

DATA BULLETIN

Bureau of Student Assessment

November 2007

KINDERGARTEN, 2006-07

Nationally and in Connecticut, there is a renewed interest in early childhood education. This report provides important information about kindergarten students in our state. It has been written for a variety of stakeholders interested in this area to inform current policies and practices in early childhood education. In turn, educators and others can work together to strengthen the system of early childhood education and to better meet the needs of our youngest learners.

This report combines data, from a variety of sources, relevant to the kindergarten class of 2006-07. Data are presented on a variety of topics including: risk factors for children in this group at birth and at age 5; public vs. nonpublic kindergarten students; population growth between birth and kindergarten; demographics; and student mobility. Statutory age of entrance, retentions and parental holdouts are also reported. Subsequent sections cover preschool experience, student attendance, student behavior, class size, length of school day, staffing and, finally, student achievement.

There is no doubt that Connecticut is a heterogeneous state with communities and school districts that vary from the most affluent suburbs to impoverished urban areas.

To reflect this disparity, most of the data have been broken down by nine District Reference Groups (DRGs), magnet schools run by the regional educational service centers (RESCs) and charter schools. DRG is a categorization of the state's 166 school districts into nine groups labeled A to I, running from the most affluent, least needy suburbs of Fairfield County to the seven impoverished and needy urban areas. A full description of DRGs and a listing of the districts can be found at www.csde.state.ct.us/public/cedar/databulletins/db_drg_06_2006.pdf.

Children Born in 2001

The *Department of Public Health 2001 Registration Report* provides indicators that show the risk factors for the 2006-07 kindergarten class from our urban areas compared to children from the suburbs. For each of the five health risk factors and a sixth indicator of mother's age, children born to families who reside in the seven districts within DRG I are at greater risk than other children in the state (see Table 1).

DRG	Number of Births	Babies Born to Mothers <18	Low Birth Weight ¹	Late or No Prenatal Care ²	Non-Adequate Prenatal Care ³	Infant Deaths Per 1,000 Births ⁴	Average Age of Mother
A	1,625	0.1%	5.0%	2.4%	6.3%	1.85	34.4
B	6,113	0.5%	6.1%	6.1%	10.4%	3.27	32.7
C	2,357	0.6%	6.1%	5.9%	11.1%	2.55	31.8
D	5,886	0.9%	6.5%	8.1%	11.6%	5.27	30.8
E	1,663	1.0%	5.2%	7.1%	10.7%	4.21	30.7
F	2,034	1.6%	6.8%	9.3%	13.7%	6.88	29.0
G	6,067	2.0%	7.1%	10.2%	13.7%	5.27	28.6
H	7,161	2.3%	7.6%	11.4%	13.0%	6.14	28.8
I	9,753	6.4%	9.8%	19.4%	20.1%	10.36	25.8
State	42,659	2.5%	7.4%	10.9%	13.7%	6.05	29.3

¹ Less than 2,500 grams or approximately 5 pounds 8 ounces

² No care or care starting after the first trimester

³ Care rated inadequate or intermediate on Adequacy of Prenatal Care Utilization Index (APNCU)

⁴ Deaths occurring one to 364 days after birth.

Sources: *Department of Public Health 2001 Registration Report*; *Department of Public Health data file of births by age of mother*

In 2001, births to families who reside in DRG I accounted for 22.9 percent (N = 9,753) of births statewide. Out of these, 6.4 percent (N = 624) were born to mothers under 18 years old. In contrast, births to families who reside in DRG A account for 4 percent (N = 625) of births statewide and 0.1 percent (N = 2) of these births were to mothers under 18. A total of 955 low birth weight babies were born to DRG I mothers. This number represents 30.4 percent of all low birth rate babies and 9.8 percent of all DRG I babies. Again, in contrast, there were 81 low birth weight babies born to DRG A mothers or 3 percent of all low birth weight babies and 5 percent of all DRG A babies.

Two prenatal care indicators also provide information on risk factors for babies born to families who reside in DRG I versus their counterparts in DRG A. Statewide, a total of 4,655 babies, or 10.9 percent of all births, were reported as having late or no prenatal care, which is defined as care starting after the first trimester. A total of 1,888 babies with late prenatal care were born to families who reside in DRG I. This represented 40.6 percent of all births with late or no prenatal care and 19.4 percent of all births in DRG I. Again, in contrast, only 2.4 percent of the babies born to families who reside in DRG A received late or no prenatal care.

Additionally, a total of 5,862 babies statewide were judged by the Adequacy of Prenatal Care Utilization Index (APNCU) to have nonadequate prenatal care. This represented 13.7 percent of all births in 2001. A disproportionate number of these births was also from DRG I. DRG I mothers had a total of 1,964 babies judged to have nonadequate care or 33.5 percent of the total statewide, and 20.1 percent of DRG I births. For DRG A, the figure was 103 babies or 6.3 percent of DRG A births.

There were 160 infants who died before their first birthday in Connecticut in 2001. This is equivalent to 6.05 infant deaths per 1,000 births. The infant mortality rates ranged from 10.36 per 1,000 births in DRG I to 1.85 per 1,000 in DRG A.

The average Connecticut mother's age for births in 2001 was 29.3 years. Mothers' ages ranged from an average low of 25.8 years for residents of DRG I to an average high of 34.4 years for residents of DRG A. Mothers in DRG I were almost eight years younger on average than mothers in DRG A.

Statewide, 37.8 percent of the births were to mothers with a high school education or less, 44.4 percent were to mothers with some college or a college degree, and 15.6 percent were to mothers with post-college education. (The education level of 2.2 percent of the mothers was unknown.) Mothers' education level is available by race but not town. Minorities, who tend to be concentrated in the DRG I communities, were less educated than whites. The percentage of mothers holding a high school degree or less was 72.7 percent for Hispanics, 58.1 percent for blacks and 27.9 percent for whites.

Child Abuse or Neglect

The Department of Children and Families (DCF) information system collects data on alleged and substantiated cases of child abuse or neglect and the number of children in relative or foster care. This information is presented in Table 2 (below) by DRG for children who were 5-year-olds in 2006-07. The number of cases in each category is presented for both public and nonpublic kindergartens.

Table 2. Indicators on 5-Year-Olds from The Department of Children and Families, 2006-07

DRG	Number of Kindergartners ¹	Allegations of Child Abuse or Neglect		Substantiated Cases of Child Abuse or Neglect		Children in Relative Care or Foster Care	
		Number	Rate ²	Number	Rate ²	Number	Rate ²
A	2,411	33	1.4	9	0.4	0	0.0
B	7,714	245	3.2	62	0.8	34	0.4
C	2,958	99	3.3	28	0.9	25	0.8
D	6,524	408	6.3	107	1.6	88	1.3
E	2,025	161	8.0	33	1.6	39	1.9
F	2,298	381	16.6	154	6.7	45	2.0
G	5,885	943	16.0	248	4.2	143	2.4
H	6,232	837	13.4	228	3.7	102	1.6
I	9,271	1,640	17.7	371	4.0	277	3.0
State	45,318	4,757	10.5	1,240	2.7	753	1.7

¹Public and nonpublic kindergarten by town of residence

²Number per 1,000 kindergartners

Sources: Department of Families and Children Statewide Automated Child Welfare Information System (SACWIS), Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

There were 4,757 allegations of child abuse or neglect of 5-year-olds reported to the Department of Children and Families in the 2006-07 fiscal year. The number of allegations ranged from 33 in DRG A to 1,640 in DRG I. In other words, there were 10.5 allegations of abuse or neglect per 1,000 kindergartners statewide. This rate varied from a low of 1.4 per 1,000 children in DGR A to a high of 17.7 per 1,000 children in DRG I.

