

Key findings from Year 2 of Full-Day Early Learning Kindergarten in Peel



I'm playing with my friends at school (F SK 5 yrs)

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KEY FINDINGS FROM YEAR 2 OF FULL-DAY EARLY LEARNING KINDERGARTEN IN PEEL

REVIEW: PURPOSE OF THE RESEARCH

The research reported here represents key findings from an ongoing longitudinal study in collaboration with the Regional Municipality of Peel, the Peel District School Board and the Dufferin-Peel Catholic District School Board. For four years, the research has been examining the implementation and impact of school-based integrated early childhood services, specifically kindergarten, child care and parenting support in the Peel Best Start program (Region of Peel, 2011). The Best Start study builds on the previous work of our research team in the Toronto First Duty project (e.g., Corter, Janmohamed & Pelletier, 2012; Corter & Pelletier, 2010; Pelletier, 2012a). In 2010, the Peel research expanded to include full-day early learning/kindergarten (FDELK).

The purpose of the FDELK research has been to examine the implementation and impact of FDELK in three areas: 1) kindergarten children, 2) parents of FDELK children, and 3) staff teams of early childhood educators and kindergarten teachers as well as classroom environment. The study is being carried out over time from JK/SK until children are in Grade 3. This report provides an update on Year 2 of FDELK implementation when children were in SK or Grade 1. In March 2012, key findings from Year 1 of FDELK were reported (Pelletier, 2012b) and posted on the Atkinson Centre website at OISE (see link below). Year 1 results showed that FDELK children were ahead of half-day control group children in most areas including: vocabulary, early literacy, number knowledge and parent ratings of their child's readiness. Parent data about use of community services and their feelings of "daily hassles" were collected and analyzed when children were in JK or SK and are not reported here. Parent findings from FDELK can be found in the Year 1 report.

http://www.oise.utoronto.ca/atkinson/UserFiles/File/Publications/Peel_Year_1_FDELK_Summary_Report.pdf

METHODOLOGY

Procedures. In Year 2, key informant interviews were carried out with sixteen individuals across the region of Peel who have a big picture of early childhood services including kindergarten, child care, parenting supports, public health and other areas. Staff data about

the early learning team, early learning environment, and parent involvement were collected using the Indicators of Change tool with focus groups of early childhood educators, kindergarten teachers and in some cases, school principals. Environment observations were carried out again in Year 2 with the Early Childhood Environment Rating Scale. Children's progress in FDELK and control group sites was collected with individual children in a comfortable area close to their classrooms. Each child took part in research tasks with a trained graduate student or postdoctoral researcher who had extensive experience with young children. Children enjoyed their time and were never asked to participate if they were shy or unwilling.

Participants. Of the original FDELK and control group participants (n=367), child participants in Year 2 (n=271), now in SK and Grade 1, included 145 FDELK and 126 control group children (age range 59-88 months), 51% were boys and 57% were English Language Learners. Staff participants at the seven FDELK sites included 32 kindergarten teachers, 28 early childhood educators and four principals/vice-principals who participated in focus groups at their schools and through surveys.

Measures. Measures are described in the following sections for children and for staff and environment.

- 1) Child measures included vocabulary, early reading (alphabet knowledge, conventions of print, meaning), number knowledge, early writing, drawing ("draw yourself doing something here"), and a finger puppet interview (tell about your day, series of questions about what educators do, social problem solving such as what to do when someone won't share).
- 2) Previous Year 1 staff measures included a survey that tapped feelings about the collaborative ECE/kindergarten teacher team and about perceived benefits of the FDELK approach. Results are reported in the Year 1 Key Findings Report (see link above). Again in Year 2 staff participated in a focus group using the Indicators of Change Tool, (developed by Jane Bertrand and the TFD research team, see Pelletier, 2012a). This tool measures the degree to which staff teams and the early learning program function in an integrated way. Classroom environments were observed again in Year 2 using two subscales of the widely used Early Childhood Environment Rating Scale-Revised (Harms, Clifford & Cryer, 2005): 1) Space and Furnishings and 2) Activities.

