learning, Assessment and Evaluation, Physical Environment, Emotional Climate, Family Partnerships, Community Partnerships, and Student Progress and Self-Regulation. For the purposes of the integrative report, each theme is taken in turn.

Educator Teams

The effectiveness of the educator team was identified as essential in providing an optimal FDK learning environment; yet the findings suggest that full-day kindergarten educator teams were not fully leveraging the collective expertise of two professions (i.e., certified teachers and registered ECEs during the evaluation period). A unique feature of full-day kindergarten is the bringing together of specialists in learning (i.e., teachers) with specialists in development (i.e., early childhood educators), with the legislated “duty to cooperate” in planning and providing the full-day kindergarten program; observing, monitoring and

¹⁵ Pelletier, J. (2012). Key Findings from Year 2 of Full-Day Early Learning Kindergarten in Peel. (See http://www.oise.utoronto.ca/atkinson/UserFiles/File/Publications/Peel_Year_2_FDELK_Report.pdf.)

assessing the development of children; communicating with families; maintaining a healthy physical, emotional, and social learning environment; and performing all duties assigned to the educator team by the principal.¹⁶

While some educators and administrators are working collaboratively on defining their roles and responsibilities within the school environment, others commented that further defining roles/responsibilities is required to have children receive greater benefit from full-day kindergarten. Parents echoed concern that the climate within educator teams may influence children's experiences within the classroom. These concerns are not borne out in the longitudinal evidence where children in full-day kindergarten demonstrated favourable child outcomes in classrooms in which there were educator teams. It is important to remember that certified teachers and registered early childhood educators are both professionally trained positions in Ontario that are regulated by professional colleges, specifically, the Ontario College of Teachers, and the College of Early Childhood Educators.¹⁷ Regardless of the implementation of full-day kindergarten and the professional transition required, the evidence suggests that professional educators are providing Ontario's youngest students with a program designed to meet their learning and development needs.

Professional Development

Professional development activities were recognized as important to the implementation and continued development of full-day kindergarten. Many Ministry of Education professional learning opportunities were provided throughout implementation of FDK for both English and French school boards, beginning in 2009 prior to implementation and modified each year based on learning from the previous year. Funding was provided to release school board staff to attend provincial, regional, and local sessions, to plan at the school level, and to benefit from visiting other full-day kindergarten programs. For example, in implementation years 1 and 2, summer institutes were available to Early Years Leadership Teams (up to four members per board) that included teachers, early childhood educators, and school administrators. Ministry data indicates that 90% of eligible boards benefited from this professional development opportunity. Yet information gleaned from case study educator teams indicated that just over 50% of the educators had attended professional development activities related to the implementation of full-day kindergarten – most often it was the teacher who had attended. For a complete description of professional development opportunities provided by the Ministry during the evaluation period (2010–11; 2011–12), along with related attendance records, please see Appendix C.

The *Full-Day Early Learning – Kindergarten Program (Draft Version, 2010–11)* was recognized by educator teams as an invaluable source for professional learning with respect to full-day kindergarten.¹⁸ In addition, Ministry-supported professional learning communities organized within school boards provided important opportunities for FDK educators and Grade 1 teachers to communicate and learn from one another. This observation is consistent with other Ministry of Education initiatives designed to increase linkages between kindergarten

16 See http://www.e-laws.gov.on.ca/html/source/statutes/english/2010/elaws_src_s10010_e.htm.

17 See the Ontario College of Teachers (<http://www.oct.ca>) and the College of Early Childhood Educators (<http://www.college-ece.ca>) for professional standards.

18 See http://www.edu.gov.on.ca/eng/curriculum/elementary/kindergarten_english_june3.pdf

and primary approaches (K–2), specifically the Early Primary Collaborative Inquiry (EPCI) Projects led by the Literacy and Numeracy Secretariat (LNS).¹⁹ Early childhood educators and teachers who work collaboratively on pedagogical inquiry have noted benefits similar to those associated with FDK professional learning communities.

In addition to the preceding professional development activities, FDK teachers also recognized the efforts of teacher federations in the province to support the advancement of knowledge and day-to-day practice for FDK teachers and their ECE partners.