All allegations of suspected child abuse or neglect are investigated. In FY 2006-07, 1,240 cases were substantiated. This was 26.1 percent of the allegations. The number of substantiated cases of neglect or abuse of 5-year-olds ranged from nine in DRG A to 371 in DRG I. DCF reported 753 5-year-olds in foster care or relative care in FY 2006-07. The number ranged from zero in DRG A to 277 in DRG I. The DRG I count represents 36.8 percent of the total number of 5-year olds, statewide, in foster or relative care.

Nonpublic Schools

The nonpublic schools offer families an alternative to public school kindergarten. In some communities,

families choose this option for all-day kindergarten and then transfer to the public schools beginning in Grade 1. Table 3 presents the nonpublic enrollment by the DRG of residence (not location of the school), the percentage of students attending nonpublic schools and the affiliation of the nonpublic school.

There were 45,318 children enrolled in public and nonpublic school kindergartens in October 2006. Almost 10 percent or 4,490 were enrolled in nonpublic kindergartens. Catholic schools and independent schools were the two largest categories of nonpublic school kindergarten enrollment. Catholic schools comprised 62.2 percent of nonpublic school kindergarten enrollment. Independent schools accounted for 25.5 percent of nonpublic kindergarten enrollment. The remaining 12.2 percent of the kindergartners were enrolled in Christian academies (5.7 percent), other religious-affiliated schools (5.6 percent), special education facilities (0.5 percent) and unknown affiliation (0.4 percent).

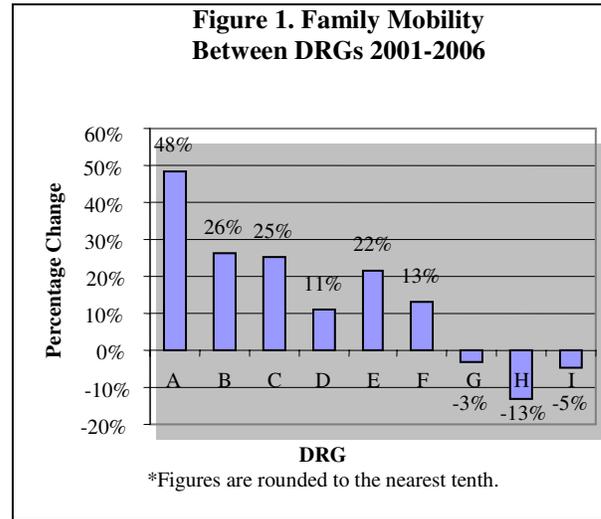
Resident DRG	Public				Affiliation (Percent)		
	Total Enrollment	By Residence	Nonpublic Enrollment	Percent Nonpublic	Catholic	Independent	Other ¹
A	2,411	2,127	284	11.8%	21.5%	69.7%	8.8%
B	7,714	6,892	822	10.7%	34.9%	53.6%	11.4%
C	2,958	2,768	190	6.4%	51.1%	41.1%	7.9%
D	6,524	5,899	625	9.6%	72.3%	15.2%	12.5%
E	2,025	1,879	146	7.2%	50.7%	34.2%	15.1%
F	2,298	2,112	186	8.1%	86.6%	2.7%	10.8%
G	5,885	5,203	682	11.6%	77.4%	9.5%	13.0%
H	6,232	5,446	786	12.6%	68.8%	16.0%	15.1%
I	9,271	8,502	769	8.3%	77.2%	11.3%	11.4%
State	45,318	40,828	4,490	9.9%	62.2%	25.5%	12.2%

¹ Other includes Christian academies, Hebrew, Adventist, Christian, Episcopal, Lutheran, Quaker, special education and unknown affiliations.

Sources: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007, and Connecticut State Department of Education ED159, Nonpublic School Report Data File

Birth to Kindergarten Increase in Population and Mobility of Connecticut Families

There was an increase of 2,689 children or 6.2 percent from the 2001 birth cohort of 42,659 babies to the combined public and nonpublic kindergarten enrollment of 45,318 children in October 2006. Along with this increase, families move within the state. It appears that most of the movement is from DRGs with lower socioeconomic status to DRGs with higher socioeconomic status, reflecting a trend of upward mobility within the state. Figure 1 shows these mobility patterns by DRG. These rates range from a gain of 48.4 percent in DRG A to a loss of 13 percent in DRG H. In DRG I, the loss was 4.9 percent. Young families may be starting out in communities that are more affordable. As their income grows and their children approach school age, they may be moving to more affluent towns.



Characteristics of the October 2006 Public Kindergarten Children

Table 4 presents the characteristics of the children enrolled in public school kindergarten in October 2006. There were 40,829 children enrolled in public school kindergarten in October 2006. Almost 1 in 5 (19.8 percent) were enrolled in kindergarten in the seven DRG I districts, whereas, only 5.2 percent were enrolled in DRG A districts. Statewide, 47.8 percent of the kindergarten students were female and 52.2 percent were male, with relatively little difference among the DRGs. The statewide breakdown by race was: white, 25,478 (62.4 percent); Hispanic, 7,692 (18.8 percent); black, 5,648 (13.8 percent); Asian American, 1,819 (4.5 percent) and Native American, 192 (0.5 percent). Minority students represented 37.6 percent of the public school

kindergartners. By DRG, the percentage minority ranged from a low of 5.7 percent in DRG E to a high of 90.9 percent in the charter schools. DRG I was 85.8 percent minority.

A total of 9,387 students were eligible to receive free meals and an additional 1,499 were eligible to receive reduced-price meals. These combined to make the 26.7 percent of kindergarten students in poverty. The poverty percentage varied from a low of 0.7 percent in DRG A to a high of 72.4 percent in the charter schools. A total of 72.3 percent of children in DRG I receive free or reduced-price meals.

District Group	October Enrollment	Percent Girls	Percent Minority	Percent Poverty	Percent Special Education	SE Identified After October 1	Percent English Language Learners
DRG A	2,135	46.9	6.8	0.7	6.0	25	1.9
DRG B	6,868	47.7	16.0	3.6	6.8	76	5.0
DRG C	2,764	49.0	6.1	2.2	6.9	30	0.5
DRG D	5,732	47.3	17.3	7.2	8.3	71	5.5
DRG E	1,870	49.1	5.7	7.9	10.2	24	0.9
DRG F	2,100	48.9	15.8	15.5	9.1	44	3.7
DRG G	5,076	47.5	36.1	28.6	9.7	70	5.0
DRG H	5,308	47.2	59.1	40.5	7.5	63	21.3
DRG I	8,095	47.8	85.8	70.3	8.6	178	18.9
RESC	572	49.7	56.3	28.1	13.8	8	10.0
Charter	308	48.1	90.9	72.4	1.9	0	1.6
State	40,829	47.8	37.6	26.7	8.1	589	9.3

NOTE: Enrollment includes one kindergarten student in a state facility.
Source: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

There were 3,780 English language learners (ELL) enrolled in fall 2006 or 9.3 percent of all kindergartners. The percentage of ELL students varied from less than 1 percent in DRGs C and E to 21.3 percent of the enrollment in DRG H. ELL students accounted for 18.9 percent of the kindergartners in DRG I in 2006.

There were 3,310 children identified as receiving special education services in October of 2006. This accounted for 8.1 percent of all kindergarten students. During the course of the year, an additional 589 students were identified. This brought the identification rate up to 9.6 percent. The percentage of special education students (based on the October 1 count) varied from a low of 1.9 percent in the charter schools to 10.2 percent in DRG E. The rate for DRG I was 8.6 percent.

