

Subgroup Achievement and Gap Trends — Iowa

K-12 enrollment — 472,628

The raw data used to develop these state profiles, including data for additional grade levels and years before 2002, can be found on the CEP Web site at www.cep-dc.org. Click on the link on the left for State Testing Data. Below the name of the report, click on the link for View State Profiles and Worksheets. Scroll down the page, and click on the Worksheet links for any state.

Subgroup Achievement Trends and Gap Trends — Key Findings

Summary

This year the Center on Education Policy analyzed data on the achievement of different groups of students in two distinct ways. First, we looked at grade 4 test results to determine whether the performance of various groups improved at three achievement levels—basic and above, proficient and above, and advanced. Second, we looked at gaps between these groups at the proficient level across three grades (grade 4, grade 8 in most cases, and a high school grade). These two types of analyses show whether elementary school achievement has generally gone up for different groups of students and whether achievement gaps at different grade levels have narrowed, widened, or stayed the same.

Achievement trends were mostly upward in Iowa, at least at the proficient achievement level. Gains were shown at the proficient level for all subgroups, but there were declines at the advanced level in reading. Achievement gaps have narrowed almost across the board.

Subgroup trends by achievement level at grade 4

- **Main trend:** In reading, all subgroups showed gains in the percentage of students scoring at proficient-and-above level, but there were declines across the board at the advanced achievement level. In math, all subgroups showed gains at the proficient level, and at the advanced level there were mostly either small increases or no change.
- **Notable exceptions:** The Asian subgroup showed a fairly large increase in the percentage of students reaching the advanced level in math.

Gap trends at three grade levels

- **Main trend:** Overall, there was improvement in the closing of gaps in the percentages of students scoring at the proficient level between the African American and Latino subgroups and the white subgroup, and between low-income and non-low-income students, at grades 4, 8 and the high school grade analyzed. All trend lines showed gaps closing in reading, and in math, gaps narrowed almost across the board.

Data notes

- Limited data: Trends are limited to 2004 to 2008. Data were unavailable to determine the percentage of elementary students at or above the basic achievement level.
- Subgroups analyzed: Trends were analyzed for white, African American, Latino, Asian American and low-income students. The Native American subgroup is too small in Iowa to yield reliable trend data. Trends for students with disabilities, English language learners, and male and female students have not been summarized because they will be discussed in separate reports.
- Grades analyzed: Analyses of subgroup trends by two achievement levels are limited to one elementary grade because of the massive amounts of data involved and because this is the pilot year of a process that CEP hopes to extend to the middle and high school levels in future years. Analyses of achievement gap trends cover three grade levels: grade 4, grade 8, and the high school grade tested for NCLB.

Data Limitations

Years of comparable percentage proficient data	2004 through 2008 (earlier years are three-year average scores, not comparable) Data by achievement levels (i.e., Low, Intermediate, High) not available until 2005
Years of comparable mean scale score data	2004 through 2008
Disaggregated data for all subgroups and comparison groups	2004 through 2008 Percentage proficient data not available until 2007 for students who are <i>not</i> low-income, disabled, or English language learners, so the subgroups of low-income students, students with disabilities, and ELLs are compared with all tested students in the state in proficiency analyses

Test Characteristics

The characteristics highlighted below are for the state reading and mathematics tests used for accountability under the No Child Left Behind Act (NCLB).

Test(s) used for NCLB accountability	Iowa Tests of Basic Skills (ITBS) (grades 3–8) Iowa Tests of Educational Development (ITED) (high school) Iowa Alternate Assessment
Grades tested for NCLB accountability	3-8, 11
State labels for achievement levels	IA uses three achievement levels: Low, Intermediate, and High. For

our analyses we treated Intermediate as Proficient and High as Advanced. No IA achievement level was treated as our Basic.

High school NCLB test also used as an exit exam?

No

First year test used

2000: Grades 4, 8, 11

2006: Grades 3, 5, 6, 7

Test comparisons are made with the 2000 norming study for the Iowa Tests.