Play-based Learning

There was strong evidence that many FDK educator teams are moving towards inquiry, play-based learning as envisioned in *The Full-Day Early Learning – Kindergarten Program (Draft Version, 2010–11)*. Educators, administrators, and parents are beginning to understand the role of inquiry-based learning for children.

The evidence also suggests that there is considerable variation in the implementation of *The Full-Day Early Learning – Kindergarten Program (Draft Version, 2010–11)* across the province. This variability is documented in the narratives offered in the companion document to this report, entitled *Final Report: Evaluation of the Implementation of the Ontario Full-Day Early Learning Kindergarten Program, Fall 2012*, pp. 29-43.

While an important place to begin the discussion on program fidelity, the narratives illustrate what was occurring in full-day kindergarten classrooms across the province during the first two years of implementation. A major focus of the narratives is what educators were doing rather than what children were learning – an understanding of program fidelity needs to begin with the program. Moreover, the description of program fidelity is offered as an end-state – where it is possible to accomplish full fidelity – rather than a fluid state where high fidelity programs are likely to have many manifestations and representations reflecting the diversity of the regions and communities in which they are offered.

The evidence is clear that the Ministry of Education must be vigilant in deepening the knowledge of administrators, educators, parents, and the broader community of the role of inquiry, play-based learning to support the development of 21st-century learners in Ontario. This remains an essential undertaking of the Ministry of Education.

Assessment and Evaluation

A sizeable body of evidence from the case studies suggests that FDK educators are becoming increasingly more knowledgeable of and creative in their assessment and evaluation of children in their classrooms. In FDK classrooms across the province learning is made visible in the form of photographs, learning portfolios, video formats, and demonstration boards, engaging parents in conversations centred on learning artefacts with their children.

There is much work to be completed in this area. Currently, guidelines specific to the assessment of children relative to the learning objectives of the kindergarten program

¹⁹ See Early Primary Collaborative Inquiry, <http://www.edu.gov.on.ca/eng/literacynumeracy/collaborative.html>

have not been established at a provincial level. That said, educators are finding ways to communicate progress to parents and, as is evident in the longitudinal analysis, this progress is observable and measurable.

Physical Environment

High enrolment in full-day kindergarten programs has been identified as an area of concern for educators, administrators, and parents. In Year 1 of the FDK implementation, school boards were asked to identify sites where limited capital work was required to accommodate the class size average of 26 pupils. The majority of school boards were able to find appropriate space; however, some boards used regular classrooms that were relatively small for a class size average of 26²⁰ (plus one early childhood educator and one teacher). To address this, the Ministry provided the following supports:

- A capital funding allocation based on a formula of \$10 000 per new FDK class to address minor capital and equipping needs
- Capital for retrofits and additions based on school board enrolment projections for the subsequent years of FDK implementation, which contributed to a flexible board allocation for FDK capital use
- Direct ministry support for boards through consultation with Ministry staff regarding class organization options to reduce class size, such as one class of 15 or fewer per school, where no ECE is required
- Direct ministry support to assist in a better understanding of how to use space differently in a play-based program and to consider how the teacher–ECE staffing model might create program opportunities to reduce classroom congestion.

Regardless of space limitations, the evidence suggests that the physical health and well-being of children in full-day kindergarten improves considerably over a two-year period, a finding that is not as pronounced for children in traditional kindergarten programs where space has been described as more adequate. Classroom space alone does not provide a barrier to favourable child outcomes.

Emotional Climate

Several areas related to emotional climate have been addressed in other themes, including issues associated with the educator team, professional development, and classroom space. Regardless of these issues that remain a focus for the Ministry, the children in FDK classrooms are most often described as happy, cooperative, and focused on their learning. These case study observations are supported further by the longitudinal analysis of the EDI data – children in FDK are demonstrating strong development in social competence, in their language and problem-solving skills, as well as their overall knowledge about the world and how it works.

²⁰ Across years 1 and 2 of FDK implementation the average class size was 23.7.

Family Partnerships

As envisioned, full-day kindergarten provides parents with employment and continuing education opportunities that would otherwise have not been possible. These opportunities are advanced when sufficient parental demand for before- and after-school programs is present.²¹ Overwhelmingly, Ontario parents are supportive of full-day kindergarten and the opportunities it presents to their children and to themselves. That said, Ontario parents have high expectations for early learning, which include expectations related to class size, preparation for primary school, as well as safety and security needs.

