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ABSTRACT

This report presents elementary school test trend data for the Chicago Public Schools (CPS), Illinois for 2000 for the Iowa Tests of Basic Skills (ITBS). In spring 2000, ITBS trend data show that mathematics test scores in the CPS elementary schools continue their long-term improvements for all age levels. Positive trends in ITBS reading scores continued for older students (aged 13 and 14), but the earlier rising trends for students aged 9 through 12 appear to have flattened out. Actual declines in reading test scores were apparent at some age levels (ages 9 and 12) in the grade equivalent metric. Productivity gains appear to have peaked in 1997 and have not improved since then. Unless a new cycle of productivity advance occurs, the flattening annual test score trends will probably continue. There was no evidence that the gap between racial/ethnic groups has narrowed or widened. There have been some changes in reporting and testing practices in the CPS; these are described. (SLD)

Research Data Brief

Academic Productivity Series
2000 Results

January 2001

Annual CPS Test Trend Review, 2000

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Todd Rosenkranz
Anthony S. Bryk

Elementary School Test Score Trends in Chicago Public Schools

By spring 2000, ITBS trend data show that:

- Math test scores in Chicago Public Schools (CPS) elementary schools continue their long-term improvements for all age levels.
- Positive trends in ITBS reading scores continue for older students (13 and 14 years old).
- Earlier rising trends in reading for students ages 9 through 12 appear to have flattened out.
- Actual declines in reading test scores are now apparent at some age levels (ages 9 and 12) in the grade equivalent metric.[1]
- Productivity gains appear to have peaked in 1997 and have not improved since then.

Figure 1 on page 3 displays the mean ITBS grade equivalent scores in reading and math for age groups nine through 14 from 1992 to 2000. The highest value in each graph corresponds to the national average for the grade level most associated with the specific age grouping.

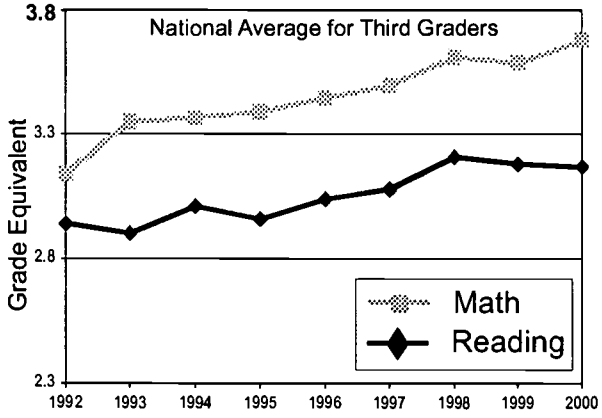
We also examined test score trends by students' race/ethnicity, in part as a result of increased national attention to the "achievement gap" between minority and non-minority students (these are shown in Figure 2).[2] In Chicago, the elementary school population is approximately 53 percent African-American, 34 percent Latino, 10 percent white, and 3 percent Asian. In general, we find that math scores continue to increase for all racial/ethnic groups and that the citywide trends in reading noted above are reflected in the scores of all racial/ethnic groups. There is no evidence here that the gap between racial/ethnic groups has narrowed or widened during this time period. (For more details on the differences in scores among the racial/ethnic groups, see the Consortium's Annual CPS Test Trend Review, 1999.)

Text continues on page 6 . . .

