

# *EXECUTIVE SUMMARY*

## Delaware Pilot Full-day Kindergarten Evaluation:

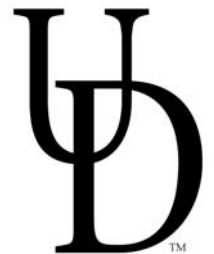
A Comparison of  
Ten Full-Day, Five Part-Day and Four Charter  
Kindergarten Programs  
and  
Comparison between First Grade Students who attended  
Full-day Kindergarten and Part-day Kindergarten

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**Executive Summary**  
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## **Delaware Pilot Full-Day Kindergarten Evaluation:**

### **Part 1: A Comparison of Ten Full-day, Five Part-day, and Four Charter Kindergarten Programs during School Year 2005-2006**

The Joint Finance Committee (JFC) of the Delaware General Assembly appropriated funds to establish ten pilot full-day kindergartens in school districts in 2004. In June 2005, the legislature appropriated funding for four of the original school districts and all charters offering full-day kindergarten, to provide full-day kindergarten for the 2005-2006 school year with the five remaining school districts also continuing to receive pilot full-day kindergarten funding. The JFC requested that an evaluation be conducted to assess the outcomes of full-day and part-day kindergarten models again in 2005-2006. This comparison analysis examines a set of full-day and part-day kindergarten classrooms. Four full-day charter school kindergartens and five part-day kindergartens agreed to participate in the comparative evaluation. Because the full-day charter school kindergartens are all located in Wilmington and have a demographic profile which is different than other kindergarten programs these programs have been analyzed separately. Program characteristics of the full-day, part-day, and charter school kindergartens are found in the Table 1 below.

Table 1. Program Characteristics for School District Full-day, School District Part-day, and Charter School Full-day Kindergarten Models

<b>Model Type</b>		<b>Class Size</b>	<b>Teaching Hours</b>	<b>Special Education Eligibility</b>	<b>Free or Reduced Lunch Eligibility</b>	<b>Teachers per Class</b>
Full-Day (N=10)	Avg. Range	21.3 14-25	6.57 5.75-7.25	6.0 (29.8%) 1-12 students	8.9 (39.5%) 0-17 students	1.3 1-2
Part-Day (N=5)	Avg. Range	20.4 14-28	2.8 2.25-3.25	1.8 (8.8.6%) 0-5 students	5.8 (27.8%) 0-10 students	1 1
Charter (N=4)	Avg. Range	22.25 17-27	7.04 6.67-7.25	0 (none identified)*	14 (62.6%) 10-24 students	1 1

\* As of December 1, 2005, no child attending a charter school, enrolled in kindergarten, had been reported to the Delaware Department of Education as receiving special education services.

Data for this evaluation was collected on the following variables: students' reading abilities, students' math abilities, students' writing abilities, students' acquisition of kindergarten performance indicators of the Delaware educational standards; amount of time of classroom instruction; and teachers' perceptions of students' readiness for kindergarten when they started kindergarten.

A summary of the findings of this evaluation follow. It is important to note that the school district full-day kindergartens and the charter school kindergartens served significantly more students who were at-risk for academic failure than did the school district part-day kindergartens. Therefore, this comparison is between students with many risk factors attending school district or charter school full-day kindergartens and students with far fewer risk factors attending school district part-day kindergartens. Subsequently, this difference may impact the results reported in the evaluation.

## Findings

### Readiness for Kindergarten

Teachers were asked to rate their students regarding their intellectual and social readiness for kindergarten. The table below provides a comparison of the proportion of children considered intellectually and socially ready for kindergarten. This is an indication of the proportion of students who started kindergarten with deficits of some type.