Community Partnerships

Information gleaned from community partners indicated that many full-day kindergarten schools are becoming hubs that welcome engagement with community leaders and that provide the opportunity to learn about local services. Communities view the implementation of full-day kindergarten as presenting opportunities to examine existing service models and to plan for more integrated service approaches. This finding is in keeping with the vision of full-day kindergarten.

Student Progress and Self-Regulation

Evidence from case study informants suggests that the play-based FDK program “is more responsive to the needs of younger children, supports self-regulation and the development of the whole child by considering the context children live in. Incorporation of children’s languages, cultures, and traditions, inviting community elders into the classroom, having the full day to support children’s familiarity with routines and developmentally appropriate expectations are resulting in positive behaviours and notable progress in children’s development...” (*Final Report: Evaluation of the Implementation of the Ontario Full-Day Early Learning Kindergarten Program, Fall 2012*, p. 52).

The longitudinal findings provide further promise to link full-day kindergarten outcomes empirically to what Shanker refers to as “optimal self-regulation”.²² The longitudinal findings suggest favourable outcomes for full-day kindergarten students in physical health and well-being as well as in cognitive and social development – all associated with Shanker’s 5-domain model for self-regulation. Full-day kindergarten classrooms may well be honing in on the type of learning environment that is required to support the development of self-regulatory mechanisms in young children. Certainly, full-day kindergarten is having a positive impact on the developmental domains associated with self-regulation.

21 Before- and after-school programs were offered in 39% and 52% of FDK schools in 2010–11 and 2011–12, respectively. In 2012–13, 62% of FDK schools offered before- and after-school programs. Schools with FDK are required to offer before- and after-school programs if there is sufficient demand (i.e., requests from the parents of 20 or more children). The Ministry remains vigilant concerning the integration of FDK and before- and after-school programs as addressed in *With Our Best Future in Mind*.

22 Shanker, S. (2013). *Calm, Alert, and Learning* (Toronto: Pearson), pp. xiv-xviii.

Objective 2: To inform program delivery moving forward through to full implementation.

In Full-Day Kindergarten Classrooms

The evaluation of full-day kindergarten during the first two years of implementation provides a preliminary understanding of learning environments that support development. The evaluation informs educators and policy makers that kindergarten in Ontario is enriched by educator teams of teachers and early childhood educators and by inquiry, play-based learning – findings that are evident for children in Ontario’s English- and French-language schools.

Moving Forward: The Ministry needs to foster continued growth in the educator teams in full-day kindergarten programs. FDK brings together the learning expertise of certified teachers and the developmental expertise of registered early childhood educators and there is evidence to suggest that the strengths of these two professions can be leveraged even further to support positive outcomes for children. In partnership with school boards, the Ministry will work towards the continued development of educator teams.

The Ministry must remain committed to knowledge transfer and mobilization with respect to inquiry, play-based learning. There is considerable variation in the implementation of *The Full-Day Early Learning – Kindergarten Program (Draft Version, 2010–11)* and continued professional development that is supported by learning resources is required – for certified teachers, registered early childhood educators, school administrators, and early years leaders within school boards. A list of current resources is available in a companion document entitled *Ministry of Education Early Learning Resources, 2013–14*, available at <http://www.edu.gov.on.ca/childcare/theresearchisin.html>.

Full-Day Kindergarten Monitoring

The evaluation highlighted important considerations for the administration, monitoring, and public accountability mechanisms that are required for effective evaluation. Specifically, longitudinal monitoring of developmental and learning trajectories will deepen our knowledge of early learning and development in relationship to academic achievement and well-being. Conceptually, this approach to program monitoring is intuitive – as learning and development is understood as generating from within children in response to an environment that is both evocative and responsive.