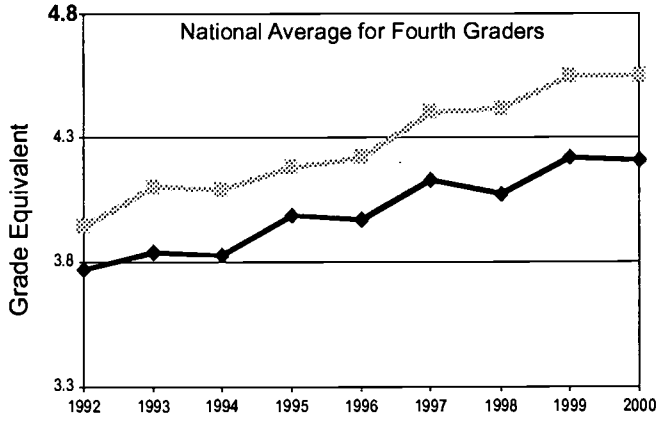
Figure 1

Trends in ITBS Grade Equivalents, by Age

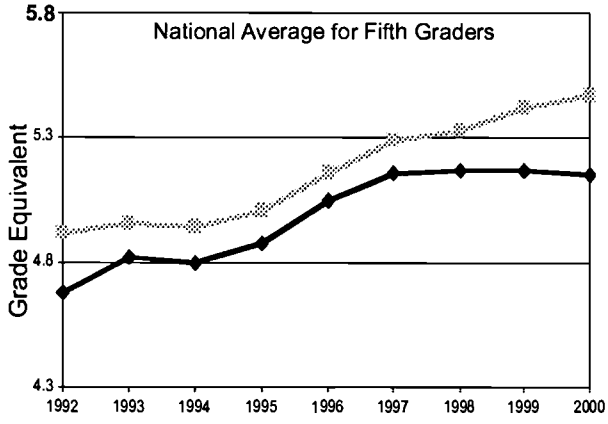
Nine Year Olds



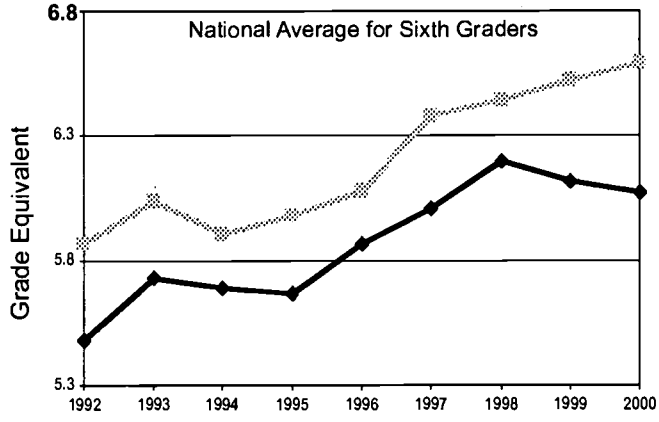
Ten Year Olds



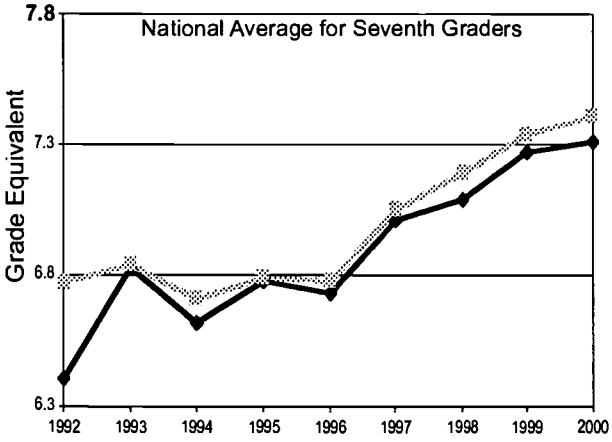
Eleven Year Olds



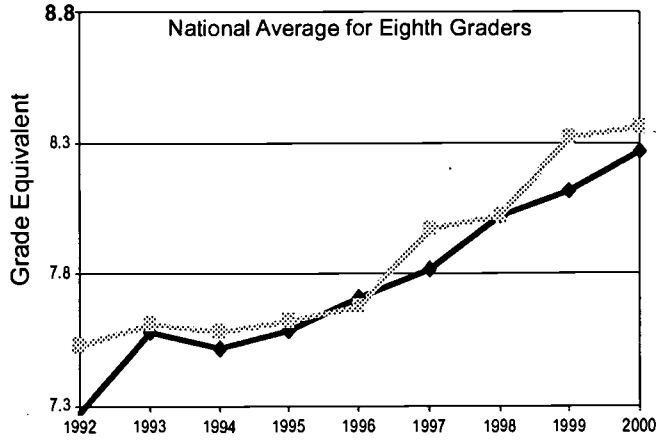
Twelve Year Olds



Thirteen Year Olds



Fourteen Year Olds

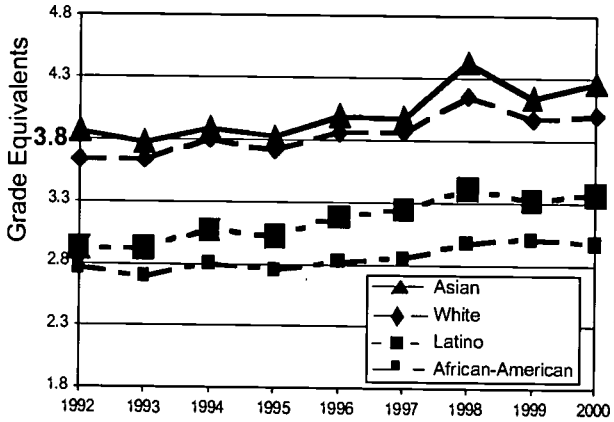


Note: See Tables C and D, pages 15 and 16, line "All", for more detail.

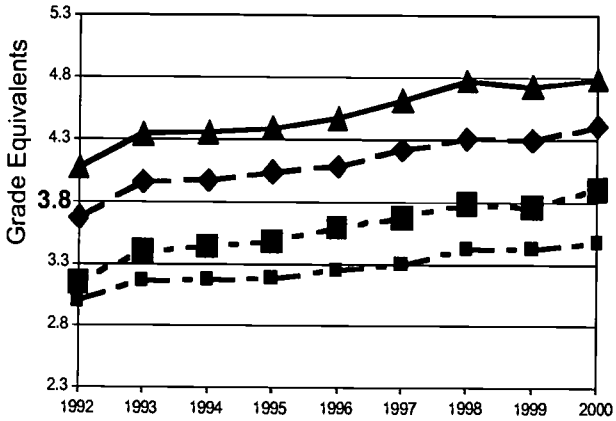
Average ITBS Results by Race/Ethnicity

Figure 2

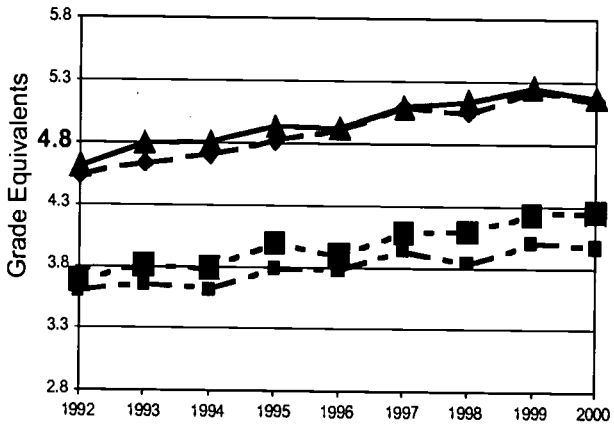
Nine Year Olds—Reading



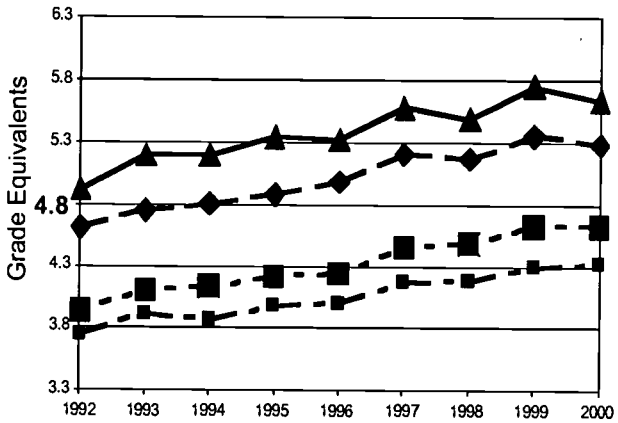
Nine Year Olds—Math



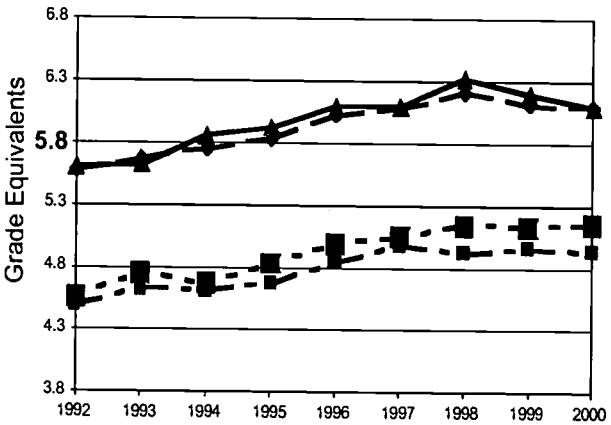
Ten Year Olds—Reading



Ten Year Olds—Math



Eleven Year Olds—Reading



Eleven Year Olds—Math

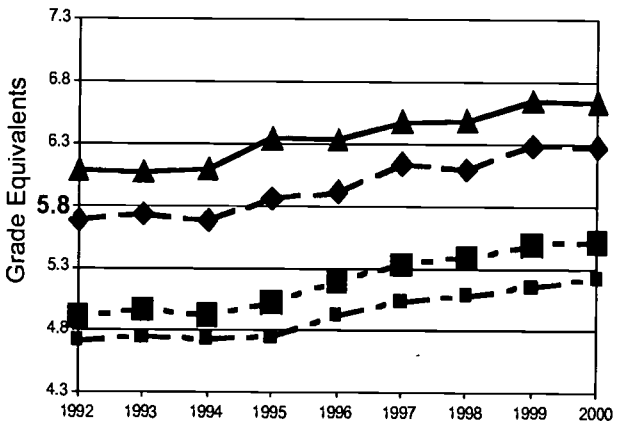
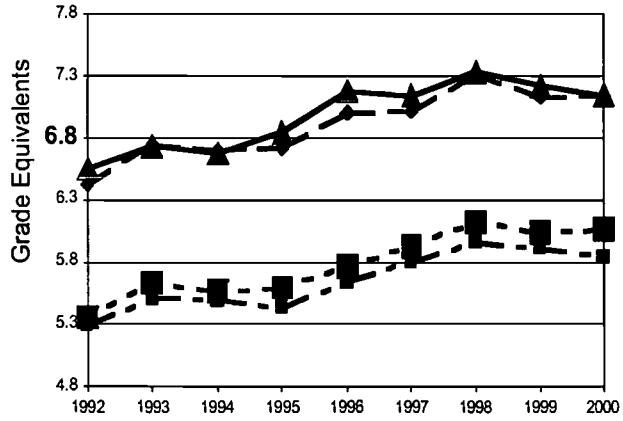