Coding and analysis. Qualitative and quantitative data were coded by trained Masters and PhD graduate students. Qualitative data from staff and child interviews and child drawings were coded thematically and were also scored for frequency count. Inter-rater reliability of at least 80% was obtained for all data requiring interpretation. Reliability rating of 100% was obtained for the coding of children's drawings. Year 2 data were added to the databases for children and for staff and environment. Maternal education level, child age and time difference between Year 1 and Year 2 data collection were controlled in the analyses. Descriptive analyses were carried out on qualitative data and statistical analyses were carried

out on numerical data using SPSS v.20 data analysis software. The Principal Investigator carried out the quantitative analyses in consultation with an education statistics consultant.

SUMMARY OF RESULTS

1) Children. Repeated Measures Analyses of Co-Variance were carried out separately for JK and SK. Only statistically significant findings or those with moderate effect sizes are reported here. Year 2 results show that:

Vocabulary and Early Reading

Both the younger cohort (JK to SK) and older cohort (SK to Grade 1) children in FDELK remain ahead of control group children in vocabulary as measured by a receptive vocabulary task (see Figure 1). Similarly both JK and SK cohorts remain ahead of control group children in early reading; this finding was stronger for the SK cohort (see Figure 2).

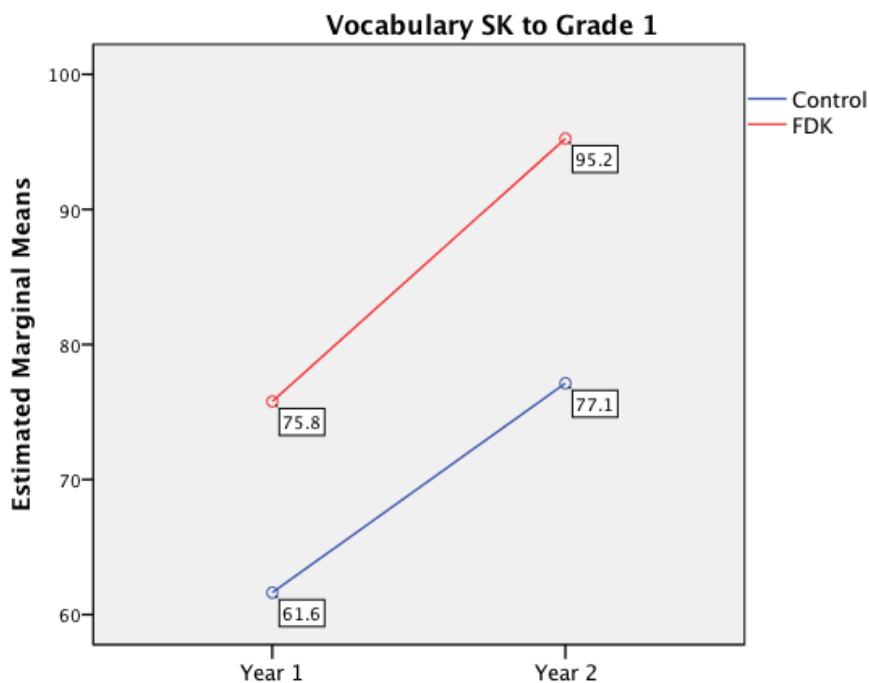


Figure 1. Raw vocabulary scores controlling for maternal education, child age, age difference between Year 1 and Year 2 data collection ($p < .001$).