Moving Forward: The Ministry intends to monitor full-day kindergarten by examining learning trajectories as children move from full-day kindergarten to the completion of primary school. This longitudinal examination of progress, centred on the child’s learning, is likely to yield the greatest value with respect to the administration and monitoring of, and the public accountability for, full-day kindergarten in Ontario. It is important to note that longitudinal monitoring cannot focus solely on the impact of full-day kindergarten in the overall academic achievement of Ontario students. If this is the case, the findings are predictable – that sometime in the future, the measureable impact of full-day kindergarten

will fade.²³ Rather, monitoring mechanisms need to consider full-day kindergarten as a foundation for much good work that is yet to come, considering FDK alongside other important student achievement factors, initiatives, and milestones. In Ontario, this building of knowledge might include understanding how the child enters Grade 1 (via their EDI scores); examining the contribution of this foundation to learning and development during primary education (via report cards and EQAO results), exploring the child's preceding academic history through middle school (via report cards and EQAO results) and so on through the secondary panel. Such an approach builds knowledge of how children learn and grow rather than a body of literature focused solely on the long-term impact of 300 instructional minutes for four- and five-year-old children, without consideration of pedagogical approaches (i.e., inquiry, play-based learning) and staffing models (i.e., certified teacher and registered early childhood educators).

It is also noteworthy that the current evaluation does not include examination of economic considerations related to Ontario's investment. Inclusion of economic perspectives is important to future work to link economic value with favourable child outcomes. The economic benefits of early learning investments are well-documented²⁴ and it is important to consider such benefits within the provincial landscape. In addition the evaluation does not consider influences such as the potential impact of family variables, pre-kindergarten experiences (e.g., licensed child care), and accumulated social risk factors. Research and evaluation activities that further extend knowledge about early learning will help to build a knowledge network and empirical legacy for full-day kindergarten in the province of Ontario.

Continued Collaboration

The evaluation of full-day kindergarten has highlighted the integrative and collaborative work that is required to ensure that FDK provides an optimal learning environment that yields positive outcomes for children. This work involves expertise in policy, program implementation, curriculum design, assessment, diversity, and evaluation, as well as knowledge mobilization and transfer – at the Ministry, school board, and local school levels.

Moving Forward: The Ministry remains committed to continued collaboration in developing and sharing knowledge as full-day kindergarten moves through full implementation. This work will include engagement of Ministry divisions (i.e., French Language, Aboriginal Learning and Research; Instruction and Leadership Development; Learning and Curriculum; and Student Achievement) and knowledge area experts as required.

23 Cooper, H, Allen, A., Patall, E., Dent, A. (2010). Effects of full-day kindergarten on academic achievement and social development. *Review of Educational Research*, 80, pp. 34–70.

24 See Heckman, J. (2008) The case for investing in disadvantaged children. In First Focus (Ed.) *Big Ideas for Children: Investing in Our Nations' Future*. In Focus. pp. 49-58 and Alexander, C. and Ignjatovic, D. (2012). Early childhood education has long lasting benefits. *TD Economics Special Report*. Retrieved from http://www.td.com/document/PDF/economics/special/di1112_EarlyChildhoodEducation.pdf.

Conclusions

The evaluation of full-day kindergarten during the first two years of implementation provides preliminary evidence that FDK is having a favourable impact on four- and five-year-olds in Ontario. The government will continue to monitor progress through Ministry of Education mechanisms (e.g., school reports, EQAO).

This report documents where full-day kindergarten began in Ontario – from the experiences of parents, educators, administrators, and community partners to the classroom experiences of children and the associated child outcomes.

Moving through to full implementation in 2014, there are areas for continued emphasis, specifically, continued work with educator teams of teachers and early childhood educators, knowledge transfer and mobilization concerning inquiry, play-based learning, as well as the development of monitoring mechanisms that account for growth and change in learning.

Acknowledgements

The Ministry of Education thanks The Social Program Evaluation Group at Queen's University²⁵ for the expertise they contributed to completing the evaluation of full-day kindergarten during the first two-years of implementation. In addition, the Ministry acknowledges the contributions and expertise of The Offord Centre for Child Studies at McMaster University for their leadership that enabled inclusion of the Early Development Instrument (EDI) in the evaluation of full-day kindergarten. Special thanks go to Drs. Magdalena Janus (McMaster University), Ray DeV. Peters (Queen's University), and Mary Louise Vanderlee (Brock University) for their roles in the completion of this work.

25 Readers of the companion document entitled *Final Report: Evaluation of the Implementation of the Ontario Full-Day Early Learning Kindergarten Program, Fall 2012* will note that there is a series of recommendations provided by the authors. The service agreement with Queen's University did not include recommendations in the deliverables associated with the agreement. The agreement was intended to deliver elements of a program evaluation rather than advice to government. The recommendations will be reviewed by appropriate branches within the Ministry and may be informative to future considerations.