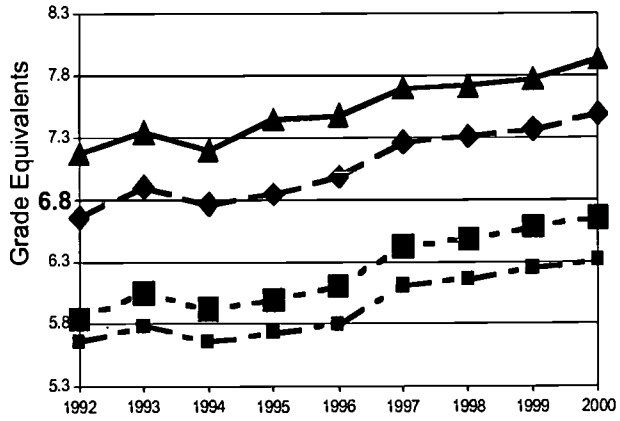
Figure 2
continued

Average ITBS Results by Race/Ethnicity

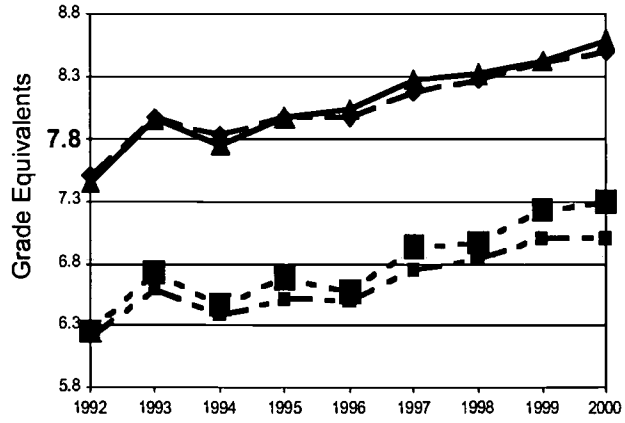
Twelve Year Olds—Reading



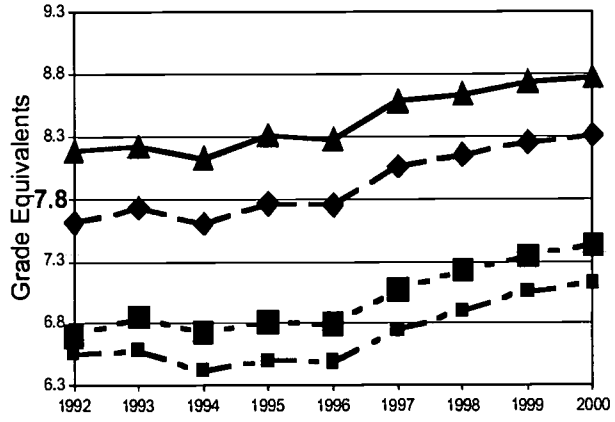
Twelve Year Olds—Math



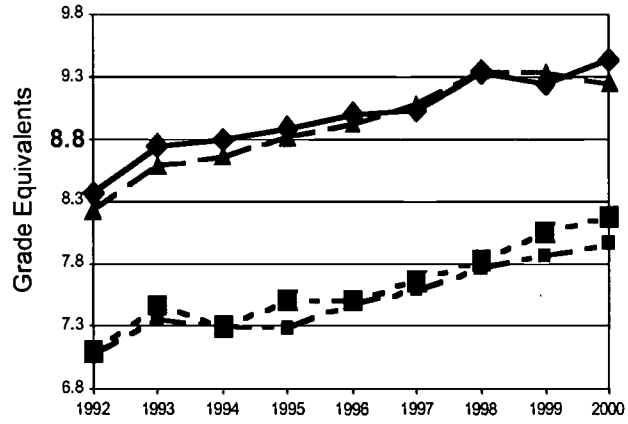
Thirteen Year Olds—Reading



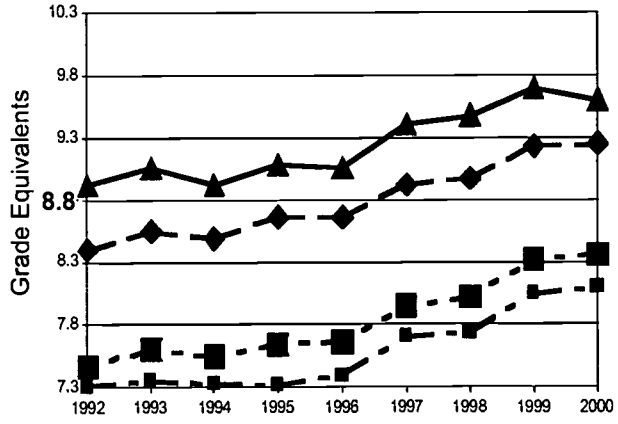
Thirteen Year Olds—Math



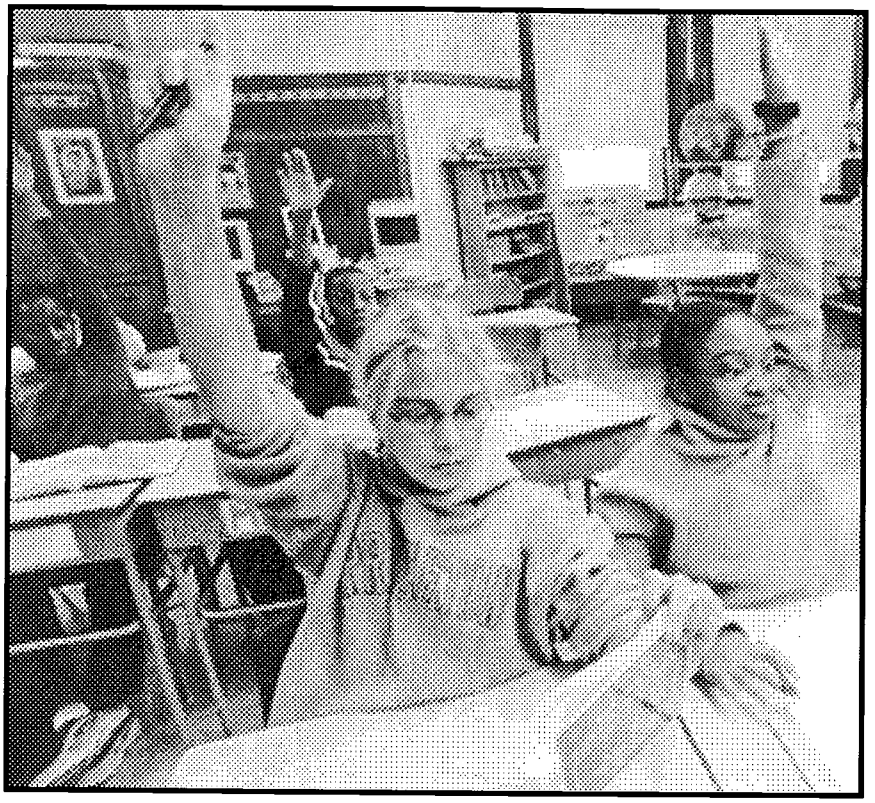
Fourteen Year Olds—Reading



Fourteen Year Olds—Math



Note: The bold-faced Grade Equivalent (GE) on the left axis indicates the national average GE for that grade level. See Tables C and D, pages 15 and 16, for more detail.



John Booz

A Focus on Gain Scores

The CPS test score trends described above indicate long-term improvements, yet data from the most recent year suggest that reading improvements have leveled-off or possibly even declined for some age levels. For a more careful look at these system changes, we turn to an investigation of **gains** in students' test scores over time. As we argued in our 1998 study of test score trends, because they measure the amount of learning that has taken place from one time point to another, these gains best reflect improvement.[3] Comparing changes in learning gains over time provides the best information about changes in the overall academic productivity of CPS.

Figure 3 on page 7 shows the gains trends in reading and math from 1994 to 2000. Judging the trends in gains is somewhat complicated by the fact that test forms have changed frequently.[4] There are some comparable patterns, however, that lead us to conclude that productivity gains may have peaked in 1997 and begun to decline now.