Time of test administration

Spring (test windows also in fall and midyear)

Major changes in testing system (2002–present)

2004–05: Changed from biennial to annual data in AYP

2005–06: Began assessing all students in grades 3–8, 11 for inclusion in AYP reporting

2005–06: AYP computed by collapsing grades rather than using grades 4, 8, and 11

Comments

The data the state reported for 2003 were three-year averages of results from 2001-2003. Single-year data were unavailable for years before 2004. For this study, the state recommended using single-year data for 2004 and beyond.

Achievement by Subgroup — Trends at the Elementary Level

Note: The tables in this profile of subgroup achievement and gap trends begin with table 7. Tables 1 through 6 can be found in the companion state profile of general achievement trends.

Table IA-7. Percentages of Grade 4 Students by Racial or Ethnic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Reading

Subgroup	Reporting Year							Average Yearly Percentage Point Gain ¹
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced			NA	22%	19%	24%	18%	-1.3
Proficient and Above			77%	79%	77%	80%	78%	0.2
Basic and Above			NA	NA	NA	NA	NA	NA
White								
Advanced			NA	24%	20%	26%	20%	-1.3
Proficient and Above			80%	82%	80%	83%	80%	0.2
Basic and Above			NA	NA	NA	NA	NA	NA
African American								
Advanced			NA	8%	8%	9%	6%	-0.8
Proficient and Above			50%	58%	56%	58%	56%	1.4
Basic and Above			NA	NA	NA	NA	NA	NA
Latino								
Advanced			NA	8%	6%	9%	6%	-0.7
Proficient and Above			52%	59%	58%	63%	61%	2.3
Basic and Above			NA	NA	NA	NA	NA	NA
Asian								
Advanced			NA	27%	25%	24%	21%	-2.1
Proficient and Above			77%	81%	81%	83%	78%	0.1
Basic and Above			NA	NA	NA	NA	NA	NA
Native American ²								
Advanced			NA	7%	9%	11%	7%	0.1
Proficient and Above			65%	69%	61%	75%	64%	-0.3
Basic and Above			NA	NA	NA	NA	NA	NA

Table reads: The percentage of white 4th graders who scored at the advanced level on the state reading test decreased from 24% in 2005 to 20% in 2008. During this period, the average yearly loss in the percentage advanced in reading for white 4th graders was 1.3 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table IA-8. Percentage of Grade 4 Students by Demographic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Reading

Subgroup	Reporting Year						Average Yearly Percentage Point Gain ¹	
	2002	2003	2004	2005	2006	2007		2008
All tested students								
Advanced			NA	22%	19%	24%	18%	-1.3
Proficient and Above			77%	79%	77%	80%	78%	0.2
Basic and Above			NA	NA	NA	NA	NA	NA
Low-income students								
Advanced			NA	11%	6%	12%	9%	-0.5
Proficient and Above			61%	66%	64%	67%	65%	0.8
Basic and Above			NA	NA	NA	NA	NA	NA
Students with disabilities ³								
Advanced			NA	4%	6%	6%	6%	-0.2
Proficient and Above			31%	40%	40%	42%	40%	0.0
Basic and Above			NA	NA	NA	NA	NA	NA
English language learners ³								
Advanced			NA	2%	2%	5%	4%	1.2
Proficient and Above			42%	47%	45%	54%	51%	3.1
Basic and Above			NA	NA	NA	NA	NA	NA
Female								
Advanced			NA	24%	20%	25%	19%	-1.4
Proficient and Above			79%	82%	80%	82%	80%	0.2
Basic and Above			NA	NA	NA	NA	NA	NA
Male								
Advanced			NA	21%	17%	22%	18%	-1.2
Proficient and Above			74%	77%	75%	78%	75%	0.2
Basic and Above			NA	NA	NA	NA	NA	NA

Table reads: The percentage of low-income 4th graders who scored at the advanced level on the state reading test decreased from 11% in 2005 to 9% in 2008. During this period, the average yearly loss in the percentage advanced in reading for low-income 4th graders was 0.5 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2008 results.