Appendix A – Participating School Boards and Schools

Table 1. Participating School Boards by Region and Number of Schools*

School Board	Ministry of Education Region	Number of Participating Schools
CSD catholique du Centre-Est de l'Ontario	Ottawa	10
CSD catholique Centre-Sud (1)	Toronto	6
CSD catholique des Grandes Rivières (1)	Sudbury/North Bay	3
CSD des écoles catholiques du Sud-Ouest	Toronto	3
CSD des écoles publiques de l'Est de l'Ontario (1)	Ottawa	6
CS Viamonde	Toronto	4
CSD du Nord-Est de l'Ontario	Sudbury/North Bay	3
DSB Ontario North East (1)	Sudbury/North Bay	7
Lambton Kent DSB (1)	London	7
Ottawa Catholic SB (1)	Ottawa	11
Ottawa-Carleton DSB (1)	Ottawa	14
Rainy River DSB (0.5)	Thunder Bay	2
Northwest Catholic DSB (0.5)	Thunder Bay	1
Simcoe County DSB (2)	Barrie	15
Simcoe Muskoka Catholic DSB (1)	Barrie	9
St. Clair Catholic DSB	London	2
Waterloo Catholic DSB (2)	London	9
Waterloo Region DSB (2)	London	13
18 Participating School Boards	6 Regions	125 Schools

Notes:

1. Numbers in parentheses indicate the number of case study sites per school board, summing to 15. One additional case study site from the Toronto District School Board was including, bringing the total number of case study sites to N = 16.
2. Sites in Rainy River DSB and Northwest Catholic DSB combined to contribute to the study of remote regions, with two schools in close proximity to one another, and was considered one case study.
3. The case study for Ottawa-Carleton DSB includes the partnership between Robert E. Wilson and the Inuit Community School and was considered one case study.
4. CS Viamonde was formerly known as CSD du Centre Sud-Ouest.

Participating school boards and schools were chosen with consideration of ongoing research and evaluation activities occurring throughout the province. School board representatives provided final input on school selection based on local needs.

Table 2. Participating Schools by School Board**

School Board	Participating School
CSD catholique du Centre-Est de l'Ontario	Découverte Des Pins Georges-Étienne-Cartier Lamoureux L'Envol Horizon Jeunesse Marius-Barbeau Alain Fortin Saint Geneviève Sainte-Anne
CSD catholique Centre-Sud (1)	Frère-André Cardinal-Léger*** Sainte-Marguerite-Bourgeois Saint-René-Goupil Marguerite-Bourgeois (Borden) Mère-Élisabeth-Bruyère
CSD catholique des Grandes Rivières (1)	Assomption (Earlton)*** Sainte-Croix Louis Rhéaume
CSD des écoles catholiques du Sud-Ouest	Sainte-Catherine Sainte-Jean-de-Brébeuf Saint-Phillippe
CSD des écoles publiques de l'Est de l'Ontario (1)	Des Sentiers l'Équinoxe Séraphin-Marion*** L'Académie de La Seigneurie Marie Curie Rose des Vents
CS Viamonde	Académie de la Moraine Gabrielle-Roy La Fontaine Pierre Elliott Trudeau
CSD du Nord-Est de l'Ontario	Navigateurs Étoile du Nord Lionel Gauthier
DSB Ontario North East (1)	Central Public Cochrane Public School*** Federal Public School Flora Macdonald Iroquois Falls Public Queen Elizabeth Timmins Centennial PS

(continued)

** School names may vary slightly from those identified in *The Full Day Kindergarten Early Learning Program Final Report, October 2012*. In working with field personnel and school boards, the Ministry has attempted to identify schools by their current school name.