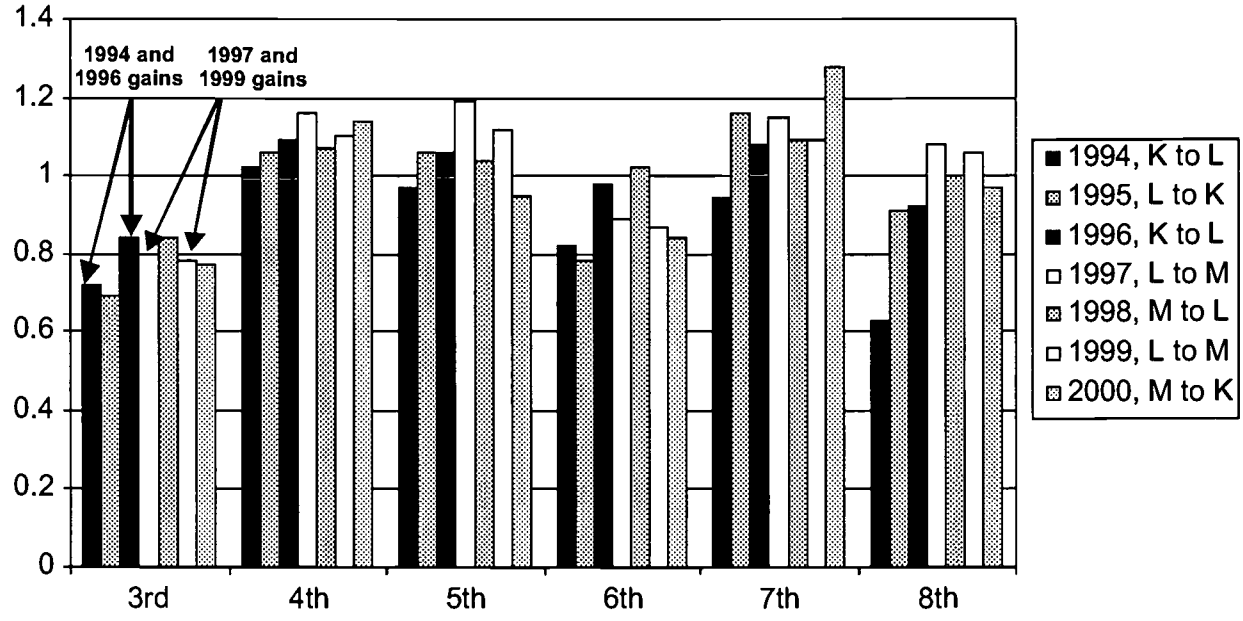
The most valid comparisons are between gains in 1994 and 1996, and between gains in 1997 and 1999. The 1994 and 1996 gains are both calculated using the same two test forms (K to L); the 1997 to 1999 comparisons are also based on a constant pattern of test forms (L to M). In Figure 3, the 1994 and 1996 gains are both solid black bars, and the 1997 and 1999 gains are both solid white. At all grades, the 1996 gains exceed the 1994 gains. In contrast, the 1999 gains are uniformly lower than the 1997 gains.

Although the 2000 gains are calculated from a different pair of test forms (M and K), they provide further evidence that the gains in reading are leveling off, or possibly declining. Math gains in 2000 appear to have rebounded slightly above the 1999 levels, but still well below their 1997 peak.

In sum, the school system now operates at a higher level of productivity than earlier in the decade. Evidence suggests that at the end of the decade neither math nor reading gains are continuing to improve. Unless a new cycle of productivity advancement occurs, we can expect the flattening annual test score trends, now visible in the lower grades, to eventually emerge in the higher grades as well.

Figure 3

Trends in Reading Gains, in GEs



Trends in Math Gains, in GEs

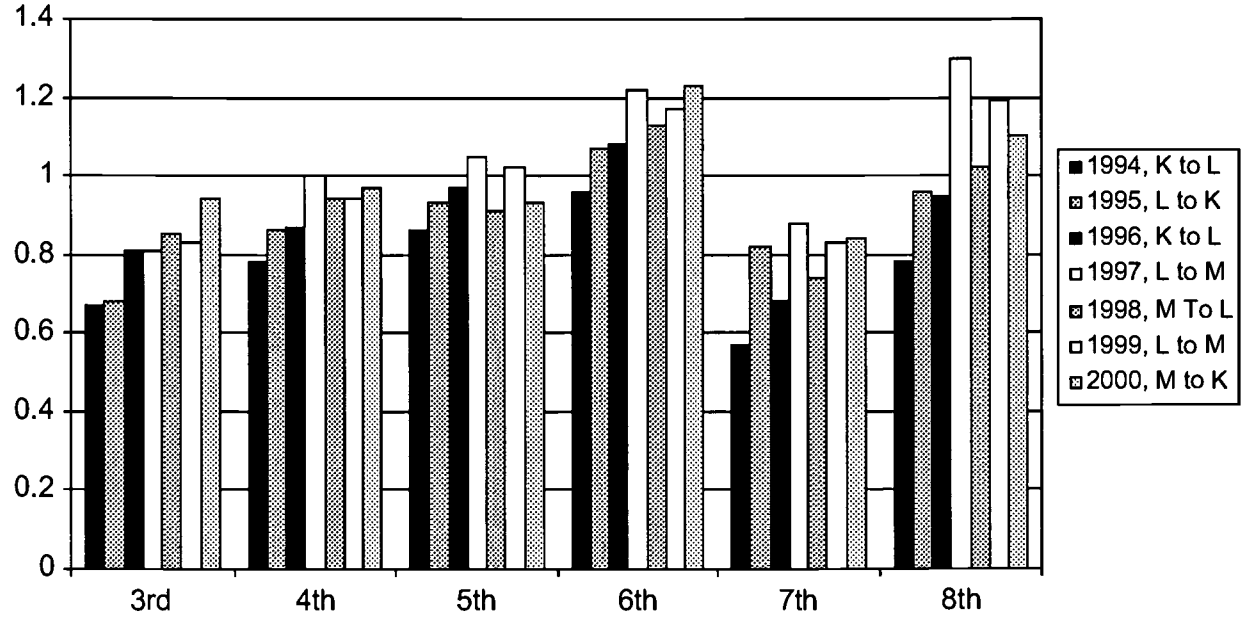
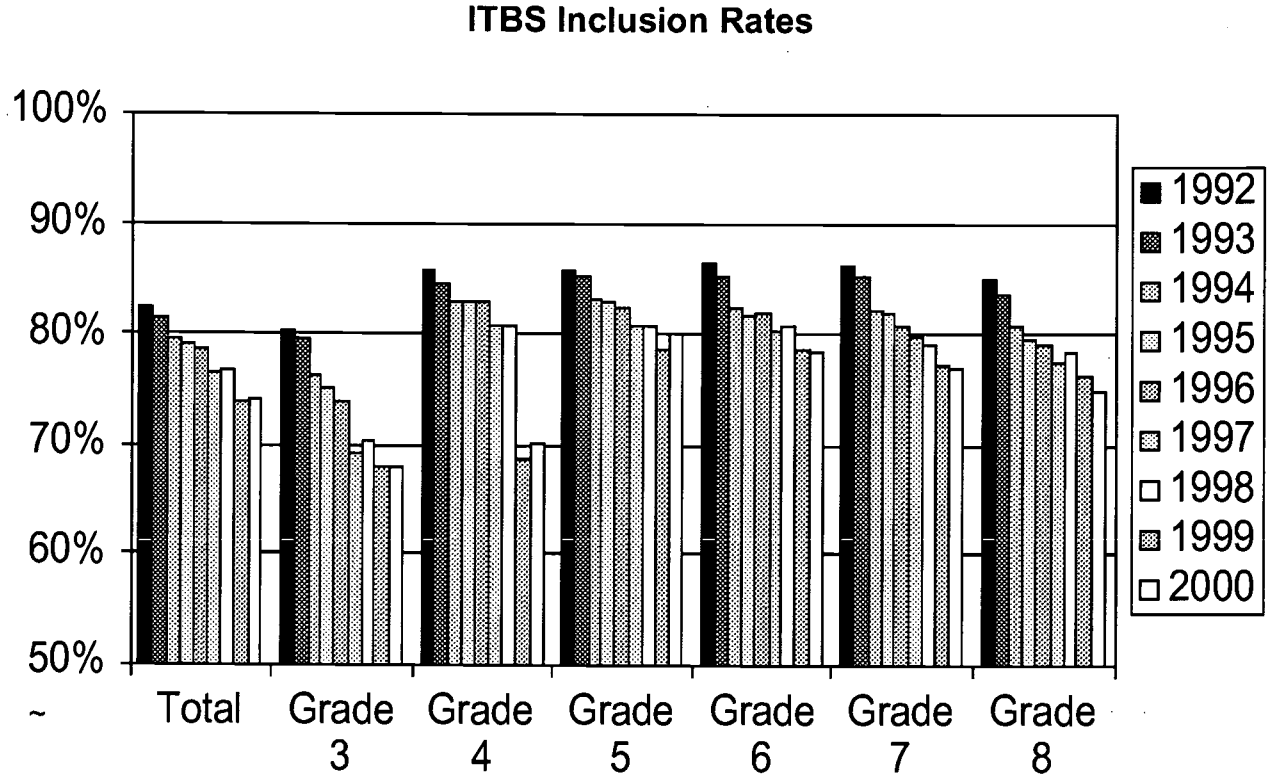