Student Mobility within Public Kindergarten

During the course of the school year, some students are mobile — that is, they change schools within a district, move to another district or move out of the Connecticut public school system. Those moving from the public school system may have moved out-of-state or transferred to a nonpublic school in state. Table 5 presents data on student mobility along with changes in enrollment between October 2006 and June 2007.

It is interesting to note that there was relatively little mobility during the school year. Statewide, 38,244 students or 93.7 percent of the October 2006 enrollment were enrolled in the same school for the full school year. The percentage staying in the same school ranged from 98 percent in DRG A to 88.5 percent in DRG I. A total of 929 DRG I youngsters moved during the 2006-07 school year. Statewide, a total of 722 students moved to a different school within their district (1.8 percent of the October enrollment), another 740 moved to a different district within the state (1.8 percent) and 1,123 moved out of state or to a nonpublic school within Connecticut (2.8 percent).

There was a small net gain in migration of students during the school year. At the end of the school year in June 2007, there were 40,968 children enrolled, an increase of 0.3 percent over the October 2006 count. DRGs A and H grew the most between October and June with an increase of 0.8 percent. DRGs F and G lost 0.1 percent and 0.4 percent of their October enrollment, respectively. Enrollment was down 1.9 percent in charter schools and 2.6 percent in the regional educational service centers (RESCs) schools, as well. For the districts in DRG I, enrollment grew 0.5 percent between October and June.

District Group	Oct. 2006 Enroll.	Stay in Same School	Move Within District	Move to Another District	Move from CT Public	Percent Staying In Same School	June 2007 Enroll.	Oct. to June Change
DRG A	2,135	2,093	3	11	28	98.0%	2,152	0.8%
DRG B	6,868	6,698	9	62	99	97.5%	6,915	0.7%
DRG C	2,764	2,690	1	35	38	97.3%	2,779	0.5%
DRG D	5,732	5,529	16	84	103	96.5%	5,748	0.3%
DRG E	1,870	1,805	1	34	30	96.5%	1,877	0.4%
DRG F	2,100	1,973	13	58	56	94.0%	2,098	-0.1%
DRG G	5,076	4,621	92	163	200	91.0%	5,054	-0.4%
DRG H	5,308	4,835	157	123	193	91.1%	5,349	0.8%
DRG I	8,095	7,166	429	154	346	88.5%	8,137	0.5%
RESC	572	540	1	12	19	94.4%	557	-2.6%
Charter	308	294	0	3	11	95.5%	302	-1.9%
State	40,829	38,244	722	740	1,123	93.7%	40,968	0.3%

Source: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

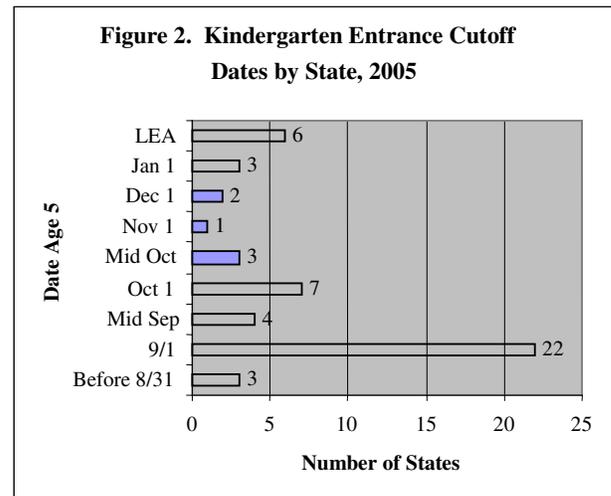
Age of Kindergartners, Including Retentions and Holdouts

The age of kindergarten students in Connecticut is a function of state statute, combined with principals',

teachers' and parents' decisions to retain students, and parents' decisions to hold their children out for a year. Connecticut General Statutes Section 10-15c states that "The public schools shall be open to all children five years of age and over who reach age five on or before the

first day of January of any school year." Local boards of education may vote to admit children under 5 years of age.

Figure 2 shows the cutoff dates that 45 states have established for entrance to kindergarten. Six states, all in the northeast, have school districts set the kindergarten cutoff date. Nationally, the most common cutoff date is September 1, as it is the standard in 22 states. Almost 65 percent of the states (36 of 51) have start dates of October 1 or before. Only Connecticut, the District of Columbia and Hawaii have established a date around January 1.



Source: *Colasanti, M. Kindergarten Entrance Ages: A 30 Year Trend Analysis.* Education Commission of the States, March 2007. www.ecs.org.

Table 6 presents an analysis of when the kindergartners of October 2006 were born. Only 87 percent of the October 1, 2006, kindergarten students were born in 2001, the year of their fifth birthday. About one-quarter of Connecticut's kindergarten students — the 10,004 born between September and December of 2001 and the 65 born in 2002 — would be too young to enroll in kindergarten in most states.

A total of 5,216 students were old for the grade (i.e., born before January 1, 2001). Retentions, parents holding their children out for an extra year and provisions of special education plans that hold students in preschool or kindergarten for an extra year are possible reasons why 12.8 percent of kindergartners were older than the typical Connecticut kindergarten student.

Table 6. Birth Year and Month of Students

District Group	Oct. 2006 Enroll.	Born in 1999	Born in 2000			Born in 2001			Born in 2002
			Jan to Apr	May to Aug	Sep to Dec	Jan to Apr	May to Aug	Sep to Dec	
DRG A	2,135	1	12	35	341	657	690	399	0
DRG B	6,868	5	20	138	900	2,212	2,318	1,269	6
DRG C	2,764	2	4	55	346	883	910	561	3
DRG D	5,732	5	30	113	357	1,754	1,912	1,256	4
DRG E	1,870	2	13	37	182	577	622	435	1
DRG F	2,100	6	10	23	147	650	713	547	3
DRG G	5,076	7	39	97	412	1,522	1,652	1,339	8
DRG H	5,308	7	30	95	253	1,568	1,739	1,604	11
DRG I	8,095	17	197	288	585	2,258	2,376	2,359	13
RESC	572	3	7	17	51	168	170	141	12
Charter	308	1	4	5	17	92	90	94	4
State	40,829	55	367	903	3,891	12,341	13,192	10,004	65

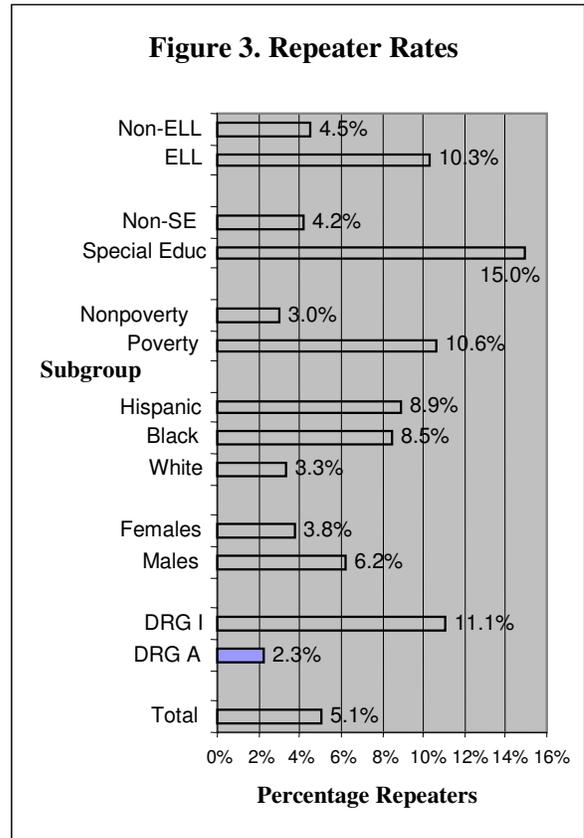
NOTE: Birthdates outside of the years 1999 to 2002 were reported in 11 cases.