Table IA-9. Percentages of Grade 4 Students by Racial or Ethnic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Mathematics

Subgroup	Reporting Year							Average Yearly Percentage Point Gain ¹
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced			NA	23%	23%	25%	24%	0.0
Proficient and Above			77%	81%	80%	82%	80%	0.8
Basic and Above			NA	NA	NA	NA	NA	NA
White								
Advanced			NA	25%	25%	28%	26%	0.1
Proficient and Above			80%	83%	82%	84%	83%	0.8
Basic and Above			NA	NA	NA	NA	NA	NA
African American								
Advanced			NA	8%	7%	9%	8%	0.0
Proficient and Above			46%	58%	55%	60%	55%	2.3
Basic and Above			NA	NA	NA	NA	NA	NA
Latino								
Advanced			NA	8%	8%	10%	8%	0.0
Proficient and Above			56%	63%	64%	65%	65%	2.2
Basic and Above			NA	NA	NA	NA	NA	NA
Asian								
Advanced			NA	28%	30%	29%	35%	2.4
Proficient and Above			82%	84%	84%	85%	85%	0.6
Basic and Above			NA	NA	NA	NA	NA	NA
Native American ²								
Advanced			NA	10%	6%	8%	12%	0.5
Proficient and Above			58%	67%	59%	68%	65%	1.7
Basic and Above			NA	NA	NA	NA	NA	NA

Table reads: The percentage of white 4th graders who scored at the advanced level on the state math test increased from 25% in 2005 to 26% in 2008. During this period, the average yearly gain in the percentage advanced in math for white 4th graders was 0.1 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table IA-10. Percentage of Grade 4 Students by Demographic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Mathematics

Subgroup	Reporting Year						Average Yearly Percentage Point Gain ¹	
	2002	2003	2004	2005	2006	2007		2008
All tested students								
Advanced			NA	23%	23%	25%	24%	0.0
Proficient and Above			77%	81%	80%	82%	80%	0.8
Basic and Above			NA	NA	NA	NA	NA	NA
Low-income students								
Advanced			NA	12%	12%	13%	12%	0.1
Proficient and Above			62%	69%	67%	70%	68%	1.4
Basic and Above			NA	NA	NA	NA	NA	NA
Students with disabilities ³								
Advanced			NA	5%	8%	7%	7%	-0.6
Proficient and Above			39%	49%	50%	51%	49%	-0.2
Basic and Above			NA	NA	NA	NA	NA	NA
English language learners ³								
Advanced			NA	4%	5%	5%	6%	0.7
Proficient and Above			49%	54%	57%	58%	58%	0.5
Basic and Above			NA	NA	NA	NA	NA	NA
Female								
Advanced			NA	22%	20%	24%	21%	-0.4
Proficient and Above			76%	80%	79%	81%	79%	0.7
Basic and Above			NA	NA	NA	NA	NA	NA
Male								
Advanced			NA	25%	26%	27%	27%	0.5
Proficient and Above			78%	81%	81%	82%	81%	0.8
Basic and Above			NA	NA	NA	NA	NA	NA

Table reads: The percentage of low-income 4th graders who scored at the advanced level on the state math test was 12% in 2005 and 2008. During this period, the average yearly gain in the percentage advanced in math for low-income 4th graders was 0.1 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2008 results.

Achievement by Subgroup — Gap Trends (Percentages Proficient)**Table IA-11. Subgroup Achievement Trends in Reading by Percentages Proficient**

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.