Figure 4



Note: See Table A for more detail, including grade 20.

Assuring Valid Comparisons in Test Score Trends

This is the third annual elementary school test trend review conducted at the Consortium on Chicago School Research. This re-analysis of CPS test score data is undertaken primarily to understand the underlying trends in test score data over time. It is difficult to discern these underlying trends because of several changes in testing practices and related policies in CPS. These changes have affected what scores are reported and how students are grouped in the reporting.

In this data brief we diverge from CPS test score reporting practices in three major ways. First, we include certain bilingual education students whose scores are excluded by CPS, and we remove others from our calculation of the test trends. The purpose of this is to set a common inclusion standard and apply it over the entire time period (1992-2000). Second, in order to distinguish the effects of grade retention from changing test score trends, we report student scores by age groupings rather than grade groupings. Third, we report mean grade equivalent scores instead of the percent of students scoring at or above national norms because of basic problems with the latter indicator. In addition, we examine changes over time in annual test score gains. Looking at gains over many years indicates the extent to which schools have become more or less productive.

Inclusion in the Elementary Testing Program

In spring 2000, the test scores of 74.2 percent of the total student enrollment in grades three through eight were included in CPS reporting.[5] Of those not included, 19.1 percent of the total were tested but then excluded and 6.7 percent were not tested at all (see Figure 3 and Table A).

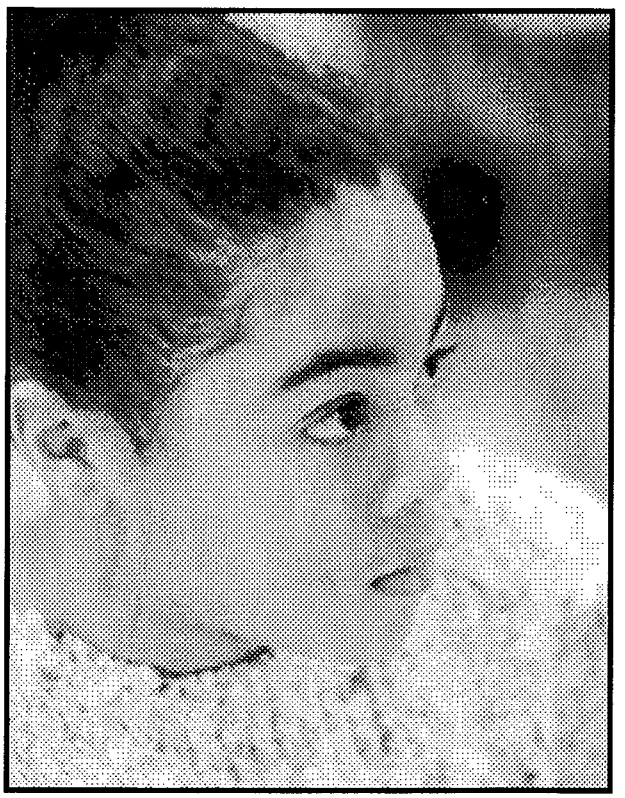
The 2000 inclusion rate of 74.2 percent is slightly higher than the 1999 rate (73.9 percent). This may indicate a leveling off in the percent of students whose test scores are included in public reporting of scores, an exception to the overall trend toward lower inclusion rates since 1992. A previous publication by the Consortium detailed the changes in policy and the shift in demographics in the school system that account for the declining inclusion rates throughout the 1990's.[6]

Of the 19.1 percent of the total enrollment who were tested but not included, slightly more than half (52.7 percent) were in special education programs, about 40 percent (39.4 percent) in bilingual programs, and 7.9 percent were in both programs (see Table B).

Among the 6.7 percent of the total enrollment who were not tested at all, 47.5 percent are enrolled in bilingual programs, 29.9 percent in special education programs, and 6.6 percent are enrolled in both bilingual and special education programs. Enrollment in special education does not create an automatic exclusion from testing or traditional test score reporting. In fact, many special education students are tested and included, as specified in their individual education plans. This information is not available centrally since it is contained in individual plans, therefore, we do not know which of these students "should" be tested and included. It is likely that a substantial proportion of the students not tested are indeed exempt from testing because of the bilingual or special education status; however, we do not have the specific information needed to make that determination. Sixteen percent of the students who were not tested at all are not in either bilingual or special education programs. These students make up only 1.1 percent of the total enrollment in 2000.

Different Reporting Strategies

In order to make test scores comparable from one year to another, we have applied the 1997 and 1998 bilingual inclusion rules to all other years. In 1997 and 1998, scores were included in traditional CPS public reporting after students had completed three full years of bilingual education, exclusive of kindergarten. This changed to four years in 1999 so that most students in bilingual education programs entered the public reporting system in the fifth grade, as opposed to the fourth grade in prior years. Before



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1997, any bilingual student who was tested was included in traditional public reporting.

The practical effects of applying the 1997 and 1998 criteria are to add back in the scores of the fourth year bilingual students in 1999 and 2000, and to remove the scores of students who had not completed three years of bilingual education in the years prior to 1997. Adding these students back in effectively increases the inclusion rates. The inclusion rate for year 2000 increases from 74.2 percent to 76.9 percent. For year 1999 the inclusion rate increases from 73.9 percent to 76.7 percent. These adjusted rates are both very similar to the inclusion rates in 1997 and 1998, the years whose inclusion rates we are applying to 1999 and 2000.

In addition to applying different inclusion criteria to test scores, we group students by age rather than by grade. We do this in order to minimize the effects of grade retention on our interpretation of score trends. Since the fall of 1997, large numbers of students have been retained in CPS, primarily in grades three, six and eight.[7] Since then, the student composition of grades has changed. So, for example, there are first-time third grade students, second-time third grade students, and even third-time third grade students. Not only are the target grades affected, but the adjacent higher grades are also affected as they have lower enrollments. Because it is the weaker students who are held back, scores in these higher grades may be inflated when compared to scores for the same grades in prior years. Moreover, the effects of grade retention only become more complicated over time as the policy evolves.

For example, in 1998, after the first year of the policy, fifth grade was the only grade unaffected by the retentions in third, sixth and eighth. The next year, 1999, the fifth grade contained relatively few weak students because the first group of retained third graders were in fourth grade, rather than fifth. By 2000, however, most of the first group of retained third graders entered fifth grade. It is very difficult to follow any trends in fifth grade scores while the composition of the student enrollment changes so much from one year to the next.