School Board	Participating School
Lambton Kent DSB (1)	Landsdowne Mooretown-Courtright PS Rosedale PS Tilbury Area PS*** Queen Elizabeth II PS Victor Lauriston PS Winston Churchill
Ottawa Catholic SB (1)	Blessed Kateri Tekakwitha*** Our Lady of Peace Prince of Peace St Augustine St Bernard St Elizabeth St Elizabeth Ann Seton St Marguerite d'Youville St Michaels – Corkery St Michaels – Fitzroy St Patrick English Catholic
Ottawa-Carleton DSB (1)	Barrhaven Bayshore PS Bell's Corners PS Bridlewood Charles Hulse Connaught PS Dunlop ES Fallingbrook Community ES Jockvale ES Munster ES Queen Mary Robert E Wilson and Inuit Community School*** Robert Hopkins PS W. Erskine Johnston PS
Rainy River DSB (0.5)	North Star Community School*** Robert Moore PS
Northwest Catholic DSB (0.5)	St. Patrick's***
Simcoe County DSB (2)	Admiral Collingwood PS Allandale Heights Angus Morrison ES Ardrea-Cumberland Beach PS Assikinack PS Cookstown PS Hillcrest Lion's Oval*** Mountain View Oakley Park PS*** Orchard Park Portage View PS Prince of Wales Sunnybrae PS Warnica Public

(continued)

School Board	Participating School
Simcoe Muskoka Catholic DSB (1)	Canadian Martyrs*** Holy Cross Monsignor Ronan Pope John Paul II Sacred Heart St Mary's St Monica's St Noel Chabanel St Paul's
St. Clair Catholic DSB	St. Joseph St. Matthew
Waterloo Catholic DSB (2)	Blessed Sacrament*** St Gregory St John St Joseph St Michael St Nicholas*** St Teresa St Vincent de Paul Sir Edgar Bauer
Waterloo Region DSB (2)	AR Kaufman*** Ayr PS Bridgeport PS Cedar Creek PS Chalmers Street PS Forest Hill PS Howard Robertson PS King Edward PS*** Prueter Rockway Stewart Ave Winston Churchill PS Wilson Avenue PS
18 Participating School Boards	

Notes:

1. Toronto District School Board case study site – Queen Victoria PS
2. Numbers in parentheses indicate the number of case study sites per school board; *** indicates case study location
3. CS Viamonde was formerly known as CSD du Centre Sud-Ouest.
4. The school called Horizon Jeunesse was formerly known as Le Petit Prince.