If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Grade 4					Grade 8					Grade 11				
	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group
All tested students	04-08	77%	78%	0.2		04-08	69%	72%	0.5		04-08	77%	77%	0.2	
White	04-08	80%	80%	0.2		04-08	72%	75%	0.6		04-08	79%	79%	0.2	
African American	04-08	50%	56%	1.4	L	04-08	37%	45%	2.0	L	04-08	50%	53%	0.9	L
Latino	04-08	52%	61%	2.3	L	04-08	42%	48%	1.5	L	04-08	51%	57%	1.4	L
Asian	04-08	77%	78%	0.1	S	04-08	69%	72%	0.8	L	04-08	74%	79%	1.2	L
Native American	04-08	65%	64%	-0.3 ²	S	04-08	52%	62%	2.4 ²	L	04-08	62%	63%	0.2 ²	E
All tested students	04-08	77%	78%	0.2		04-08	69%	72%	0.5		04-08	77%	77%	0.2	
Low-income	04-08	61%	65%	0.8	L	04-08	50%	54%	1.2	L	04-08	60%	61%	0.3	L
All tested students	06-08	77%	78%	0.1		06-08	71%	72%	0.4		06-08	78%	77%	-0.2	
Students with disabilities ³	06-08	40%	40%	0.0	S	06-08	27%	26%	-0.4	S	06-08	35%	33%	-1.1	S
All tested students	06-08	77%	78%	0.1		06-08	71%	72%	0.4		06-08	78%	77%	-0.2	
English language learners ³	06-08	45%	51%	3.1	L	06-08	29%	32%	1.8	L	06-08	30%	34%	2.0	L
Female	04-08	79%	80%	0.2		04-08	72%	73%	0.3		04-08	82%	81%	-0.2	
Male	04-08	74%	75%	0.2	E	04-08	67%	70%	0.7	L	04-08	72%	74%	0.5	L

Table reads: In 2004, 80% of white 4th graders and 50% of African American 4th graders scored at the proficient level on the state reading test. In 2008, 80% of

white 4th graders and 56% of African American 4th graders scored at the proficient level in reading. Between 2004 and 2008, the percentage proficient improved at an average rate of 0.2 percentage point per year for white students and 1.4 percentage points per year for African American students, indicating a larger rate of gain and a narrowing of the achievement gap for African American 4th graders.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table IA-12. Subgroup Achievement Trends in Mathematics by Percentages Proficient

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.

If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Grade 4					Grade 8					Grade 11				
	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain ¹	Gain Larger or Smaller Than Comparison Group
All tested students	04-08	77%	80%	0.8		04-08	72%	76%	0.9		04-08	79%	78%	-0.2	
White	04-08	80%	83%	0.8		04-08	75%	79%	0.9		04-08	81%	80%	0.0	
African American	04-08	46%	55%	2.3	L	04-08	34%	46%	2.9	L	04-08	44%	45%	0.3	L
Latino	04-08	56%	65%	2.2	L	04-08	43%	55%	3.0	L	04-08	52%	56%	1.0	L
Asian	04-08	82%	85%	0.6	S	04-08	78%	81%	0.8	S	04-08	79%	77%	-0.4	S
Native American	04-08	58%	65%	1.7 ²	L	04-08	51%	57%	1.5 ²	L	04-08	60%	61%	0.4 ²	L
All tested students	04-08	77%	80%	0.8		04-08	72%	76%	0.9		04-08	79%	78%	-0.2	
Low-income	04-08	62%	68%	1.4	L	04-08	52%	59%	1.8	L	04-08	62%	61%	-0.2	E
All tested students	06-08	80%	80%	0.1		06-08	75%	76%	0.4		06-08	78%	78%	-0.2	
Students with disabilities ³	06-08	50%	49%	-0.2	S	06-08	30%	31%	0.7	L	06-08	35%	33%	-0.9	S
All tested students	06-08	80%	80%	0.1		06-08	75%	76%	0.4		06-08	78%	78%	-0.2	
English language learners ³	06-08	57%	58%	0.5	L	06-08	43%	44%	0.5	L	06-08	40%	38%	-0.9	S
Female	04-08	76%	79%	0.7		04-08	72%	76%	0.9		04-08	78%	78%	-0.2	
Male	04-08	78%	81%	0.8	L	04-08	72%	76%	0.9	E	04-08	79%	78%	-0.1	L

Table reads: In 2004, 80% of white 4th graders and 46% of African American 4th graders scored at the proficient level on the state math test. In 2008, 83% of white 4th graders and 55% of African American 4th graders scored at the proficient level in math. Between 2004 and 2008, the percentage proficient improved at an average rate of 0.8 percentage point per year for white students and 2.3 percentage points per year for African American students, indicating a larger rate of gain and a narrowing of the achievement gap for African American 4th graders.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Achievement by Subgroup — Gap Trends (Mean Scale Scores)