Table 2: Kindergarten Readiness of Students attending School District Full-day, Charter School Full-day and School District Part-day Kindergarten Models

Kindergarten Model:		Full-Day (N=199)	Charter Full-Day (N=50)	Part-Day (N=93)
<b>Readiness:</b>				
<b>Intellectually Ready for Kindergarten</b>	n	129 students	35 students	66 students
	%	63.3%	70.0%	71.0%
<b>Socially Ready for Kindergarten</b>	n	138 students	42 students	67 students
	%	69.3%	84.0%	72.0%

### Kindergarten Student Outcomes

- Over the course of one academic year, students in school district full-day kindergartens and in charter school kindergartens made more progress in the development of writing skills as measured by the *TEWL (Test of Early Written Language)* than students in part-day kindergartens. Between a fall administration of the *TEWL* and a spring administration of the instrument, the kindergarten students in the charter schools gained 11.3 months of writing skills, students in school district full-day kindergartens gained 9.9 months of writing skills, and the students in school district part-day kindergartens gained 8.8 months of writing skills.
- The preliminary analysis of the reading scores at the end of the school year indicate that students in school district part-day kindergartens who receive free or reduced lunch tended to have the lowest of performance scores on a measure of discrete phonemic awareness skills.
- Regarding math skills, the assessments indicate that students' end of school year skills are similar regardless of the kindergarten program in which they participated.
- Regarding science, humanities, and social studies; the assessments indicate that students' end of school year skills are similar regardless of the kindergarten program in which they participated.
- By analyzing report card data on seven (7) kindergarten literacy and math indicators from five (5) school districts which had both full-day and part-day kindergarten classrooms in this evaluation, it was found that the school district full-day kindergarten classes had a greater percentage of at-risk students than part-day kindergarten classes (54.1% vs. 36.5%), and an equal or greater percentage of the students in the school district full-day kindergarten classrooms achieved the benchmark performance indicators compared to the percentage of students in the school district part-day kindergarten classrooms.

**Classroom Instruction**

The table below provides a comparison of the amount of time spent and the proportion of time used in the three kindergarten models. Teachers provided weekly schedules of their classroom activities. From this information, this table provides comparisons for three major activities that occurred during the school week. The “basic” activities include preparing for the school day, meeting basic needs of children, preparing for lunch, and departure from school.

Table 3. Average Number of Minutes per Week spent in Literacy, Basic Activities, and Mathematics in Three Kindergarten Models

<b>Kindergarten Model: Use of Time:</b>		<b>Full-Day (N=10)</b>	<b>Charter Full-Day (N=4)</b>	<b>Part-Day (N=5)</b>
<b>Literacy</b>	Average %	747.2 minutes 37.91%	596.5 minutes 28.68%	395.0 minutes 48.05%
<b>Basics</b>	Average %	335.2 minutes 17.01%	662.5 minutes 31.86%	78.0 minutes 9.49%
<b>Math</b>	Average %	273.6 minutes 13.88%	274.3 minutes 13.19%	142.3 minutes 17.31%

## Part 2: A Comparison between First Grade Students who attended Full-day Kindergarten and Part-day Kindergarten

In June of 2004, the Joint Finance Committee of the Delaware General Assembly appropriated funds which funded pilot full-day kindergartens in nine school districts and one charter school. An evaluation of the outcomes of these students at the end of the 2004-2005 school year was conducted and the outcomes of the full-day kindergarten students were compared with the outcomes of students in eight randomly selected part-day kindergarten programs. The students from the ten pilot full-day kindergartens were monitored during the 2005-2006 school year in order to assess their outcomes as first graders. The students who had received full-day kindergarten services during 2004-2005 were matched with students who were demographically similar and had attended a part-day kindergarten in a Delaware school district during the 2004-2005 school year.

Table 4. Characteristics of First Graders in this Evaluation who had attended School District Full-day and School District Part-day Kindergartens

Kindergarten Model:		Special Education Eligibility	Free or Reduced Lunch Eligibility
Full-Day (N=174)	n	31	79
	%	17.8%	45.7%
Part-Day (N=175)	n	16	61
	%	9.1%	34.9%

Data for this evaluation was collected on the following variables: students' reading abilities, students' math abilities, students' writing abilities, students' acquisition of first grade performance indicators of the Delaware educational standards; and teachers' perceptions of students' readiness for first grade when they started first grade.