Source: *Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007*

A total of 2,065 students, 39.6 percent of the 5,216 children old for the grade, were positively identified as repeaters using individual records from Connecticut's Public School Information System (PSIS). Repeaters represented 5.1 percent of the October 2006 kindergarten enrollment. The percentage of students retained in kindergarten varied by DRG. The repeat rate varied from

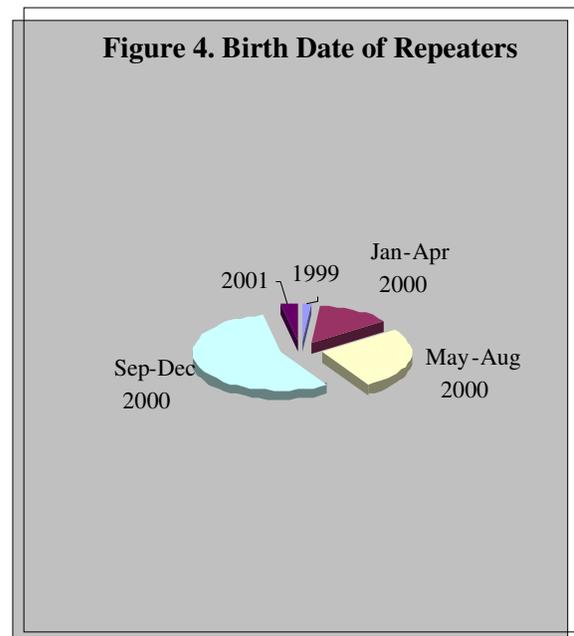
a low of 2.3 percent in DRG A to a high of 11.1 percent in DRG I.

Figure 3 shows that there were marked differences in repeater rates for different subgroups of students. Fifteen percent of the special education students enrolled in kindergarten in October 2006 were enrolled in kindergarten the prior year, compared to 4.2 percent of students not identified as receiving special education services. By race, the repeater rate was 2.5 percent for Asians, 3.3 percent for whites, 6.2 percent for Native Americans, 8.5 percent for blacks and 8.9 percent for Hispanics. More than 10 percent of students from low-income families were repeaters compared to 3 percent of students not in poverty. Slightly more than 10 percent (10.3 percent) of ELL kindergartners were in kindergarten for a second year. Finally, boys were more likely to be retained than girls. Of the boys, 6.2 percent were in kindergarten for a second year compared to 3.8 percent of girls.



Source: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

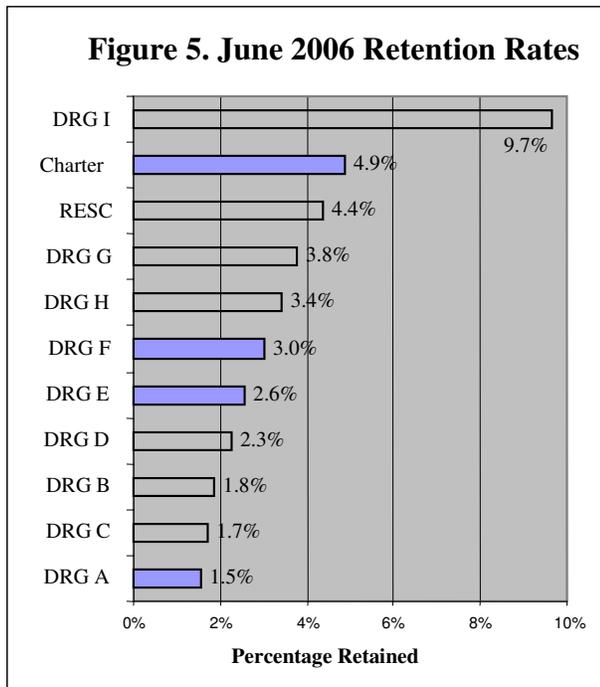
Figure 4 shows that a disproportionate number of the 2,065 repeaters was young when they first entered kindergarten in 2005. Fifty-five percent were born in the September 2000 to December 2000 period. Slightly more than one-quarter (26.4 percent) were born in the May to August period of 2000, and 13.4 percent were born in the January to April period of 2000. Sixty-five repeaters were born in 2001; however, this figure may indicate a small problem of erroneous reporting of grade in 2005 or a wrong birth date. Thirty-four repeaters were born in 1999.



Source: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

Almost two thirds of the repeaters (64.3 percent) were boys. Young boys (September to December 2000 birthdays) made up 34.4 percent of the repeaters. This is more than double the percentage that might be expected if retention were random. Minorities made up 59 percent of the repeaters. Students in poverty comprised 55.8 percent of the repeaters. Special education students comprised 24 percent of the kindergarten repeaters and English language learners accounted for 18.9 percent.

Form ED165 provides a second source of data on retained students. The 2006-07 ED165 data collection asked schools to report whether the June 2006 kindergartners were promoted, promoted to a transitional grade, promoted after attending summer school or retained. Statewide, 1,690 children or 4.1 percent of all June 2006 kindergartners were retained. A total of 250 children (0.6 percent) were promoted to a transitional grade and 390 (0.9 percent) were promoted after attending summer school. Figure 5 shows that the percentage retained ranged from 1.5 percent in DRG A to 9.7 percent in DRG I. The retention rate in DRG I was nearly double that of the next highest group, which were the charter schools at 4.9 percent.

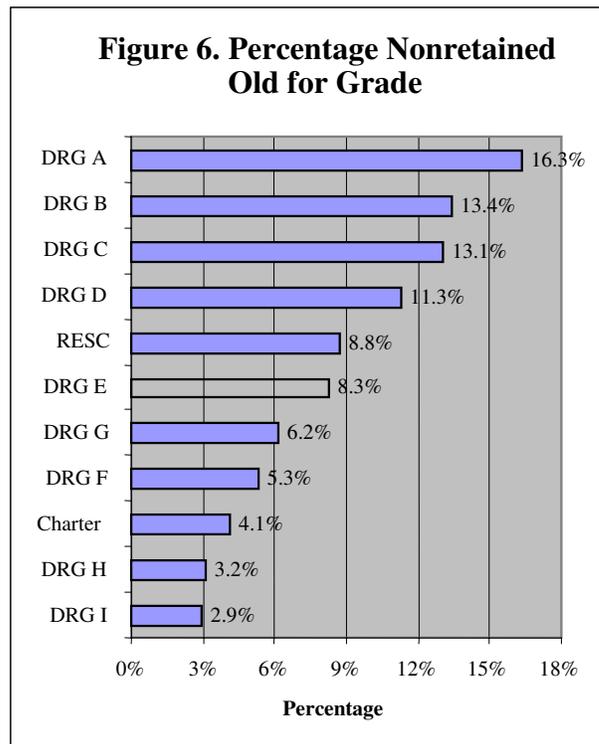


Source: Connecticut State Department of Education Form ED165, Connecticut School Data Report, November 2006