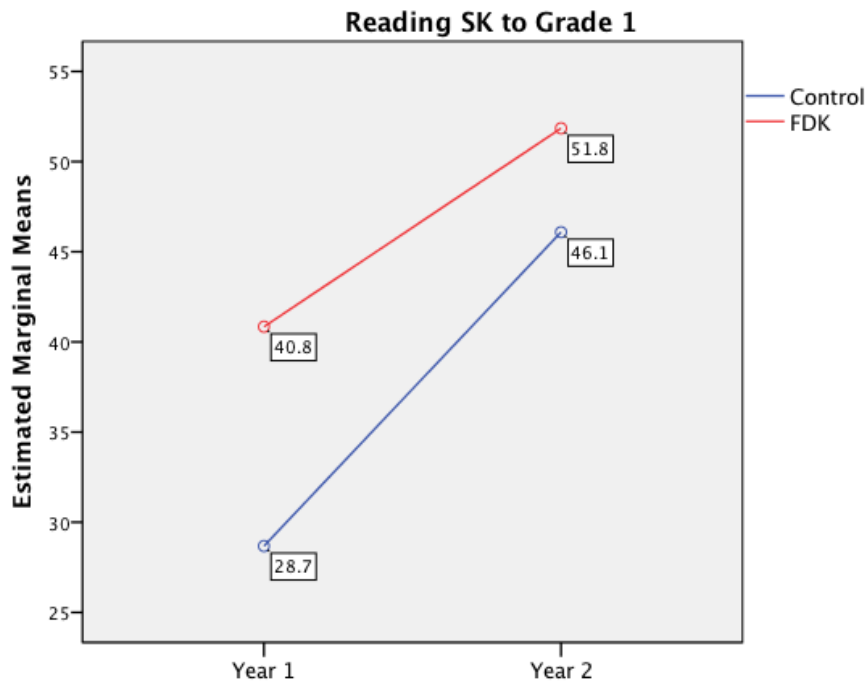


Figure 2. Total reading raw scores, controlling for age, age difference and maternal education ($p < .001$).

Early Writing

The early writing task asked children to write: “Teacher has five little red crayons” (see Figure 3). The SK cohort children in FDELK remained ahead of the control group in early writing although the difference was not statistically significant. The JK cohort control group children remained ahead of FDELK in early writing.



Figure 3. Sample of child’s writing in SK.

Number Knowledge

The number knowledge task asked children to count objects, determine “more/less,” understand which of two numbers was bigger and other similar tasks. In Year 2 the SK cohort children in FDELK remained ahead of control group in number knowledge (see Figure 4).

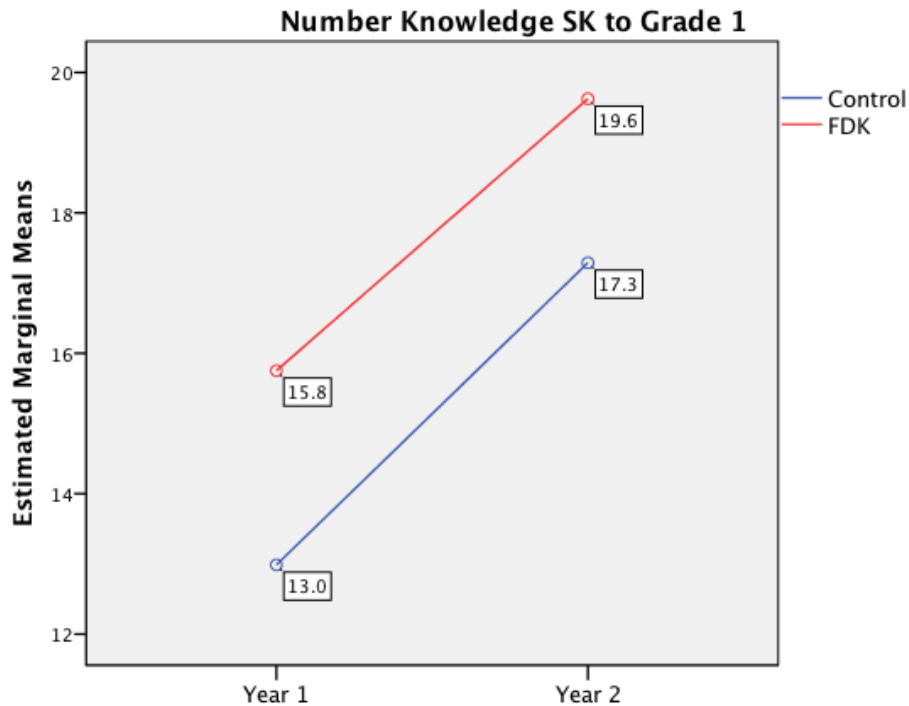


Figure 4. Number knowledge controlling for age, age difference and maternal education ($p < .05$).

Productive Language

To measure spontaneous productive language, children took part in interviews using finger puppets. The first question asked children to report on what happens from the time they get to school until they go home, these were coded as scripts (Fivush, 1984; Pelletier, 1999).

Example of FDELK child script

Playing, reading and writing and a little bit of legos and outdoor play. Then lunch time, then outdoor play again. And then indoor play – there’s lots of play. And there’s colouring, there’s drawing, there’s snack time. There’s play time again and then snack time. And then done.

In comparison to the control group, both younger and older cohorts in FDELK produced longer scripts about school as measured by word count (see Figure 5) in kindergarten and in Grade 1.