Reporting the test score trends by age groups rather than grade allows us to keep the comparison group constant over time. For this study, we defined age in a way that complements CPS age requirements for entry into school. For example, the nine year old group (usually third graders) consists of all students whose ninth birthday fell between September 1 and August 31 of a given academic year.[8] For school year 1999-2000, all students who celebrated their ninth birthday on any date between September 1, 1999 and August 31, 2000 are classified as nine year olds.

Finally, this data brief makes a third change from CPS reporting practices. We use the mean (average) grade equivalents, rather than any of the alternative statistics, such as percent at or above grade level, median percentile, or median grade equivalent. We argued in a 1998 Consortium report that the mean is the most sensible single statistic to report, given that it is sensitive to the performance of all included students. Other indicators can be strongly influenced by the performance of relatively small subgroups of students.[9]

Tables

Table A

CPS Spring Enrollment Grades 3 to 8, Including Non-Graded Special Education Students, by Test Inclusion Category

Grades 3 to 8, Plus Non-Graded Special Education Students of Same Ages

	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	203,751	151,191	74.2%	38,886	19.1%	13,696	6.7%
1999	201,027	148,656	73.9%	38,954	19.4%	13,417	6.7%
1998	197,262	151,557	76.8%	26,861	13.6%	18,844	9.6%
1997	193,007	147,779	76.6%	24,318	12.6%	20,910	10.8%
1996	190,680	150,160	78.7%	18,710	9.8%	21,810	11.4%
1995	191,411	151,528	79.2%	17,557	9.2%	22,326	11.7%
1994	193,286	153,835	79.6%	16,736	8.7%	22,715	11.8%
1993	195,665	159,467	81.5%	16,024	8.2%	20,174	10.3%
1992	193,021	158,898	82.3%	15,710	8.1%	18,413	9.5%

Grade 3	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	40,779	27,788	68.1%	10,247	25.1%	2,744	6.7%
1999	41,083	27,994	68.1%	10,435	25.4%	2,654	6.5%
1998	39,461	27,739	70.3%	5,318	13.5%	6,410	16.2%
1997	34,823	24,113	69.2%	3,965	11.4%	6,745	19.4%
1996	33,075	24,419	73.8%	2,135	6.5%	6,521	19.7%
1995	32,673	24,533	75.1%	1,906	5.8%	6,234	19.1%
1994	32,982	25,179	76.3%	1,838	5.6%	5,965	18.1%
1993	33,067	26,342	79.7%	1,696	5.1%	5,029	15.2%
1992	30,808	24,729	80.3%	1,539	5.0%	4,540	14.7%

Grade 4	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	36,220	25,390	70.1%	8,475	23.4%	2,355	6.5%
1999	34,669	23,785	68.6%	8,832	25.5%	2,052	5.9%
1998	29,671	23,999	80.9%	3,461	11.7%	2,211	7.5%
1997	32,367	26,168	80.8%	3,496	10.8%	2,703	8.4%
1996	31,969	26,481	82.8%	2,673	8.4%	2,815	8.8%
1995	32,591	26,987	82.8%	2,476	7.6%	3,128	9.6%
1994	32,171	26,677	82.9%	2,326	7.2%	3,168	9.8%
1993	30,633	25,925	84.6%	2,090	6.8%	2,618	8.5%
1992	31,464	27,021	85.9%	2,014	6.4%	2,429	7.7%

Grade 5	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	33,856	27,072	80.0%	4,928	14.6%	1,856	5.5%
1999	30,116	23,736	78.8%	4,545	15.1%	1,835	6.1%
1998	31,723	25,657	80.9%	4,055	12.8%	2,011	6.3%
1997	31,361	25,286	80.6%	3,786	12.1%	2,289	7.3%
1996	31,940	26,366	82.5%	3,019	9.5%	2,555	8.0%
1995	31,539	26,112	82.8%	2,751	8.7%	2,676	8.5%
1994	30,023	24,932	83.0%	2,551	8.5%	2,740	9.1%
1993	31,175	26,632	85.4%	2,338	7.5%	2,205	7.1%
1992	31,690	27,226	85.9%	2,320	7.3%	2,144	6.8%

Grade 6	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	31,335	24,625	78.6%	4,739	15.1%	1,971	6.3%
1999	33,344	26,228	78.7%	5,190	15.6%	1,926	5.8%
1998	33,462	27,004	80.7%	4,505	13.5%	1,953	5.8%
1997	31,513	25,305	80.3%	4,031	12.8%	2,177	6.9%
1996	30,928	25,359	82.0%	3,138	10.1%	2,431	7.9%
1995	29,699	24,254	81.7%	2,914	9.8%	2,531	8.5%
1994	30,732	25,363	82.5%	2,806	9.1%	2,563	8.3%
1993	31,372	26,704	85.1%	2,519	8.0%	2,149	6.9%
1992	32,879	28,425	86.5%	2,440	7.4%	2,014	6.1%

Grade 7	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	30,258	23,343	77.1%	5,040	16.7%	1,875	6.2%
1999	30,702	23,715	77.2%	5,009	16.3%	1,978	6.4%
1998	28,494	22,551	79.1%	4,074	14.3%	1,869	6.6%
1997	30,210	24,098	79.8%	3,876	12.8%	2,236	7.4%
1996	29,040	23,526	81.0%	3,087	10.6%	2,427	8.4%
1995	29,874	24,488	82.0%	2,933	9.8%	2,453	8.2%
1994	30,515	25,053	82.1%	2,770	9.1%	2,692	8.8%
1993	32,212	27,514	85.4%	2,430	7.5%	2,268	7.0%
1992	30,841	26,612	86.3%	2,246	7.3%	1,983	6.4%

Grade 8	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	30,624	22,969	75.0%	5,439	17.8%	2,216	7.2%
1999	30,340	23,189	76.4%	4,891	16.1%	2,260	7.4%
1998	31,267	24,585	78.6%	4,335	13.9%	2,347	7.5%
1997	29,395	22,782	77.5%	3,851	13.1%	2,762	9.4%
1996	30,270	23,979	79.2%	3,238	10.7%	3,053	10.1%
1995	31,485	25,101	79.7%	3,086	9.8%	3,298	10.5%
1994	33,042	26,773	81.0%	2,760	8.4%	3,509	10.6%
1993	31,371	26,226	83.6%	2,248	7.2%	2,897	9.2%
1992	29,159	24,748	84.9%	2,178	7.5%	2,233	7.7%

"Non-graded" Special Education Students ("Grade 20") Enrolled in Grades 3 to 8 Age Range

	Total Enrollment	Tested and Included	Percent Tested and Included	Tested but Excluded	Percent Tested and Excluded	Not Tested	Percent Not Tested
2000	701	4	0.6%	18	2.6%	679	96.9%
1999	773	9	1.2%	52	6.7%	712	92.1%
1998	3,178	22	0.7%	1,113	35.0%	2,043	64.3%
1997	3,338	27	0.8%	1,313	39.3%	1,998	59.9%
1996	3,458	30	0.9%	1,420	41.1%	2,008	58.1%
1995	3,550	53	1.5%	1,491	42.0%	2,006	56.5%
1994	3,821	58	1.5%	1,685	44.1%	2,078	54.4%
1993	5,835	124	2.1%	2,703	46.3%	3,008	51.6%
1992	6,180	137	2.2%	2,973	48.1%	3,070	49.7%

Table B **Reasons for Exclusion from Reporting**

Grades 3 to 8, Plus Non-Graded Special Education Students of Same Ages

	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	38,886	22,069	14,018	2,799
1999	38,954	20,522	15,358	3,074
1998	26,861	19,790	4,451	2,620
1997	24,318	18,486	3,583	2,249

Grade 3	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	10,247	2,761	6,994	492
1999	10,435	2,849	7,114	472
1998	5,318	2,529	2,485	304
1997	3,965	2,118	1,598	249

