Full-Day Kindergarten Research

Janette Pelletier
Dr. Eric Jackman Institute of Child Study
OISE, University of Toronto
janette.pelletier@utoronto.ca


Background to research

❖ Toronto First Duty demonstration project
  ▪ 5 sites in Toronto
  ▪ kindergarten, child care, parenting supports, community services

❖ Ontario Best Start
  ▪ 5 integrated sites & 5 comparison sites in Region of Peel

❖ With our Best Future in Mind (report to Premier)
  ▪ Play-based full-day kindergarten & care

http://www.oise.utoronto.ca/atkinson/About_Us/What_We_Do/Toronto_First_Duty/index.html

Research objectives

❖ To describe the implementation and impact of FDK on
  ▪ Staff teams implementing the play-base program (ECEs & K teachers + administrative & support personnel)
  ▪ Parents (daily hassles, parents’ views of their children’s progress, employment)
Children (tell their story, measure growth in learning over time)
Design of study

- Full-day & half-day kindergarten – phased in over 5 years natural experiment
- Longitudinal: JK-Gr 2 (+ Gr 3 provincial tests scores)
- Continuing to Gr 6
- Mixed methods (quantitative and qualitative)
- Measuring success and telling the story
- Carried out in one municipality in Ontario
Number of children

- Full Day Kindergarten (9 sites) = 328
- Control Half Day Kindergarten (7 sites) = 264
- Best Start children (not included here) = 286
## Demographics

<table>
<thead>
<tr>
<th>Program</th>
<th>Gender</th>
<th>ELL*</th>
<th>M Ed*</th>
<th>F Ed*</th>
<th>Preschool Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>49% boys</td>
<td>61% ELL</td>
<td>4.74</td>
<td>4.69</td>
<td>3.87</td>
</tr>
<tr>
<td>FDK</td>
<td>54% boys</td>
<td>51% ELL</td>
<td>4.53</td>
<td>4.26</td>
<td>2.66</td>
</tr>
</tbody>
</table>
Analyses

❖ Main longitudinal analyses included scores from SK-Grade 2 since all children had SK

❖ Mixed-model repeated measures ANOVAs (controlling for child age, site, ELL, mother’s education, neighbourhood SES, JK/SK)

❖ Included EQAO (standardized test) scores in Grade 3 for children who had finished Grade 3
Child measures

- Peabody Picture Vocabulary Test
- Test of Early Reading Ability
- Early Number Knowledge

Vocabulary

Early reading

Drawing: This is me waiting to go on the computer at daycare

Writing: Teacher has 5 little red crayons

Number knowledge

Example (using red and white poker chips)
- Place 5 red chips in front of child. "Count these chips and tell me how many there are."

Puppet interview: Social & emotional understanding

(provincial achievement tests) + EQAO + HTKS (self-regulation)
Self-Regulation
The Head Toes Shoulders Knees Task

❖ measure of self-regulation (McLelland & Cameron)
❖ ability to inhibit responses & control attention
❖ Part I (Head Toes) & II (Shoulders Knees added)

Ponitz, McClelland, Mathews, & Morrison (2009).
HTKS (behavioral self-regulation)
Self-Regulation: Observations

Continuous running records were completed during 10-minute intervals in four contexts:

❖ Small group
❖ Whole group
❖ Transition
❖ Play


What we observed

Using the Running Records, we examined:

- Responses to opportunities to self-regulate
- Engagement
- Child-child interactions: including play
- Child-educator interactions
When are kindergarten children most self-regulated?

![Graph showing estimated marginal means for different activities]

- Whole Group
- Small Group
- Play
- Transition
When are kindergarten children most engaged?

![Bar chart showing engagement levels across different categories: Transitions, Play, Small group instruction, Whole group instruction. The chart indicates the percentage of children observed in each category, with categories such as Not Engaged, Somewhat Engaged, and Very Engaged.]
What educators do varies by context

Average Frequency of Interaction Type per Context

- Instruction
- Affection/Praise
- Social Interaction
- Behaviour Management
- Play Extension

What educators do varies by context.
Vocabulary

![Graph showing vocabulary levels for SK, Gr1, and Gr2 groups differentiated by Con-JK, Con-SK, FDK-JK, and FDK-SK lines.](image-url)
Number knowledge

![Graph showing number knowledge comparison between SK, Gr1, and Gr2 across different groups, labeled as Con-JK, Con-SK, FDK-JK, and FDK-SK.](image)
Writing

![Graph showing comparison of Con-JK, Con-SK, FDK-JK, and FDK-SK across SK, Gr1, and Gr2.](image-url)
EQAO (Gr 3 tests)

- 4 levels of EQAO categories
  - 1&2=below expectations
  - 3&4= meets expectations

- Predict scores in the EQAO areas of reading, writing and mathematics by program (with same controls)

- Multinomial logistic regressions
  - Long-term benefit of FDK in reading on Gr 3 tests
  - Math & writing higher but not statistically significant
JK effect

- Separate analyses with the JK group showed that children who began FDK in JK were significantly ahead of HDK children in self-regulation, reading, drawing complexity, and number knowledge by the end of JK.
Children’s voices

❖ Interviews
❖ Drawings
Child interview with finger puppets

Choose a puppet for yourself and one for me...
Tell me about your day, from the time you leave home until you go home.
Comparison of FDK and HDK child interviews

❖ All children reported play is what they like best at school
❖ HDK children reported ”learning”, “work” were most important
❖ FDK children reported “play” was most important

Drawings: Draw yourself doing something at school

I’m playing with my friends at school (F 5 yrs)
I like to play with Wally (M 4 yrs)
Me and my friends playing (F 4 yrs)
Drawing Complexity

FDK higher in K and Gr 1, only FDK JK higher in Gr 2
Drawing Themes

❖ FDK and HDK children drew themselves at play more than any other activity at school
❖ The word “play” needed to appear in the children’s descriptions of their drawings
❖ As children went through the grades, the themes changed from “play” to “social activities”, “recess”, “sports”
❖ We are continuing to code their drawings every year to Grade 6