Table IA-13. Achievement Gap Trends in Reading by Mean Scale Scores

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group. If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Statistic	Grade 4					Grade 8					Grade 11				
		Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
All tested students	Mean SS	04-08	207.0	209.4	0.6		04-08	252.3	255.4	0.8		04-08	286.0	288.2	0.6	
	SD	04-08	27.5	27.0			04-08	38.4	36.7			04-08	42.6	41.3		
White	Mean SS	04-08	209.2	211.6	0.6		04-08	255.0	258.0	0.8		04-08	288.1	290.5	0.6	
	SD	04-08	27.2	26.7			04-08	37.6	35.9			04-08	41.9	40.5		
African American	Mean SS	04-08	189.4	192.8	0.9	L	04-08	224.4	231.9	1.9	L	04-08	256.3	260.9	1.2	L
	SD	04-08	23.9	24.0			04-08	34.6	34.9			04-08	40.9	41.0		
Latino	Mean SS	04-08	189.5	196.0	1.6	L	04-08	225.9	234.3	2.1	L	04-08	258.6	262.9	1.1	L
	SD	04-08	23.9	23.7			04-08	37.1	35.0			04-08	42.0	40.0		
Asian	Mean SS	04-08	207.3	211.8	1.1	L	04-08	254.1	259.4	1.3	L	04-08	285.7	292.7	1.8	L
	SD	04-08	29.3	27.6			04-08	40.7	38.4			04-08	43.0	43.4		
Native American	Mean SS	04-08	198.4	197.5	-0.2 ²	S	04-08	235.6	243.0	1.8 ²	L	04-08	268.3	274.6	1.6 ²	L
	SD	04-08	25.2	24.3			04-08	38.3	35.0			04-08	38.5	42.8		
Not Low-income	Mean SS	04-08	212.7	215.0	0.6		04-08	259.7	262.7	0.7		04-08	290.8	294.0	0.8	
	SD	04-08	26.8	26.2			04-08	36.6	34.9			04-08	41.2	39.6		
Low-income	Mean SS	04-08	195.6	199.3	0.9	L	04-08	234.0	238.8	1.2	L	04-08	265.9	269.3	0.9	L
	SD	04-08	25.4	25.3			04-08	36.8	35.3			04-08	42.5	41.0		
Not disabled	Mean SS	06-08	213.1	213.2	0.1		06-08	261.7	261.9	0.1		06-08	294.4	294.3	0.0	
	SD	06-08	25.7	25.4			06-08	33.8	33.4			06-08	38.5	38.4		
Students with disabilities ³	Mean SS	06-08	173.6	184.5	5.4	L	06-08	204.4	215.2	5.4	L	06-08	232.1	243.8	5.8	L
	SD	06-08	46.6	23.4			06-08	54.3	30.2			06-08	61.2	33.8		
Not ELLs	Mean SS	06-08	208.5	210.4	0.9		06-08	253.9	256.3	1.2		06-08	287.0	289.0	1.0	
	SD	06-08	32.5	26.8			06-08	42.7	36.4			06-08	46.9	41.0		
English language learners ³	Mean SS	06-08	187.7	191.1	1.7	L	06-08	218.8	221.1	1.1	S	06-08	244.1	243.3	-0.4	S
	SD	06-08	21.4	23.2			06-08	32.3	30.3			06-08	35.8	35.2		
Female	Mean SS	04-08	208.9	211.0	0.5		04-08	253.6	256.1	0.6		04-08	289.5	290.7	0.3	
	SD	04-08	27.3	26.7			04-08	37.0	35.1			04-08	40.2	39.4		

Subgroup	Statistic	Grade 4					Grade 8					Grade 11				
		Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
Male	Mean SS	04-08	205.1	207.9	0.7	L	04-08	251.1	254.7	0.9	L	04-08	282.7	285.7	0.8	L
	SD	04-08	27.6	27.1			04-08	39.8	38.1			04-08	44.4	42.9		

Table reads: In 2004, the mean scale score on the state 4th grade reading test was 209.2 for white students and 189.4 for African American students. In 2008, the mean scale score in 4th grade reading was 211.6 for white students and 192.8 for African American students. Between 2004 and 2008, the mean scale score improved at an average yearly rate of 0.6 points for white students and 0.9 points for African American students, indicating a narrowing of the achievement gap for African Americans.