Parent Holdouts

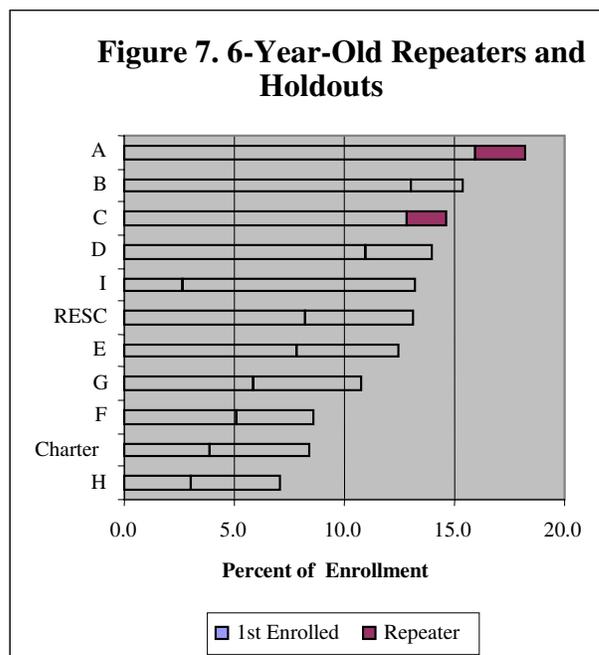
Some parents believe that their children get an academic and social advantage if they are held out of kindergarten until they turn six. This phenomenon is sometimes known as “red-shirting.” The number of these holdouts can be assessed only indirectly. There were 3,200 children born in 2000 who were enrolled in kindergarten for the first time (nonrepeaters). This was 7.8 percent of all kindergartners. Some may have attended a nonpublic or out-of-state kindergarten in 2005. Fully 86 percent of older, first-time kindergartners were born between September and December 2000.

Figure 6 shows that the percentage of nonretained students who were old for the grade (parental holdouts) varied significantly by DRG. The percentage of overage children who were not identified as repeaters ranged from a high of 16.3 percent in DRG A to 2.9 percent in DRG I.



Source: Connecticut State Department of Education Form ED165, Connecticut School Data Report, November 2006.

Figure 7 breaks down these 6-year-olds by district classification and indicates whether they were overage because their parents held them out for a year or whether they were retained by the school.



Source: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

It is clear that the most affluent districts in the State proportionally had the oldest students. The percentage of 6-year-olds ranged from 18.2 percent in DRG A to 7.1 percent in DRG H. Students in DRGs A-D were consistently older than those in DRG I, which had 13.2 percent of its students born in 2000. A critical difference here is that children in DRGs A-D were old by parent choice, not a result of kindergarten failure.

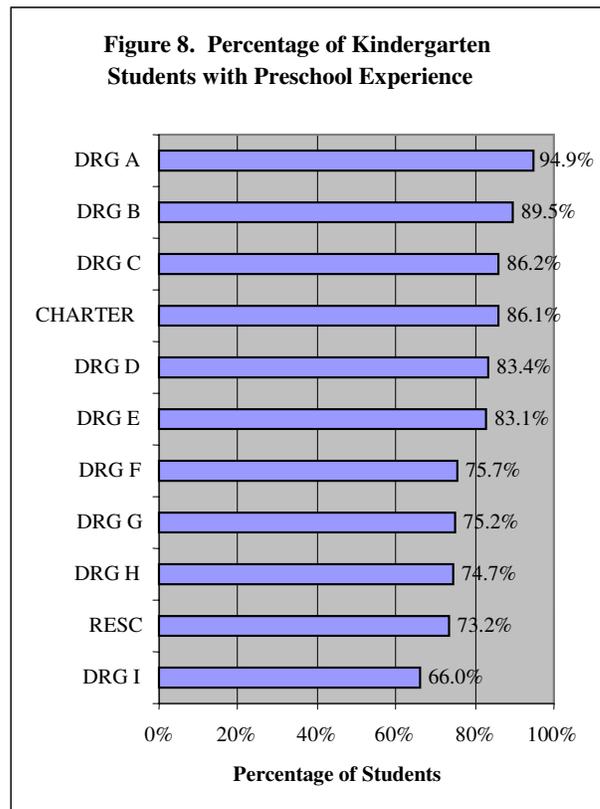
Preschool Experience

The State Board of Education's *Five Year Comprehensive Plan for Education 2006-2011* has as its first priority that all children in the state will have access to a high quality preschool education. The plan states that, "High-quality preschool education plays a significant role in the development of competent learners." It is believed that a lack of access to these programs and their uneven quality can contribute significantly to the achievement gap.

Efforts are under way to integrate children's preschool education into the individually based PSIS. Until that system is built, the Connecticut State Department of Education (CSDE) has available school-reported aggregate counts of students enrolled in kindergarten as of October 1 who regularly attended a Head Start program, nursery school, licensed day care center or public preschool program during the previous school year or summer. Concurrently, CSDE can also determine which of the current kindergartners attended a public prekindergarten program the prior year. This represents a relatively small subset of the range of prekindergarten options available to children.

Statewide, 79.1 percent of the 2006 kindergartners were reported to have had some kind of preschool experience. This is an improvement over the 74.7 percent reported for the kindergarten class of 2000. In 2006, there were about 8,400 public school kindergartners who did not attend any type of preschool. Approximately 2,700 of this number were from DRG I and an additional 1,300 were from DRG H. Figure 8 shows that the percentage attending preschool varied from 94.9 percent in DRG A to 66 percent in DRG I.

Relatively few kindergartners received their preschool experience from the public schools. Table 7 depicts that when October 2006 kindergartners were matched against the prekindergarten records from 2005-06, only 22 percent were found to have attended a public school prekindergarten program. The highest percentages for public preschool students were in schools run by RESCs or charter schools, both above 50 percent. More than 30 percent (31.3 percent) of DRG I kindergartners had attended a public prekindergarten program the prior year, and in DRG A, the figure was 11.1 percent.



Source: Connecticut State Department of Education Form ED165, Connecticut School Data Report, November 2006

Table 7. Prior Year Public Prekindergarten

District Group	October Enrollment	Public Pre-K in 2005-06	Percent with Public Pre-K
DRG A	2,135	236	11.1%
DRG B	6,868	875	12.7%
DRG C	2,764	438	15.8%
DRG D	5,732	972	17.0%
DRG E	1,870	490	26.2%
DRG F	2,100	704	33.5%
DRG G	5,076	1,312	25.8%
DRG H	5,308	945	17.8%
DRG I	8,095	2,534	31.3%
RESC	572	318	55.6%
Charter	308	163	52.9%
State	40,829	8,987	22.0%

Source: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

Student Attendance and Behavior

In order for teachers to deliver the instruction called for in Connecticut's curriculum frameworks, students must be present in school and reasonably well-behaved. Connecticut currently collects attendance on the June data collection of the PSIS. Attendance is specific to the facility attended at the time of reporting. This means that for the approximately 1,500 students who changed schools during the year, the total days absent may be an underestimate. The system has been upgraded this year to gather attendance data any time a student moves. Student behavior is not currently available for the 2006-07 school year, so data for the **2005-06** school year is presented instead.

District Group	Average Attendance	Absent 20 Days or More	
		Number	Percent ¹
DRG A	95.2	130	6.0
DRG B	95.5	341	4.9
DRG C	95.8	115	4.1
DRG D	95.5	300	5.2
DRG E	95.3	110	5.9
DRG F	95.5	149	7.1
DRG G	94.5	506	10.0
DRG H	93.8	764	14.3
DRG I	92.5	1,621	19.9
RESC	94.4	71	12.7
Charter	95.0	25	8.3
State	94.5	4,132	10.1

(1) Based on June 2007 enrollment

Source: Connecticut State Department of Education Public School Information System (PSIS) June 2007 Data Collection, September 4, 2007

Table 8 presents two indicators of absenteeism for the nine DRGs, the charter schools and the magnet schools run by the RESCs. Average attendance is measured by dividing the number of days attended by the number enrolled. There is no state definition for attendance. It is determined by local policy. Statewide, kindergarten students enrolled in June attended school 94.5 percent of the possible days. In a 180-day school year, that is equivalent to 10 days absent. In general, attendance improves from DRG I to DRG A. The average attendance ranged from 95.8 percent in DRG C to 92.5 percent in DRG I. Attendance in the RESC magnet schools and charter schools was near the state average.