The first grade students were assessed during February of 2006. A summary of the findings of this evaluation are listed below.

### Findings

**First Grade Student Outcomes** This data on the first graders was collected in February of 2006, which is considered to be the middle of the school year for students.

- On measures of discrete phonemic awareness skills (such as decoding nonsense words) those first graders who attended school district full-day kindergartens had better skills than students who attended school district part-day kindergartens. For those students who were eligible for free or reduced lunch in first grade, those who attended school district full-day kindergartens achieved higher scores than their counterparts who had attended school district part-day kindergartens.
- In the area of math skills, first graders who attended school district full-day kindergarten and students who attended school district part-day kindergarten performed at similar skill levels on the mathematics assessment. Because of the risk factors associated with many of the students who attended full-day kindergartens, it would have been expected that those who attended school district full-day kindergarten would not have performed as well.
- Concerning their writing skills, of the 161 first graders who attended school district full-day kindergarten, 142 (88%) were rated as having average or above writing skills for first

graders; of the 150 first graders who attended school district part-day kindergarten, 136 (85.1%) were rated as having average or above writing skills for first graders.

- When assessing their academic knowledge, as assessed by the *Woodcock Johnson III*, those first grade students who attended school district part-day kindergartens performed better than first grade students who attended full-day kindergartens.
- Of the 28 first grade literacy and mathematics indicators assessed on report cards, more of the first graders who attended school district full-day kindergartens were rated as proficient on 15 of the indicators in comparison to the first graders who attended school district part-day kindergartens; a similar proportion of first graders who attended school district full-day kindergarten and part-day kindergarten were rated as proficient on nine of the indicators; on two of the indicators, a greater proportion of first graders who attended school district part-day kindergartens were rated as proficient than those who attended school district full-day kindergartens.

## Limitations

As with any program evaluation, there are limitations to these findings. The most significant limitation to this evaluation is the lack of randomization of the school district full-day kindergartens, the charter schools, and comparison part-day kindergartens. There are also important contextual and community variables that were not assessed for this evaluation, such as the child care experiences and other out-of-home activities in which children and families participate. In order to have a more complete understanding of the impact of full-day kindergarten, more data and analysis should occur related to students' outcomes and contextual variables. Many of the school district full-day kindergartens had more students who had risk factors. Because of this, it is difficult to accurately assess the differential impact of full-day kindergarten, indeed more benefits may have been detected for full-day kindergarten with a more similar sample of students.

## Conclusions

First and foremost, at this point in time, full-day and part-day kindergarten models are serving different populations of students. As can be seen in both the 2004-2005 kindergarten evaluation (Amsden et al., 2005) and in this current evaluation, full-day kindergarten serves four times more students with disabilities and three times more students eligible for free or reduced school meals. While the stated long-term goal may be to make full-day kindergarten available to all students, presently, the model serves a disproportionate number of students with poverty and disability risk factors. Any discussion of the outcomes and benefits of a full-day kindergarten model need to take these factors into account.

Charter school full-day kindergarten is distinctly different than other full-day kindergarten because of the large number of children at-risk due to poverty. More than 60% of the students attending full-day charter school kindergarten in Wilmington are eligible for free or

reduced school meals. This is twice the rate of part-day kindergarten and 50% greater than the rate of school district full-day kindergarten.

The findings of this evaluation indicate that at the end of the kindergarten, both part-day and full-day kindergarten students are achieving academically at similar levels, despite full-day kindergarten students having more risk factors than students attending part-day kindergarten.

As documented by the 2005 kindergarten evaluation (Amsden et al., 2005) and confirmed by this evaluation, a significant amount of time is spent on literacy activities for students participating in both full-day kindergarten and part-day kindergarten. The absolute amount of time spent learning literacy skills is almost twice as much in school district full-day kindergarten (12.5 hours per week) as in part-day kindergarten (6.6 hours per week). With this strong emphasis on literacy instruction, students who have begun their school experiences at-risk for academic success, are achieving at similar rates as those students without poverty and disability risk factors.