Note: The Iowa Tests of Basic Skills (ITBS) for grades 3-8 and Iowa Tests of Educational Development (ITED) for grade 11 are scored on a vertical scale. Developmental scores are established by assigning a score of 200 to the median performance of students in the spring of grade 4 and 250 to the median performance of students in the spring of grade 8.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table IA-14. Subgroup Achievement Trends in Mathematics by Mean Scale Scores

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.

If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Statistic	Grade 4					Grade 8					Grade 11				
		Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
All tested students	Mean SS	04-08	205.0	209.1	1.0		04-08	257.2	262.2	1.3		04-08	288.4	289.9	0.4	
	SD	04-08	22.6	22.8			04-08	34.9	33.9			04-08	39.1	38.4		
White	Mean SS	04-08	206.9	210.8	1.0		04-08	259.8	264.8	1.3		04-08	290.7	292.4	0.4	
	SD	04-08	22.2	22.4			04-08	34.1	33.1			04-08	38.2	37.5		
African American	Mean SS	04-08	187.6	193.8	1.6	L	04-08	225.9	236.2	2.6	L	04-08	252.1	257.7	1.4	L
	SD	04-08	19.5	21.0			04-08	29.6	30.7			04-08	36.5	35.4		
Latino	Mean SS	04-08	191.3	198.6	1.8	L	04-08	231.4	242.2	2.7	L	04-08	262.1	264.9	0.7	L
	SD	04-08	19.4	20.2			04-08	31.1	31.2			04-08	38.1	36.6		
Asian	Mean SS	04-08	207.9	215.9	2.0	L	04-08	264.6	270.6	1.5	L	04-08	290.2	293.6	0.8	L
	SD	04-08	23.7	24.7			04-08	37.8	35.4			04-08	40.4	41.6		
Native American	Mean SS	04-08	196.8	198.6	0.4 ²	S	04-08	239.9	246.1	1.6 ²	L	04-08	272.3	272.7	0.1 ²	S
	SD	04-08	19.9	20.4			04-08	32.4	32.0			04-08	36.1	39.8		
Not Low-income	Mean SS	04-08	209.6	213.7	1.0		04-08	264.4	269.2	1.2		04-08	293.2	296.0	0.7	
	SD	04-08	21.9	22.1			04-08	33.2	32.2			04-08	37.5	36.5		
Low-income	Mean SS	04-08	195.8	200.7	1.2	L	04-08	239.5	246.2	1.7	L	04-08	268.5	270.4	0.5	S
	SD	04-08	21.1	21.4			04-08	32.7	32.2			04-08	39.3	37.7		
Not disabled	Mean SS	06-08	211.3	211.9	0.3		06-08	267.4	268.1	0.4		06-08	296.6	296.0	-0.3	
	SD	06-08	21.6	21.7			06-08	30.8	30.9			06-08	34.9	35.1		
Students with disabilities ³	Mean SS	06-08	179.8	190.4	5.3	L	06-08	212.1	225.4	6.7	L	06-08	234.7	245.7	5.5	L
	SD	06-08	46.7	20.8			06-08	53.8	27.8			06-08	59.7	31.4		
Not ELLs	Mean SS	06-08	207.5	209.8	1.1		06-08	259.7	262.9	1.7		06-08	289.2	290.6	0.7	
	SD	06-08	28.8	22.7			06-08	40.4	33.7			06-08	44.0	38.1		
English language learners ³	Mean SS	06-08	194.8	196.0	0.6	S	06-08	233.4	234.9	0.8	S	06-08	250.9	251.1	0.1	S
	SD	06-08	19.4	20.3			06-08	30.9	28.9			06-08	34.3	33.9		
Female	Mean SS	04-08	203.6	207.5	1.0		04-08	255.7	260.2	1.1		04-08	286.3	287.3	0.3	