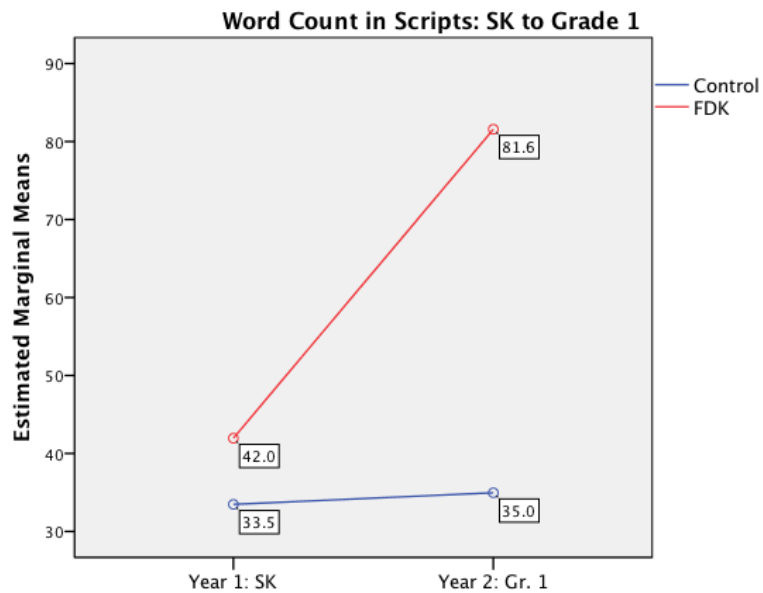


Figure 5. Productive language – word count in children’s scripts controlling for age, age difference between data collection time points from Year 1 to Year 2 and maternal education ($p < .05$).

Interview Themes

During the puppet interviews, children (their puppets) were asked a number of other questions about their experiences at school including what they like best and what is important. Although all children reported that “play” was what they liked best, children in FDELK programs mentioned play specifically and social activities significantly more often than children in the control group. Children in the control group mentioned academic activities more often (for example, reading or writing) (see Figure 6). When asked what is important in kindergarten, 60% of FDELK children reported that socialization was important whereas 34% of control group children mentioned that socialization was important (e.g., it is important to learn to be nice and cooperate).

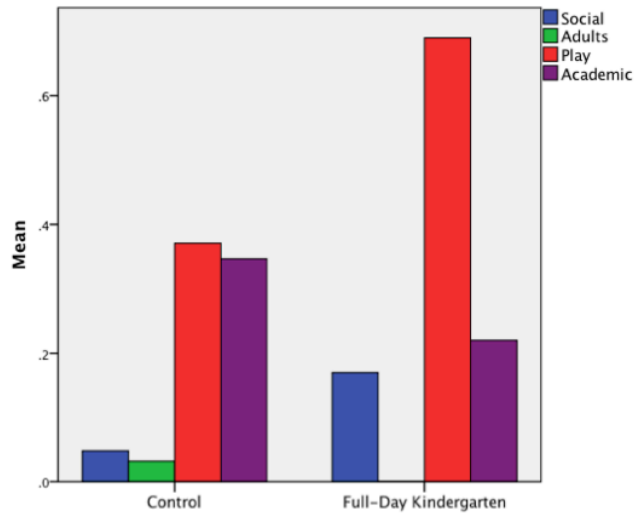


Figure 6. Children's reports of what they like best in kindergarten.

Children's Drawings

In Year 2 children were asked again to draw themselves doing something at school; see Figure 7 for an example of a drawing by a FDELK child who had moved to Grade 1. Children's drawings were compared by the theme of the drawing including: a specific drawing of play and accompanying narrative, a depiction of socialization (e.g., my friend and I), an academic activity (literacy, numeracy, worksheet), or a physical activity (e.g., running outside). A one-way ANOVA (themes x program type) revealed a significant difference between children who were in SK or Grade 1 in Year 2 and those in the control group: FDELK children drew more examples of "play" and mentioned play specifically in their description of their drawing or they mentioned friends in their narrative.



Figure 7. Example of drawing and description ("In my picture, I'm skipping and my friend's watching me. My skipping rope is a rainbow one").