Grade 4	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	8,475	3,569	4,350	556
1999	8,832	3,175	5,118	539
1998	3,461	2,485	559	417
1997	3,496	2,621	499	376

Grade 5	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	4,928	3,582	836	510
1999	4,545	3,051	969	525
1998	4,055	3,162	416	477
1997	3,786	2,942	423	421

Grade 6	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	4,739	3,674	619	446
1999	5,190	3,820	807	563
1998	4,505	3,619	371	515
1997	4,031	3,260	378	393

Grade 7	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	5,040	4,094	574	372
1999	5,009	3,814	667	528
1998	4,074	3,323	339	412
1997	3,876	3,145	332	399

Grade 8	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	5,439	4,371	645	423
1999	4,891	3,761	683	447
1998	4,335	3,603	281	451
1997	3,851	3,172	353	326

"Non-graded" Special Education Students ("Grade 20") Enrolled in Grades 3 to 8 Age Range

	Total, Tested but Excluded	Special Education	Bilingual Education	Both SpecEd and BilingEd
2000	18	18	0	0
1999	52	52	0	0
1998	1,113	1,069	0	44
1997	1,313	1,228	0	85

Table C

Mean ITBS Reading Grade Equivalent Scores

	1992	1993	1994	1995	1996	1997	1998	1999	2000
9 Year Olds									
White	3.64	3.64	3.80	3.72	3.86	3.87	4.15	3.97	4.00
African-American	2.77	2.70	2.80	2.75	2.82	2.88	2.98	3.00	2.97
Asian	3.87	3.78	3.89	3.82	3.99	3.98	4.42	4.14	4.27
Latino	2.92	2.93	3.07	3.03	3.19	3.24	3.41	3.32	3.37
All	2.94	2.90	3.01	2.96	3.04	3.08	3.21	3.18	3.17
10 Year Olds									
White	4.54	4.64	4.71	4.82	4.91	5.09	5.05	5.23	5.15
African-American	3.61	3.65	3.62	3.79	3.78	3.95	3.83	4.00	3.97
Asian	4.62	4.80	4.81	4.94	4.93	5.10	5.14	5.26	5.17
Latino	3.69	3.81	3.79	3.99	3.90	4.08	4.10	4.23	4.26
All	3.77	3.84	3.83	3.99	3.97	4.14	4.07	4.22	4.21
11 Year Olds									
White	5.58	5.67	5.76	5.83	6.03	6.08	6.21	6.12	6.10
African-American	4.51	4.63	4.62	4.67	4.84	4.98	4.93	4.96	4.94
Asian	5.61	5.63	5.86	5.93	6.09	6.10	6.32	6.20	6.07
Latino	4.56	4.75	4.67	4.83	4.99	5.05	5.14	5.13	5.15
All	4.68	4.82	4.80	4.88	5.05	5.16	5.17	5.17	5.15
12 Year Olds									
White	6.43	6.74	6.70	6.72	7.01	7.02	7.31	7.13	7.14
African-American	5.30	5.51	5.49	5.44	5.64	5.80	5.96	5.91	5.83
Asian	6.55	6.73	6.67	6.85	7.17	7.14	7.33	7.22	7.14
Latino	5.36	5.63	5.56	5.60	5.77	5.92	6.12	6.04	6.06
All	5.48	5.73	5.69	5.67	5.87	6.01	6.20	6.12	6.07
13 Year Olds									
White	7.51	7.97	7.83	7.97	7.97	8.18	8.28	8.41	8.50
African-American	6.21	6.59	6.39	6.52	6.50	6.75	6.85	7.00	7.01
Asian	7.45	7.96	7.75	7.97	8.04	8.28	8.32	8.42	8.59
Latino	6.25	6.73	6.47	6.69	6.57	6.94	6.97	7.23	7.30
All	6.41	6.83	6.62	6.77	6.73	7.01	7.09	7.27	7.31
14 Year Olds									
White	8.37	8.75	8.80	8.89	9.01	9.04	9.34	9.25	9.44
African-American	7.08	7.36	7.31	7.29	7.48	7.59	7.77	7.87	7.96
Asian	8.23	8.59	8.66	8.82	8.93	9.08	9.36	9.33	9.25
Latino	7.10	7.47	7.30	7.51	7.51	7.66	7.82	8.05	8.18
All	7.28	7.58	7.52	7.59	7.71	7.82	8.01	8.12	8.24

Note: Scores in 1995, 1996, and 1999 adjusted to 1997 and 1998 bilingual inclusion rules. In 1999, students in their fourth year of bilingual education have been added back in to the totals. In 1995 and 1996, students with fewer than three years in bilingual education have been removed.

Table D

Mean ITBS Math Grade Equivalent Scores

	1992	1993	1994	1995	1996	1997	1998	1999	2000
9 Year Olds									
White	3.68	3.96	3.97	4.04	4.08	4.22	4.31	4.30	4.41
African-American	3.00	3.16	3.18	3.19	3.25	3.30	3.42	3.42	3.48
Asian	4.07	4.34	4.36	4.39	4.47	4.62	4.78	4.73	4.79
Latino	3.15	3.40	3.45	3.48	3.59	3.67	3.79	3.77	3.90
All	3.14	3.35	3.37	3.39	3.45	3.50	3.61	3.59	3.68
10 Year Olds									
White	4.62	4.76	4.81	4.88	4.98	5.21	5.17	5.36	5.29
African-American	3.76	3.91	3.87	3.98	4.01	4.18	4.19	4.30	4.32
Asian	4.93	5.20	5.20	5.34	5.32	5.58	5.49	5.75	5.64
Latino	3.94	4.11	4.14	4.22	4.24	4.46	4.49	4.63	4.63
All	3.94	4.10	4.09	4.18	4.22	4.41	4.42	4.55	4.55
11 Year Olds									
White	5.69	5.73	5.69	5.86	5.91	6.14	6.10	6.29	6.28
African-American	4.72	4.75	4.73	4.76	4.93	5.04	5.08	5.15	5.23
Asian	6.08	6.07	6.09	6.34	6.33	6.48	6.49	6.65	6.64
Latino	4.91	4.97	4.93	5.03	5.20	5.33	5.39	5.49	5.52
All	4.92	4.96	4.94	5.01	5.16	5.29	5.33	5.42	5.47
12 Year Olds									
White	6.66	6.90	6.77	6.85	6.98	7.27	7.31	7.37	7.49
African-American	5.66	5.79	5.66	5.73	5.80	6.11	6.16	6.25	6.31
Asian	7.17	7.34	7.20	7.45	7.48	7.70	7.72	7.78	7.94
Latino	5.85	6.05	5.92	5.99	6.11	6.43	6.48	6.58	6.65
All	5.87	6.04	5.91	5.98	6.08	6.38	6.44	6.52	6.59
13 Year Olds									
White	7.62	7.73	7.61	7.77	7.75	8.06	8.15	8.26	8.31
African-American	6.56	6.58	6.43	6.51	6.49	6.75	6.90	7.06	7.13
Asian	8.19	8.22	8.13	8.31	8.28	8.58	8.64	8.74	8.78
Latino	6.70	6.86	6.73	6.81	6.80	7.07	7.23	7.35	7.44
All	6.77	6.84	6.71	6.79	6.78	7.05	7.19	7.34	7.41
14 Year Olds									
White	8.40	8.55	8.49	8.66	8.66	8.93	8.97	9.23	9.26
African-American	7.31	7.36	7.33	7.32	7.40	7.71	7.74	8.05	8.09
Asian	8.92	9.06	8.93	9.08	9.06	9.41	9.48	9.70	9.61
Latino	7.47	7.61	7.55	7.64	7.66	7.95	8.02	8.32	8.36
All	7.53	7.61	7.58	7.62	7.68	7.97	8.02	8.32	8.36

Note: Scores in 1995, 1996, and 1999 adjusted to 1997 and 1998 bilingual inclusion rules. In 1999, students in their fourth year of bilingual education have been added back in to the totals. In 1995 and 1996, students with fewer than three years in bilingual education have been removed.

