Full Day Kindergarten: Research and Program Considerations

December 3, 2018
Great Valley School District
Board Presentation
Full Day and Half Day Research
Longitudinal Studies

- **Long-term benefits of full-day kindergarten: a longitudinal population-based study (2015)**
  - Study based in Canada – full day vs. half day comparison.
  - Statistically significant findings in numeracy and math for certain populations (from full day kindergarten to grade 3, 7, and 8).
  - No apparent benefits of full day kindergarten for all students but some benefits for specific subgroups.

- **A Developmental Perspective on Full- Versus Part-Day Kindergarten and Children's Academic Trajectories Through Fifth Grade (2008)**
  - Used Early Childhood Longitudinal Study's Kindergarten Cohort (N = 13,776).
  - Study examined associations between kindergarten program type and academic trajectories from kindergarten (ages 4-6 years) through 5th grade (ages 9-12 years).
  - Full-day kindergarten was associated with greater growth of reading and math skills from fall until spring of kindergarten. Initial academic benefits diminished soon after kindergarten.
  - Explained possible reasons for “fade-out”.
  - “Our models suggest that the advantage of full- versus part-day kindergarten fades out approximately 36 months after the spring of kindergarten assessment, or in the spring of third grade…. Furthermore, the fade-out appears to be attributed to differences in the children and families that attend part- and full-day kindergarten, as well as school characteristics associated with kindergarten program type” (p. 974).


Longitudinal Studies

  - The subjects for the study were 974 second grade children from a large Midwestern school district. Of these second-graders, 730 of them had been in full-day kindergarten and 244 were in half-day kindergarten.
  - The results indicated that children who were in a full-day kindergarten program scored significantly higher on both math and reading on a standardized achievement test.
  - Fewer children attending full day kindergarten were retained.
  - There were no differences in the number of special education referrals between the two groups.
  - Children who attended full-day kindergarten were absent less during the school year than the half day kindergarten group.
  - While earlier studies found that children who attended full-day kindergarten achieved at higher levels on standardized measures of achievement immediately following kindergarten (Gullo et al, 1987, Cryan et al, 1992) and at the end of first grade (Cryan et al, 1992), in this study the academic benefits of full-day kindergarten were shown to extend to the end of second grade.

### Table 1
Potential positive effects of full-day kindergarten compared to half-day kindergarten

<table>
<thead>
<tr>
<th>For students</th>
<th>For instruction and teaching</th>
<th>For parents</th>
<th>For society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better academic skill development</td>
<td>Better student attendance</td>
<td>Lower child care costs</td>
<td>Levels the playing field for disadvantaged children</td>
</tr>
<tr>
<td>Reading readiness</td>
<td>More individualized instruction</td>
<td>Easier scheduling and transportation</td>
<td>More learning opportunities for low income children</td>
</tr>
<tr>
<td>Language development, especially for non-English-speaking students</td>
<td>Less hurried instruction</td>
<td>More contact with the teacher</td>
<td>Decreased cost because of reduced need for retention and remediation</td>
</tr>
<tr>
<td>Higher standardized test scores</td>
<td>More repetition of material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fewer grade retentions, less remediation</td>
<td>Less transition time between activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fewer referrals to special education services</td>
<td>Fewer total students for each teacher to track</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More independent learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easier transition to first grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better socialization and peer relations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More cooperative behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More opportunity to interact with other children and adults</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive influence on self-esteem, self-confidence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better nutrition</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 2
Potential negative effects of full-day kindergarten compared to half-day kindergarten

<table>
<thead>
<tr>
<th>For students</th>
<th>For teachers and instruction</th>
<th>For parents</th>
<th>For society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes higher expectations for first graders</td>
<td>Less planning time</td>
<td>Greater fatigue because of handling same students all day</td>
<td>Diminished parent responsibility</td>
</tr>
<tr>
<td>First grade pushed down to kindergarten</td>
<td></td>
<td></td>
<td>Cost (salaries, space)</td>
</tr>
<tr>
<td>Pressure to achieve things before developmentally prepared</td>
<td></td>
<td></td>
<td>Takes resources from more effective interventions (e.g., smaller classes)</td>
</tr>
<tr>
<td>K should be more learning by doing rather than worksheets and teacher-led instruction</td>
<td></td>
<td></td>
<td>Access is still unequal for disadvantaged students</td>
</tr>
<tr>
<td>Increased fatigue, irritability, aggression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lengthened adjustment because of separation anxiety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor role models in lunchroom, playground</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of confidence, enjoyment of learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less time for informal learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part of day in home is also important</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fewer opportunities to visit informal education settings (e.g., museums)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DOI:10.3102/0034654309359185
Longitudinal Studies