Appendix B – Figures for Longitudinal Analysis of Individual EDI Domains

Figure 1: % Vulnerable in Physical Health and Well-Being

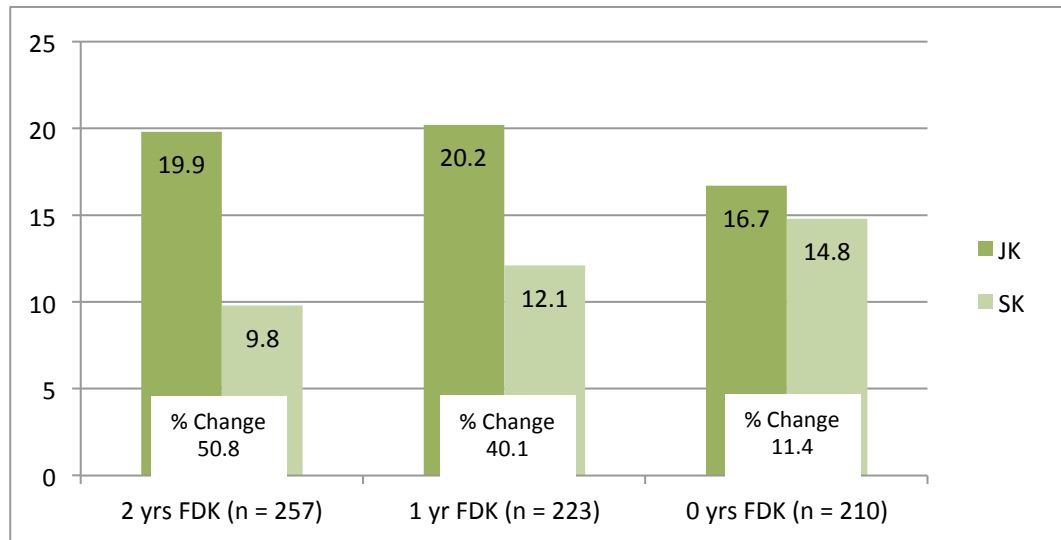


Figure 2: % Vulnerable in Social Competence

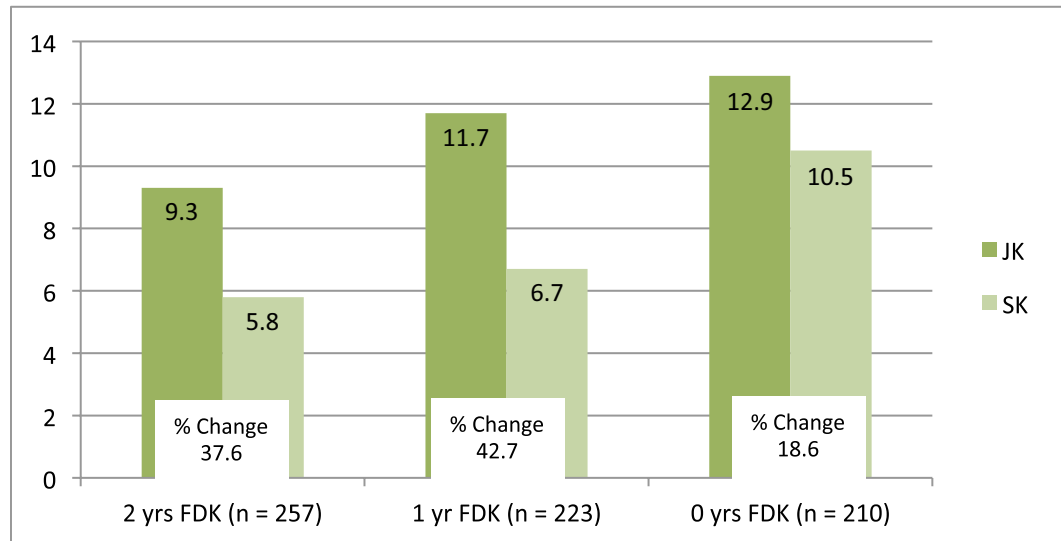


Figure 3: % Vulnerable in Emotional Maturity

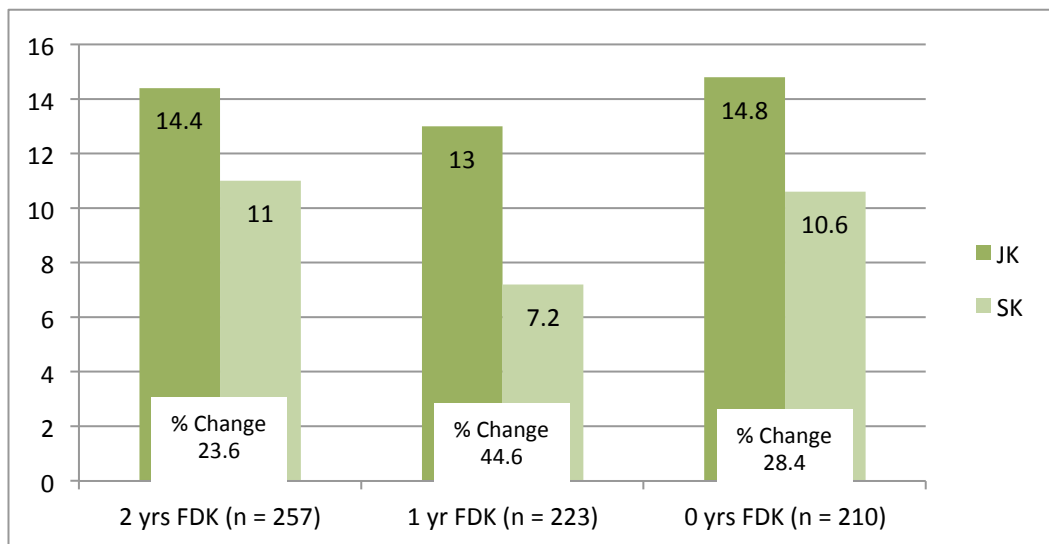


Figure 4: % Vulnerable in Language and Cognitive Development

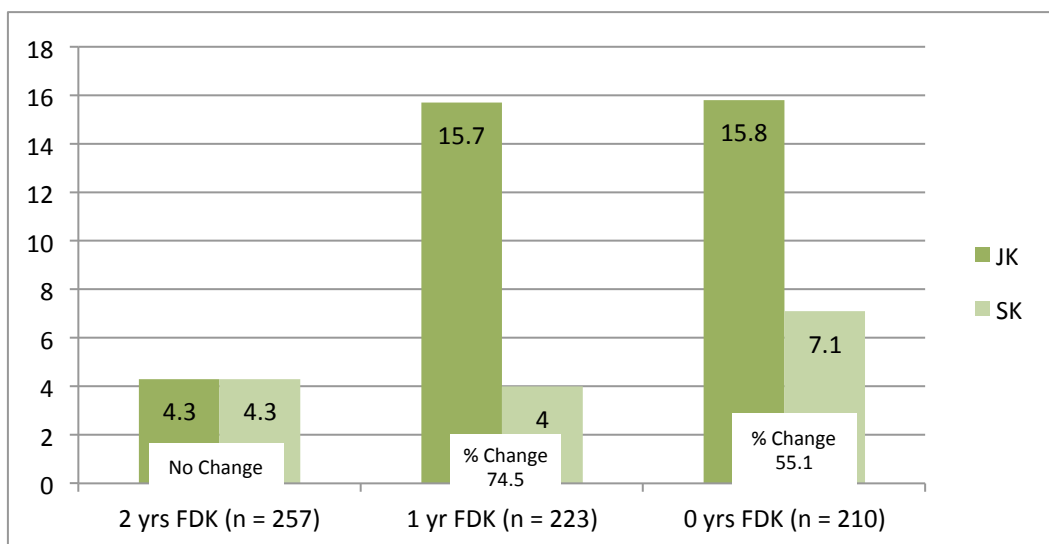
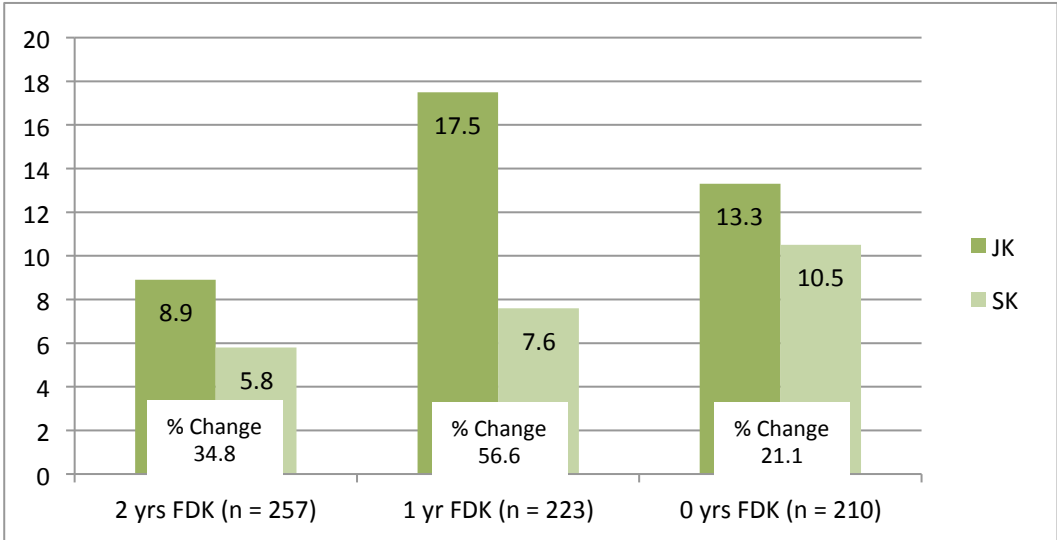


Figure 5: % Vulnerable in Communication Skills and General Knowledge



Appendix C – Ministry of Education Supports During the First Two Years of FDK Implementation

Table 1. Total Attendance in Ministry-led FDK Training by Year

Region	Spring 2011			Spring 2012			Spring 2013	
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2
Ottawa	130	130	130	105	100	100	100	110
Thunder Bay	45	80	80	30	65	65	40	100
Sudbury/North Bay	45	50	50	70	70	70	35	110
Barrie	120	140	140	125	90	90	140	140
London East	140	140	140	135	100	100	105	95
London West	100	140	140	90	85	85	130	100
Toronto	125	245	245	130	85	85	125	125
Total Engagement	705	925	925	685	595	595	575	780

Notes:

1. Day 1 = Principals and Early Years Leads within school boards
2. Day 2 = Early Years teams within school boards and their stakeholders
3. Day 3 = Early Years teams within school boards and their stakeholders