A second indicator of attendance is the number of kindergartners absent for 20 days or more in the course of the school year. Statewide, 4,132 of the kindergarten students enrolled in June 2006 were absent for 20 days or more. The percentage of students absent 20 days or more averaged 10.1 percent statewide, with almost 40 percent from DRG I. The percentage ranged from a low of 4.1 percent in DRG C to a high of 19.9 percent in DRG I.

For several years, the Department of Education has collected student-based records on disciplinary offenses. These records are used, in part, to determine persistently dangerous schools. The system was originally set up to record behaviors that resulted in suspensions or expulsions. However, it is now designed to record all behavioral incidents, from serious offenses to violations of school policy, irrespective of the punishment. Table 9 presents a summary of the data for the 2005-06 school year, the most recently available information. The data show the number of incidents by category, the number of students involved and the total days students were punished in and out-of-school.

District Group	School Year Enrollment	Number of Behavioral Incidents						Students Involved		Days Punished	
		Serious Offenses ¹	Harassment	Physical Confrontation	Fighting	Theft/Property Damage	School Policy	Number	Percent	Total	Out-of-School
DRG A	2,263	0	0	0	0	0	0	0	0.0	0	0
DRG B	7,163	0	0	0	1	0	1	1	0.0	2	1
DRG C	2,904	1	0	0	0	0	0	1	0.0	1	0
DRG D	6,208	1	5	5	7	1	12	17	0.3	114	23
DRG E	2,107	0	2	4	2	0	2	7	0.3	15	9
DRG F	2,264	0	0	3	2	0	10	12	0.5	20	13
DRG G	5,454	4	8	28	17	3	52	64	1.2	169	140
DRG H	5,759	1	13	64	7	2	46	70	1.2	205	166
DRG I	9,009	25	57	91	278	16	222	349	3.8	1,696	1,605
RESC	574	0	2	15	7	0	0	11	1.9	20	15
Charter	231	0	1	6	0	0	8	11	4.8	20	20
State	43,936	32	88	216	321	22	353	543	1.2	2,262	1,991

(1) Crimes against persons, weapons or drugs

Source: Connecticut State Department of Education Form ED166, Disciplinary Offense Record, 2005-06

During the 2005-06 school year, schools reported a total of 1,032 instances of inappropriate behavior for kindergarten students. About one-half of the incidents (52 percent) involved fighting or a physical confrontation. About one-third (34.2 percent) represented breaking other school rules. While the categories of infractions are fairly well-defined, it is possible for different schools to classify the same behavior in different categories.

Schools are supposed to report behavioral infractions irrespective of whether the consequence is a warning, parent conference, detention, suspension or expulsion. A few years ago, the data collection requested only serious incidents that resulted in a suspension or expulsion. It is evident that many of the local reporting systems have not yet made the adjustment. With that caveat, schools in DRG I reported a total of 689 incidents, which represented two-thirds of all incidents reported. Schools in DRGs A-C reported a total of three incidents among them.

The reported incidents resulted in a loss of 2,262 days of punishment that could have ranged from expulsion, in- or

out-of-school suspension, detention, suspension of lunch or bus privileges, parent conference or a warning. Three-quarters of the days punished (75 percent) were issued by DRG I schools.

Kindergarten students in 2005-06 lost a total of 1,991 days of instructional time due to expulsion or out-of-school suspension. This number is attributed to many different students so no individual student lost much time. The maximum time lost for any incident was 10 days for each of the two kindergarten students expelled during the year. There were a total of 827 other incidents that resulted in out-of-school suspensions. The average school time lost was 2.4 days per incident.

Relatively few students were involved in inappropriate behavior. Statewide, a total of 543 individuals were involved. This represents 1.2 percent of the students who attended kindergarten during the 2005-06 school year. The highest rate was 4.8 percent reported by the charter schools. Among the DRGs, the rates varied from 0 percent in DRGs A, B and C to 3.8 percent in DRG I.

Program Characteristics

The state last collected data on kindergarten hours of instruction in 1994. Today the CSDE knows only whether students attend half-day, extended-day or full-day programs. These categories give only a crude estimation of the instructional hours that kindergarten children receive. In 1994, the 126 programs classified as half day averaged 481 hours of instruction with a range of 450 to 615 hours. The 17 programs classified as extended day averaged 821 hours of instruction with a range of 552 to 1,051. The 18 programs classified as full day averaged 1,077 hours of instruction and ranged from 951 to 1,188 hours. It is possible that a half-day program or a full-day program could provide more instructional time than an extended-day program.

Table 10 presents the program length for the kindergarten students enrolled in October 2006. In October 2006, 47.5 percent of the children received full-day instruction and an additional 10.7 percent received extended-day instruction. Almost 95 percent of the students in DRG I attended full-day kindergarten compared to 10 percent of the children in DRG A. Almost three-fourths of DRG A children received extended-day instruction, however.

A total of 41 school districts and six charter schools provided full-day kindergarten for all students. This included six of the seven districts in DRG I. Nine districts provided full-day instruction to a majority of their students and 14 districts provided it to some children. There were 25 districts and one charter school that provided extended-day instruction. The remaining 75 districts offered half-day kindergarten instruction.

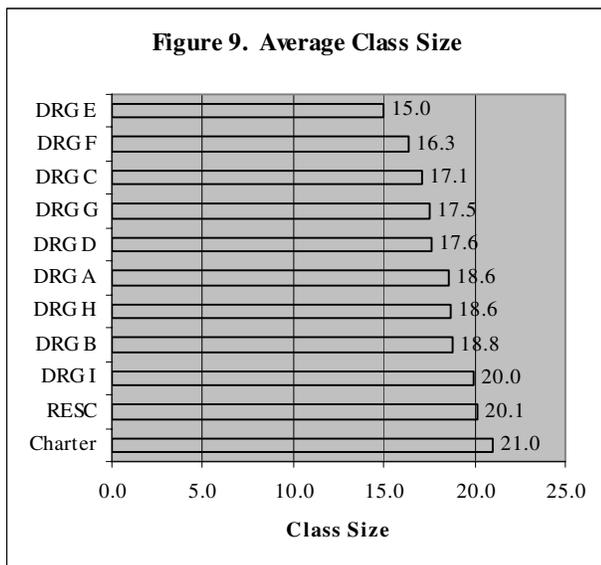
Table 10. Student Enrollment by Program Length

District Group	Number of Students			Total	Pct. in Full-Day
	Half-Day	Exten- ded-Day	Full-Day		
DRG A	332	1,589	214	2,135	10.0%
DRG B	4,037	700	2,131	6,868	31.0%
DRG C	1,705	759	300	2,764	10.9%
DRG D	3,957	218	1,557	5,732	27.2%
DRG E	1,233	280	357	1,870	19.1%
DRG F	1,413	131	556	2,100	26.5%
DRG G	2,390	287	2,399	5,076	47.3%
DRG H	1,518	360	3,430	5,308	64.6%
DRG I	422	8	7,665	8,095	94.7%
RESC	44	4	524	572	91.6%
Charter	0	37	271	308	88.0%
State	17,052	4,373	19,404	40,829	47.5%

Source: Connecticut State Department of Education Public School Information System (PSIS), September 4, 2007

A Tennessee experiment in 1985 to 1989, Student/Teacher Achievement Ratio (STAR), showed that small class sizes of 13 to 17 students led to statistically significant improvements in reading and mathematics compared to class sizes of 22 to 26 children. The benefits were greatest for students who started early and minority students seemed to benefit the most. A Wisconsin study found similar results with a disproportionate benefit for low-income students. Figure 9 presents the average kindergarten class size in October 2006 for the different types of districts. The

average kindergarten class size was 18.2 students. The average kindergarten class size ranged from a low of 15 in DRG E to a high of 21 students in the charter schools. The average in DRG I was 20 students.