- Effects of Full-Day Kindergarten on Academic Achievement and Social Development
  - A meta-analysis found that attending full-day (or all-day) kindergarten had a positive association with academic achievement (compared to half-day kindergarten) equal to about one quarter standard deviation at the end of the kindergarten. But the association disappeared by third grade.
  - “[T]he average (50th percentile) child in FDK performed better on academic tests than 60% of children in HDK at the end of the kindergarten [and]...the positive association of FDK with academic achievement is a result of the amount of time children spend in school rather than the arrangement of time within the school day” (p. 62).
  - “For adjusted measures FDK had a significantly stronger association with higher academic achievement for children attending programs in urban than in nonurban communities.” (p. 62).

Longitudinal Studies

• Effects of Full-Day Kindergarten on Academic Achievement and Social Development
  • When subsequent years were added to the analysis, HDK students showed a stronger growth trajectory and seemed to make up gains by third grade. This was referenced as a fade-out effect.
  • Three possible explanations provided for the fade-out effect:
    • The effect becomes a smaller and smaller influence as students experience more in an academic setting.
    • Children who benefitted from FDK were less likely than HDK children to be eligible for support services.
    • Between ½ and ¼ of the post-kindergarten growth advantage for HDK was associated with child and family variables.
  • Determining the reasons for the fade-out effect require additional research.
  • Best way to consider the issue is to think about the fact that FDK and HDK are comprised of individuals who will be influenced by the other interventions and implications for instruction.
  • “FDK is probably best viewed as one in a continuing series of interventions needed to alter the academic success of students who enter and continue through school with disadvantages. Furthermore, other support services provided in later grades may be capable of providing similar levels of academic compensation when FDK is not an option for struggling students” (p. 66).

Programming Research and Considerations
Programming Considerations

• The Play-Literacy Interface in Full-day Kindergarten Classrooms (2018)
  • Research shows that other teachers believe play to be an important context for both children’s development as well as for learning academic skills (Fesseha and Pyle 2016). Within this perspective, play, often identified as play based learning, is seen as actively engaging the learner while providing instruction in essential academic skills (Hirsh-Pasek et al. 2008; Van Oers and Duijkers 2013; Weisberg et al. 2013).
  • When teachers did not share the belief that play supports the development of children’s academic skills, then the play environments in their classrooms were likely to reflect this, resulting in fewer intentional spaces that contain literacy rich materials.
  • The integration of a standards based curriculum and the emergent pedagogical approach of play-based learning presented challenges; however, these challenges were not insurmountable for all of the participating teachers.
  • Classrooms where teachers expressed belief in the value of play as a platform for learning integrated play and literacy in a wider variety of play contexts and with more frequency.

Programming Considerations

• Crisis in Kindergarten: Why Children Need Play in School (2009)
  • Kindergarteners need a balance of child-initiated play in the presence of engaged teachers and more focused experiential learning guided by teachers.
  • Levin says that in the ideal classroom children are engaged, taking initiative to the extent they are able, and teachers are also active in building on children’s play (without taking control of it) as they engage children with intentional but playful activities.

• Reclaiming Kindergarten: Part I. Questions about Theory and Practice (2011)
  • Children learn best through active engagement, through conversation, and dialogue concerning their experiences. Discovery involving concrete objects or manipulatives and multi-sensory experiences enhance learning in young children by helping them understand the world and how things work. Learning in this way is deeper, more meaningful, and offers a strong foundation for future learning.
  • Play is an important vehicle to promote language, cognition, social competence, and self-regulation.

  • Play is important for building social competence and confidence in dealing with peers, a life skill that is essential for functioning in school.
  • Play is critical to self-regulation and children’s ability to manage their own behavior and emotions.
  • When children are in environments where learning is occurring in a meaningful context, where they have choices, and where they are encouraged to follow their interests, learning takes place best (Hirsh-Pasek & Golinkoff, 2003).


Program Considerations in GVSD

• Review current curriculum – explore areas that are natural extensions
  • English Language Arts: Readers’ and Writers’ Workshop
  • Mathematics – Math in Focus
  • Science, Social Studies, and Special Areas
    • Deeper exploration and opportunities for additional content

• Identify areas to incorporate developmental based play
  • Integrate in literacy
    • Writing opportunities
    • Rich print environment opportunities
  • Integrate in mathematics
    • Application of numbers and number sense
    • Using manipulatives during structured play
  • Integrate in science and social studies
    • Opportunities for students to experience concepts
    • Structured time that supports science and engineering