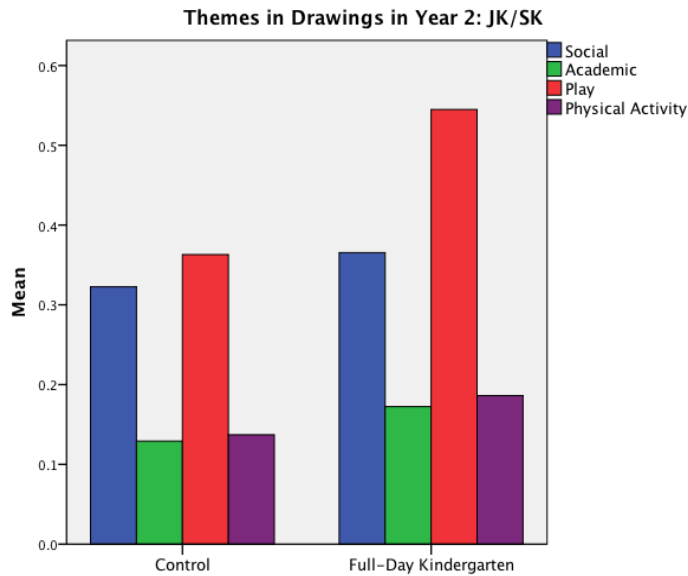


Figure 8. Themes in children’s drawings showing more “play” drawn by children from FDELK.

2) Findings on Staff and the early learning environment in Year 2 FDELK.

Key Informant Interviews

We began by asking key informants who hold positions of leadership within the school boards and regional government how things were going now that FDELK was in its second year of implementation. Specifically, key informants were asked about benefits and challenges of the FDELK program in Year 1 (spring 2011) and again in Year 2 (spring 2012). Sixteen key informants participated in 2012. For both 2012 (Year 2) and 2011 (Year 1) the key informants were more likely to report concerns about the curriculum than other areas. In Year 1 the proportion of comments related to challenges concerning the staff team of ECE and kindergarten teacher was greater than the proportion concerned with meeting the needs of children and families. In 2012 this was reversed: meeting the needs of children and families was mentioned more often than concern with the staff team (see Figure 9). This is interesting given the attention paid to the educator team relationships and associated challenges during Year 1 of FDELK implementation.

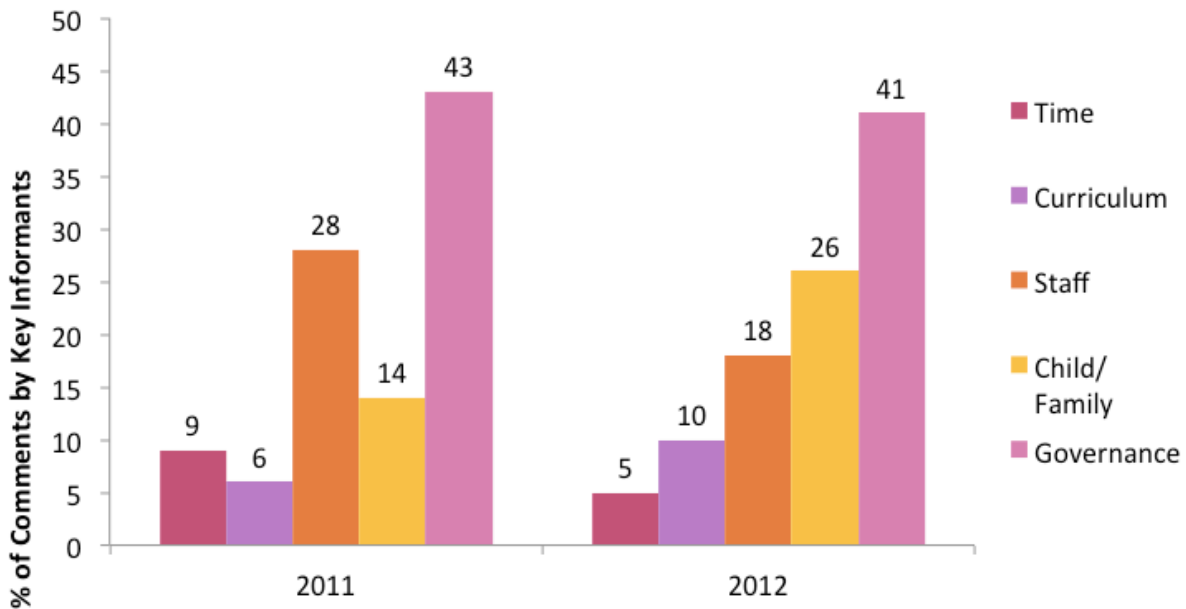


Figure 9. Challenges reported by key informants in Years 1 and 2 of FDELK.