Source: Connecticut State Department of Education Form ED165, Connecticut School Data Report, November 2006

Certified Staff

The increased academic demands for kindergarten students require a dedicated, highly trained staff. The characteristics of the staff presented in Table 11 include all teachers with a "Kindergarten" assignment and teachers with the primary responsibility for the classroom with a "Special Education Kindergarten" assignment.

In October 2006, there were 1,982 professionals serving a total of 1,719.4 full-time equivalents in the position of kindergarten teacher. Twenty-two percent were employed in the DRG I districts.

The average kindergarten teacher had 14 years of teaching experience. Average years' experience varied from 6.7 years in the relatively new charter schools to 16 years in DRG D. DRG I teachers had 14.1 years experience, just above the state average. There were a total of 85 kindergarten teachers statewide with no previous teaching experience. This represented 4.3 percent of the kindergarten teachers. The percentage of novice teachers ranged from 3.4 percent in DRG B to 7.7 percent in the charter schools. In DRG I, 3.7 percent of the teachers were inexperienced.

More than 79 percent of teachers had a master's degree. The percentage ranged from 91.7 percent in DRG A to 53.8 percent in the charter schools. The 77.4 percent of the DRG I teachers who had a master's was slightly below the state average.

Teacher mobility was analyzed by comparing last year's assignment and location with this year's, for the subset of teachers who worked in only one school (1,846 of the 1,982 teachers). Statewide, 78.9 percent of kindergarten teachers worked as kindergarten teachers in the same school in both 2005 and 2006. An additional 108 teachers (5.8 percent) stayed in the same school but changed from another teaching assignment to a kindergarten teacher. There were 81 teachers (4.4 percent) who changed schools within a district and 20 who had changed districts (1.1 percent). A total of 182 teachers (9.8 percent) did not teach in a Connecticut public school in October 2005. They may have been novice teachers, experienced teachers entering the public schools or experienced teachers returning from leave.

Table 11. Kindergarten Teachers, 2006-07

District Group	Number of Teachers	FTE	Mean Years Experience	Percent 1st Year	Percent With Master's or Above	Percent in Same School and Job	Percent Minority
DRG A	132	104.6	11.4	3.8	91.7	88.1	0.0
DRG B	293	261.2	14.2	3.4	87.7	81.4	2.7
DRG C	110	96.6	14.6	6.4	80.9	79.4	0.9
DRG D	260	215.4	16.0	3.8	78.5	76.4	1.2
DRG E	93	77.8	15.6	4.3	82.8	80.5	1.1
DRG F	93	82.8	14.6	7.5	67.7	73.7	1.1
DRG G	233	210.5	14.1	5.2	75.5	78.5	2.6
DRG H	270	239.4	13.4	4.1	75.2	80.7	8.9
DRG I	434	386.7	14.1	3.7	77.4	80.0	18.7
RESC	51	32.6	9.8	3.9	72.5	44.2	17.6
Charter	13	12.0	6.7	7.7	53.8	75.0	7.7
State	1,982	1,719.4	14.0	4.3	79.2	78.9	6.7

Source: Connecticut State Department of Education Form ED-163, Certified Staff Data Form, October 2006.

Within the DRGs, the percentage of teachers staying in the same school and job ranged from 73.7 percent in DRG F to 88.1 percent in DRG A. Eighty percent of the DRG I teachers remained in the same school and job, a figure above the state average. Kindergarten teachers in the RESCs showed the greatest mobility with only 44.2 percent in the same school and assignment as the prior year.

There were 132 minority kindergarten teachers or 6.7 percent of the teachers. The percentage of minority teachers ranged from 0 percent in DRG A to 18.7 percent in DRG I. Only 37 kindergarten teachers were men, making the profession 98.1 percent women.

Noncertified Staff

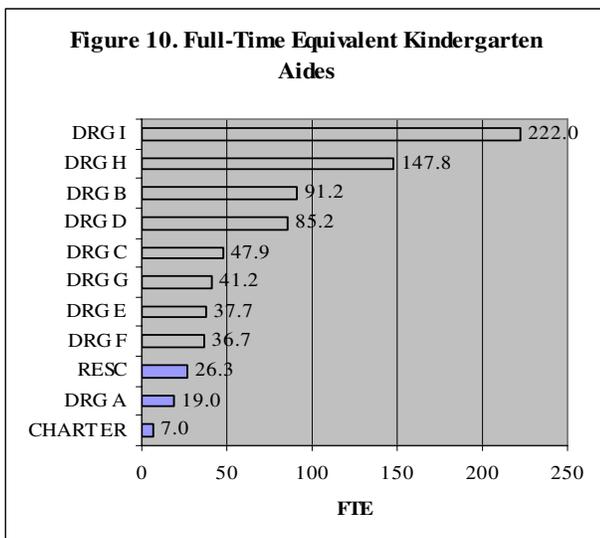
The *No Child Left Behind Act* of 2001 (NCLB) addresses the issue that paraprofessionals are prevalent in schools, particularly those schools serving needy children, and have significant contact with all students. The law enumerates the duties that paraprofessionals can perform in schools receiving federal funds and sets education requirements for individuals working in this capacity. All people serving in these positions are required to have two years of education or higher, an associate degree or pass an academic assessment. To meet this last requirement, Connecticut along with 33 other states adopted the Educational Testing Service ParaPro Assessment. This measures the basic skills and knowledge of mathematics, reading and writing, and the ability to apply that knowledge to classroom settings. The passing scores adopted by each state ranged from 450 in Louisiana to 464 in Massachusetts and North Dakota. Connecticut's cut score of 457 is in the lower half of the states.

The STAR Study, which found small class sizes beneficial, did not find that an aide in the classroom had a positive impact on student achievement or behavior. However, this study was conducted before the educational requirements for paraprofessionals were established by NCLB.

Annually, schools provide the Department of Education with counts of noncertified staff and the number of people serving as classroom aides is collected. Figure 10 shows the number of full-time equivalent kindergarten aides who were employed in each of the DRG categories in the fall of 2006. A total of 762 full-time equivalent kindergarten aides were employed in 114 districts in the fall of 2006. Almost 30 percent of the aides (29.1 percent) were employed in the seven districts of DRG I.

Student Achievement

In 2007, the Connecticut Department of Education, in collaboration with a content validation committee of kindergarten teachers from across the state, defined the knowledge and behaviors that kindergarten students should have acquired during the school year. Each of six domains — language skills, literacy skills, numeracy skills, physical/motor skills, creative/aesthetic skills and personal/social skills — was defined by six to eight skills. In May 2007, each kindergarten teacher assigned his/her class of students into three performance levels, as a group. Students placed in performance level one consistently demonstrated a limited number of skills in the domain and required significant teacher support. Students placed in performance level two consistently demonstrated some of the skills in the domain and required some teacher support. Students placed in performance level three consistently demonstrated most of the skills in the domain and required limited teacher support. No individual student data were collected in May 2007.