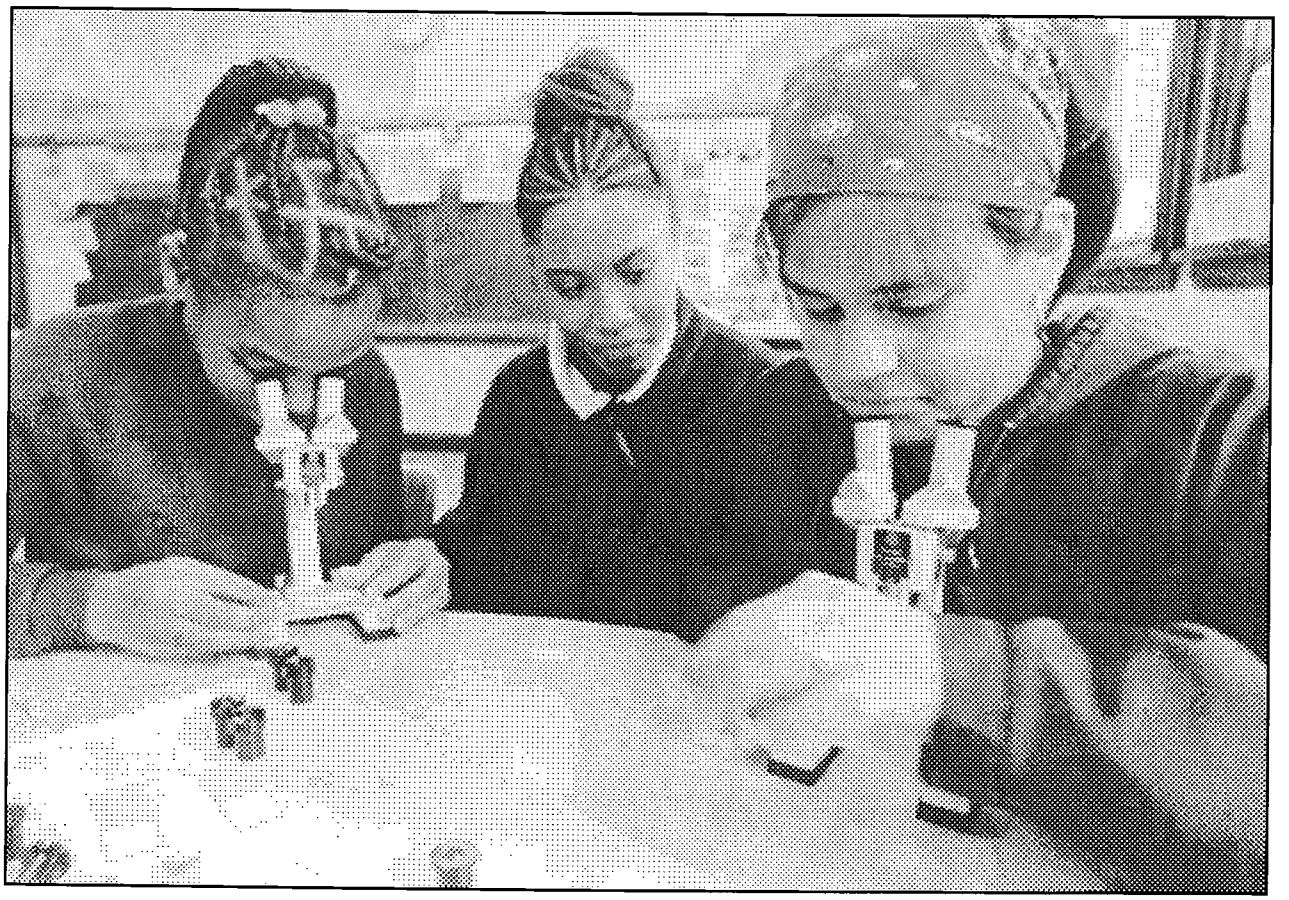
Reading Gain Scores

Table E

	1994	1995	1996	1997	1998	1999	2000
Grade 3	0.72	0.69	0.84	0.80	0.84	0.78	0.77
Grade 4	1.02	1.06	1.09	1.16	1.07	1.11	1.14
Grade 5	0.97	1.06	1.06	1.19	1.04	1.12	0.95
Grade 6	0.82	0.78	0.98	0.89	1.02	0.87	0.84
Grade 7	0.94	1.16	1.08	1.15	1.09	1.09	1.28
Grade 8	0.66	0.91	0.92	1.08	1.00	1.06	0.97

Math Gain Scores

	1994	1995	1996	1997	1998	1999	2000
Grade 3	0.68	0.68	0.81	0.81	0.85	0.83	0.94
Grade 4	0.78	0.86	0.87	1.00	0.94	0.95	0.97
Grade 5	0.86	0.93	0.97	1.05	0.91	1.02	0.93
Grade 6	0.96	1.07	1.08	1.22	1.13	1.17	1.23
Grade 7	0.58	0.82	0.68	0.88	0.74	0.83	0.84
Grade 8	0.78	0.96	0.95	1.30	1.02	1.19	1.10



John Booz

Endnotes

[1] Because grade equivalents can be very sensitive to test level differences, we have re-analyzed the test score trends using a different metric—an equated Rasch score, called a logit. The Rasch score enables us to adjust for different test levels being given to students of the same age. The results of the Rasch analysis suggest the same overall finding of slowing and in some cases declining test score trends. The results differ slightly by age, especially for nine years old, where the scores do not drop off. This is due to the large numbers of nine year-old students taking a lower test level. We will explore these differences more completely in a subsequent study of academic productivity in the period 1996 to 2000.

[2] Christopher Jencks and Merideth Phillips, eds., *The Black-White Test Score Gap* (Washington, D. C.: Brookings Institution Press, 1998).

[3] Anthony S. Bryk, Yeow Meng Thum, John Q. Easton, Stuart Luppescu, *Academic Productivity of Chicago Public Schools* (Chicago: Consortium on Chicago School Research, 1998).

[4] CPS now tests many students at the end of summer school and in January as part of ending social promotion. These additional testings require that the same test forms of the ITBS be used repeatedly, thereby increasing problems related to test security.

[5] In its test score reports, CPS uses the term "For students traditionally included in reporting" to describe these students.

[6] John Q. Easton, Todd Rosenkranz, Anthony S. Bryk, Brian A. Jacob, Stuart Luppescu, Melissa Roderick, *Annual CPS Test Trend Review, 1999* (Chicago: Consortium on Chicago School Research, 2000).

[7] Melissa Roderick, Jenny Nagaoka, Jen Bacon, John Q. Easton, *Update: Ending Social Promotion* (Chicago: Consortium on Chicago School Research, 2000).

[8] The required minimum age for entering kindergarten changed between 1987 and 1990. At the beginning of this period, students needed to reach their fifth birthday by December 1. The entering age increased by one month each year until 1990, when students needed to be five years old by September 1. We accounted for these transitions in our analyses.

[9] Anthony S. Bryk, Yeow Meng Thum, John Q. Easton, Stuart Luppescu, *Academic Productivity of Chicago Public Schools* (Chicago: Consortium on Chicago School Research, 1998).

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This is the third in a series of research data briefs designed to provide new data on a particular issue, in a timely fashion. As the name suggests, this is a short report focusing on a single topic. Because data briefs are not comprehensive studies, we limit our discussion of findings to summarizing the key results.

This data brief reflects the interpretations of the authors. Although the Consortium's Steering Committee provided technical advice and reviewed an earlier version of this brief, no formal endorsement by these individuals, their organizations, or the full Consortium should be assumed.

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