ECE/Kindergarten Teacher Relationship

One of the most discussed areas of FDELK implementation over the past two years has been the development of the staff team comprised of the ECE and the kindergarten teacher. Certainly our observations, surveys, focus groups and individual discussions with staff team members have brought to awareness the benefits and challenges of this new team. In particular, issues related to working conditions and salary levels have continued to dominate the discussions. Nevertheless there is more positive than negative tone as educators are discovering the professional benefits of the team approach. Indeed in 2012, as in 2011, the large majority of both ECEs and kindergarten teachers report having benefitted professionally from working together. As reported in Year 1, the majority of ECEs and Kindergarten teachers do not perceive a “hierarchy” in their relationship; however when a hierarchy is perceived, it is more often reported that ECEs hold less power than kindergarten teachers. Specifically, ECEs and Kindergarten teachers generally acknowledge that Kindergarten teachers delegate more tasks to their early learning partner and have more authority than ECEs, and this remains the case in Year 2 (see Figure 10).

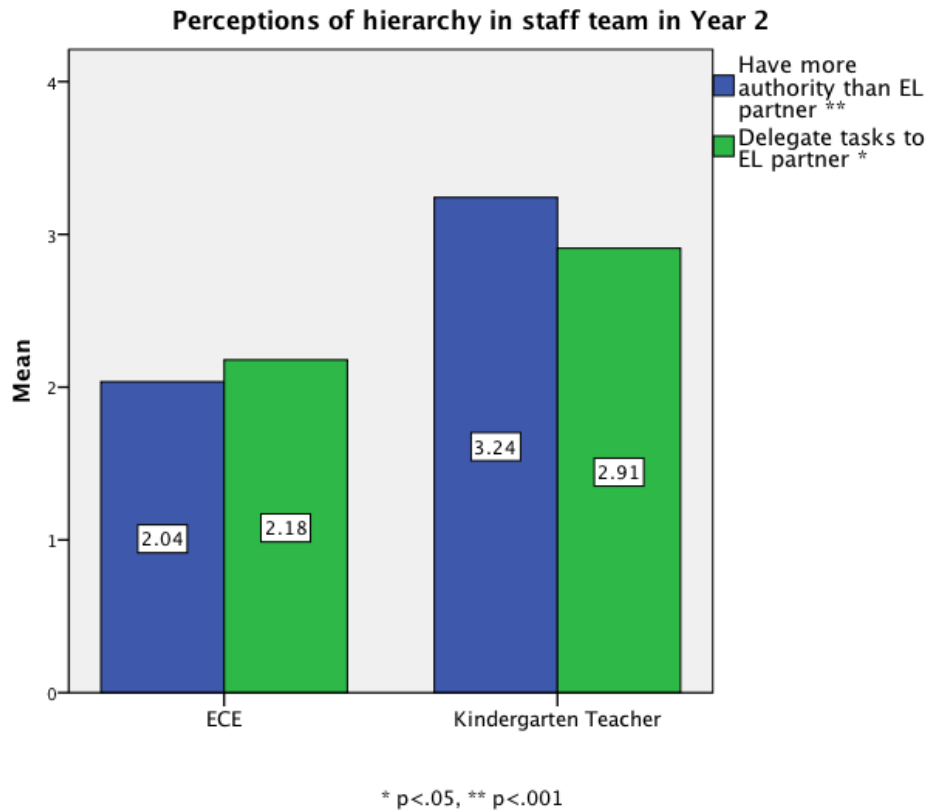


Figure 10. ECE and kindergarten teachers’ perceptions of hierarchy in the early learning team in Year 2 of FDELK implementation.

Moving Toward an Integrated Staff Team and Program

The Indicators of Change tool measures the degree to which integrated early learning services in schools (such as kindergarten, child care and parenting support or full-day early learning/kindergarten) work together. Focus groups of early learning staff teams provide levels of “site integration” of programs, early learning staff teams, and parent participation. FDELK sites generally report very high levels of integration even in the first year of implementation. Nevertheless there are site differences in the degree to which the integration of the early learning environment, the staff team and parent participation develop over time (see Figures 11 and 12).