Source: Connecticut State Department of Education form ED-162, Noncertified Staff, October, 2006

Figure 11 provides the statewide summary of kindergarten teachers' ratings of student performance in each of the six domains. In May 2007, kindergarten teachers felt that literacy skills was the weakest area with only 62 percent of the children rated able to consistently demonstrate most of the skills in the domain with limited teacher assistance. Language skills was the next weakest area (65 percent at performance level 3) followed by numeracy skills (69 percent at performance level 3). Teachers felt their students were strongest in physical/motor skills. In that area, teachers placed 79 percent of their student at performance level 3. Teachers believed that 72 percent of their children were at performance level three in the creative/aesthetic skills and 69 percent in the personal/social skills. If last year's retention rates of 4.1 percent (statewide) hold, then roughly half of the students in the lowest performance level will have been promoted to first grade.

Figure 11. Spring 2007 Kindergarten Exit Inventory

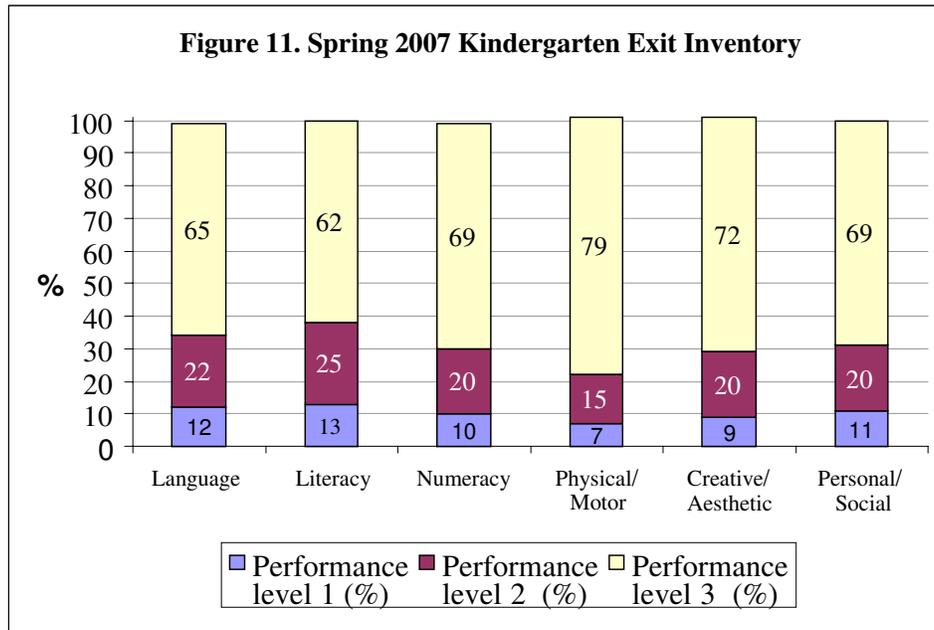


Table 12 displays the percentage of students at performance level three within each of the nine DRGs, the charter schools and RESC magnet schools. Since the ratings were done by the classroom teacher and do reflect, to some extent, on the effectiveness of the teacher, the results must be treated with caution.

In general, teachers across the DRGs rated literacy skills followed by language skills and numeracy skills as the three weakest areas. The only exceptions were teachers in DRG I and charter schools who felt their students' worst area was language, and charter school teachers who felt that their children were best in literacy skills.

Among the nine district reference groups, teachers in DRG C rated their children higher than any other DRG in each of the six skill areas assessed. Teachers in DRG G gave their students the lowest ratings in language skills, creative/aesthetic skills and personal/social skills, while teachers in DRG H had the lowest ratings in literacy skills, numeracy skills and physical/motor skills.

In mid-October of 2007, Connecticut kindergarten teachers will assess each child's "level of preparedness for kindergarten." These data will provide a statewide snapshot of the level of skills students can demonstrate at the beginning of the kindergarten year. However, Connecticut General Statute Section 10-14n (h) prohibits its use for program accountability.

District Group	Students Rated	Language Skills	Literacy Skills	Numeracy Skills	Physical/Motor Skills	Creative/Aesthetic Skills	Personal/Social Skills
DRG A	1,953	72	71	77	83	80	74
DRG B	6,453	71	68	77	81	78	73
DRG C	2,705	81	76	82	89	85	82
DRG D	5,705	69	64	73	80	76	73
DRG E	1,784	74	69	75	81	80	76
DRG F	2,076	71	64	72	82	74	75
DRG G	4,851	64	60	66	77	68	66
DRG H	4,698	56	53	58	72	64	62
DRG I	7,994	53	54	60	75	62	60
RESC	478	72	69	74	79	74	67
Charter	359	72	85	83	77	71	65
State ¹	39,064	65	62	69	79	72	69

¹ Total includes eight students from "Other" schools.

Source: Connecticut State Department of Education Spring Kindergarten Exit Inventory, May 2007

Summary:

For years, there has been a significant performance gap between urban and suburban students on the Connecticut Mastery Test. The first administration of the Kindergarten Exit Inventory in spring 2007 indicated that a gap also exists at the end of kindergarten not only in the academic skills of language, literacy and numeracy, but also for physical/motor, creative/aesthetic and personal/social skills.

However, some differences between urban and suburban children have existed from birth. Children from urban areas were more likely than suburban children to be born to teen mothers or younger mothers, had a lower birth weight and received late or inadequate prenatal care. Growing up, they were more likely to suffer abuse or neglect or be placed in foster care. Before entering public school kindergarten, many families left the cities or chose nonpublic schools. It is likely that this further concentrated the neediest students in urban areas. Suburban children were more likely than urban children to have had a preschool experience. By the time they entered kindergarten, urban students were predominantly minorities and in poverty. They were also more likely to be English language learners or to receive special education services. They were less likely than suburban students to stay in the same school for the full school year, although the fact that 88.5 percent of urban kindergarten students did stay in the same school for the whole school year is higher than was anticipated.

By statute, Connecticut children can enter kindergarten at a younger age than children in most other states. But this policy of allowing students not turning 5 years old until September through December to enter kindergarten may inadvertently be exacerbating the achievement gap as well. The percentage of 6-year-olds in kindergarten was greater in affluent suburban schools than in urban schools, and this was not due to retention. Rather, fully 16 percent of affluent suburban students were held out of kindergarten and enter kindergarten for the first time as 6-year-olds. Six-year-olds in urban schools were likely to have been retained. Urban retention rates were almost 10 percent compared to an affluent suburban rate of less than 2 percent. Repeaters were more likely to be special education, English language learners, poor, minority and male than nonrepeaters.

Most urban students attended kindergarten full-day. But some of this advantage was lost due to high absenteeism, poor behavior and larger class sizes. Almost 20 percent of urban kindergartners were absent 20 days or more compared to 6 percent of suburban students. Urban students were punished 1,700 days for misbehavior compared to about 550 days for the rest of the state. Although urban kindergartens averaged a relatively small 20 students per class, this was two students more than nonurban classes.

With the exception of the fact that urban teachers were more likely to be minority than suburban teachers, they were remarkably similar on other characteristics. Urban teachers' mean experience was at the state average. A smaller percentage of them were in their first year of teaching compared to the state average. Slightly fewer of them held a master's degree than the state average. Finally, they were as likely as teachers from around the state to hold the same job in the same school from one year to the next. Compared to a suburban teacher, they were also more likely to have a kindergarten aide in the classroom.

The State Board of Education's first priority is that all children in the state will have access to a high-quality preschool education. The lack of access to these programs by poor students — not just in the cities but also across the state — is another contributing factor to the achievement gap. Once the additional preschool programs are established, more students could enter kindergarten fully prepared for further learning in math and literacy. Additionally, they will more likely have skills in the areas that support learning, namely physical and motor development; creative and aesthetic expression; and personal, social and emotional skills. With a curriculum delivered by high-quality teachers and with an integrated data system to measure achievement and provide feedback, the state's kindergarten students will have an excellent start toward meeting the academic skills needed to be successful in the 21st century.

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