This trend appears to continue into first grade. Students who attended full-day kindergartens in 2004-2005 were found to be achieving at approximately the same levels as students who attended part-day kindergartens, despite having increased numbers of risk factors. This was also true for mathematics skills, writing skills, and general academic skills. The full-day kindergarten focus appears to be supportive of students with poverty and disability risk factors achieving similar outcomes in first grade as students attending part-day kindergarten who have fewer of those risk factors.

When asked about preparedness for kindergarten or for first grade, teachers indicated that few children are “ready” for school. At the kindergarten level, when teachers are asked about children’s proficiency in such areas as listening or following directions, the teachers indicated that fewer than 20% of children were proficient in those areas. A year later, after children had participated in kindergarten, first grade teachers reported that more than 50% of students were not proficient in specific skills expected of entering first graders, despite whether they attended full-day or part-day kindergarten.

When first grade performance indicators for Delaware educational standards were used to compare the academic outcomes of students attending full-day kindergarten with students attending part-day kindergarten, for 15 of the 28 performance indicators, students attending full-day kindergarten had more positive outcomes and for eleven of the performance indicators there was no difference between students attending full-day and part-day kindergartens. Eight of the 15 performance indicators where students attending full-day kindergarten had more positive outcomes were performance indicators related to literacy skills.

With the similar academic outcomes for students using standardized, norm-referenced assessment measures despite the model of kindergarten they attended, this difference in outcomes on performance indicators of the Delaware educational standards may reflect the increased amount of time teachers had during kindergarten to provide instruction in the area of literacy.

There are a number of issues related to program offerings and program quality that were raised during this evaluation. Aside from the massive difference in literacy instructional time between full-day and part-day kindergarten, the availability of intervention services for students is also great. Students attending full-day kindergarten have twice as many opportunities to participate in reading interventions in addition to the already significantly greater intensity of reading instruction they receive. Students in full-day kindergarten are also far more likely to have speech-language interventions, counselor interventions, and English language learner interventions available to them than do students attending part-day kindergarten. The availability of these supports are especially important to students with risk factors such as poverty or disabilities.

Because of the comparably less intense instruction students in all three kindergarten models received in mathematics, student outcomes in mathematics are uniformly low. When compared to the kindergarten mathematics standards, the students in all three kindergarten models do not appear to be gaining the expected skills. This is reflected in the time spent on math instruction as reported by the kindergarten teachers. It is unclear from the data collected for this evaluation, however the trend may also be true for science outcomes as well.

The low estimates by first grade teachers about the preparedness of students entering their classrooms, despite the model of kindergarten which students attended is important to consider. While there was a slight trend that first grade teachers assessed students who attended part-day kindergarten as more proficient in expected social, school, and perceptual-motor skills, less than 50% of the students from both groups had the expected skills according to the first grade teachers. This means that students leaving kindergarten, despite attending full-day or part-day kindergarten, are not leaving with the skills expected for rising first graders. This may call for an examination of the focus of the curriculum and the instructional strategies being implemented in all kindergarten models.

Because the risk factors of poverty and learning disabilities experienced by many of the children in the full-day kindergartens, it would have been expected that they would not have achieved the same academic outcomes as kindergarteners without these risk factors. It is an accomplishment for those children in full-day kindergarten to be performing at a similar academic level as children who attended part-day kindergarten without those risk factors.

Finally, poverty and other risk factors exert a powerful influence on children's school adjustment and achievement. Many interventions seek to contravene these influences in order to support children's success in school. Based on the data collected for this evaluation, it appears that part-day kindergarten programming is least effective in ameliorating the negative impacts of poverty and risk. Full-day kindergarten, however, appears to have great benefits for students with the risk factors of poverty and disability.



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