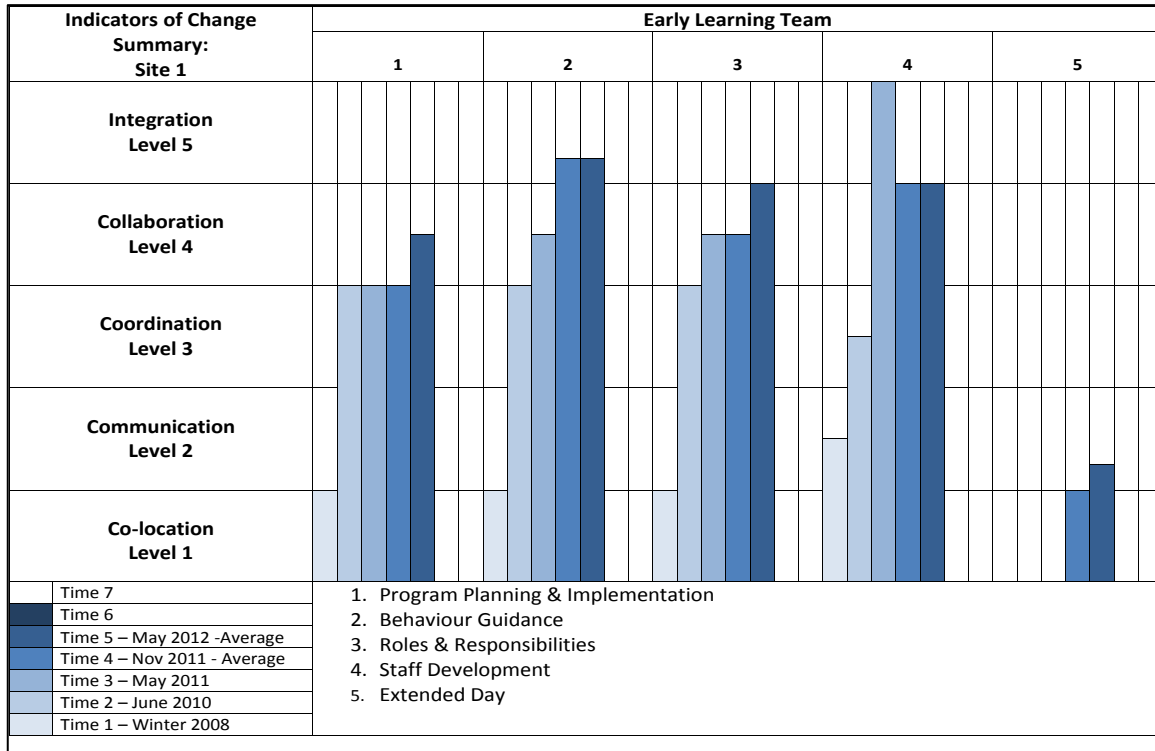


Figure 11. Indicators of Change for the Early Learning Team Site 1.

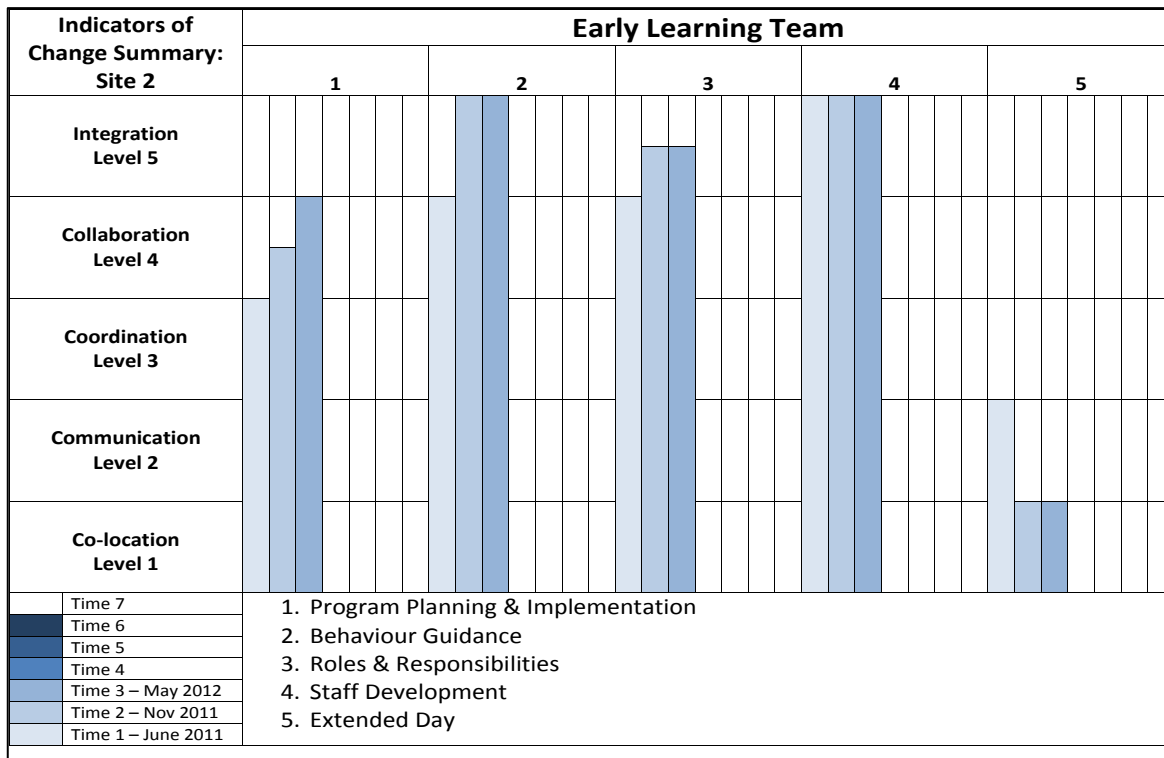


Figure 12. Indicators of Change for the Early Learning Team Site 2.

Classroom Environment Observations

During Year 2 of FDELK (spring 2012), environment observations were carried out using two subscales of the Early Childhood Environment Rating Scale – Revised (Harms, Clifford & Cryer, 2005). The subscales of Space and Furnishings and Activities were measured using standardized observation procedures. A comparison of 2011 and 2012 environment observations showed that in both areas, scores increased, particularly at sites with lower scores in Year 1, suggesting that the FDELK teams are working together to provide optimal space and activities for young children (see Figure 13).

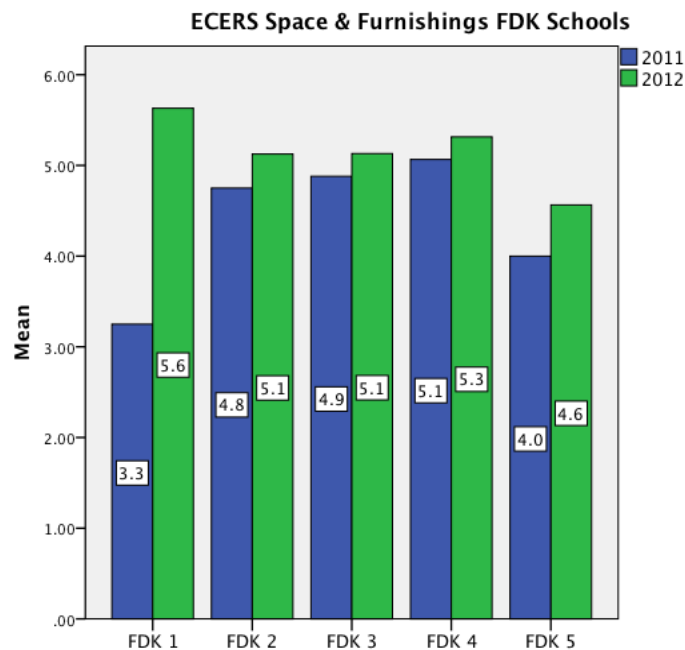


Figure 13. FDELK Space and Furnishings in Years 1 & 2.

Summary

Research during the second year of FDELK in the region of Peel continues to paint a positive picture of the implementation and early outcomes for children, replicating many of the positive findings from Year 1 of FDELK. However, conclusions about the long-term effectiveness of the FDELK program cannot be determined until further longitudinal analysis has been carried out. As reported in the Year 1 key findings, this study will include longitudinal follow-up of children from JK/SK until Grade 3, with progress reports each year. A larger provincial evaluation of FDELK, commissioned by the Ontario government, will provide independent evidence on the implementation and outcomes of FDELK.

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