Subgroup	Statistic	Grade 4					Grade 8					Grade 11				
		Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) ¹	Gain Larger or Smaller than Comparison Group
	SD	04-08	21.7	21.8			04-08	33.1	32.1			04-08	36.8	36.2		
Male	Mean SS	04-08	206.3	210.6	1.1	L	04-08	258.6	264.1	1.4	L	04-08	290.5	292.4	0.5	L
	SD	04-08	23.3	23.6			04-08	36.5	35.4			04-08	41.0	40.2		

Table reads: In 2004, the mean scale score on the state 4th grade math test was 206.9 for white students and 187.6 for African American students. In 2008, the mean scale score in 4th grade math was 210.8 for white students and 193.8 for African American students. Between 2004 and 2008, the mean scale score improved at an average yearly rate of 1.0 points for white students and 1.6 points for African American students, indicating a narrowing of the achievement gap for African Americans.

Note: The Iowa Tests of Basic Skills (ITBS) for grades 3-8 and Iowa Tests of Educational Development (ITED) for grade 11 are scored on a vertical scale. Developmental scores are established by assigning a score of 200 to the median performance of students in the spring of grade 4 and 250 to the median performance of students in the spring of grade 8.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table IA-15. Numbers of Test-Takers

Subgroup	Subject	Grade 4					Grade 8					Grade 11				
		Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year	Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year	Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year
All tested students	Reading	04-08	34,055	31,384	-7.8%	100.0%	04-08	37,883	32,873	-13.2%	100.0%	04-08	34,511	33,675	-2.4%	100.0%
	Math	04-08	34,025	31,314	-8.0%	100.0%	04-08	37,811	32,818	-13.2%	100.0%	04-08	34,501	33,662	-2.4%	100.0%
White	Reading	04-08	28,945	26,685	-7.8%	85.0%	04-08	33,188	28,622	-13.8%	87.1%	04-08	31,088	30,244	-2.7%	89.8%
	Math	04-08	28,901	26,617	-7.9%	85.0%	04-08	33,119	28,584	-13.7%	87.1%	04-08	31,071	30,238	-2.7%	89.8%
African American	Reading	04-08	1,647	1,728	4.9%	5.5%	04-08	1,513	1,600	5.8%	4.9%	04-08	977	1,243	27.2%	3.7%
	Math	04-08	1,652	1,726	4.5%	5.5%	04-08	1,514	1,587	4.8%	4.8%	04-08	969	1,235	27.5%	3.7%
Latino	Reading	04-08	1,818	2,128	17.1%	6.8%	04-08	1,470	1,846	25.6%	5.6%	04-08	1,036	1,433	38.3%	4.3%
	Math	04-08	1,822	2,127	16.7%	6.8%	04-08	1,457	1,841	26.4%	5.6%	04-08	1,037	1,433	38.2%	4.3%
Asian	Reading	04-08	599	675	12.7%	2.2%	04-08	596	624	4.7%	1.9%	04-08	627	592	-5.6%	1.8%
	Math	04-08	597	675	13.1%	2.2%	04-08	596	625	4.9%	1.9%	04-08	627	593	-5.4%	1.8%
Native American	Reading	04-08	206	167	-18.9%	0.5%	04-08	236	179	-24.2%	0.5%	04-08	168	162	-3.6%	0.5%
	Math	04-08	208	168	-19.2%	0.5%	04-08	246	179	-27.2%	0.5%	04-08	178	162	-9.0%	0.5%
Low-income	Reading	04-08	11,373	11,128	-2.2%	35.5%	04-08	10,977	10,039	-8.5%	30.5%	04-08	6,709	8,025	19.6%	23.8%
	Math	04-08	11,364	11,094	-2.4%	35.4%	04-08	10,941	10,000	-8.6%	30.5%	04-08	6,699	8,024	19.8%	23.8%
Students w/ disabilities	Reading	06-08	4,261	4,162	-2.3%	13.3%	06-08	5,322	4,584	-13.9%	13.9%	06-08	4,453	4,106	-7.8%	12.2%
	Math	06-08	4,263	4,155	-2.5%	13.3%	06-08	5,296	4,556	-14.0%	13.9%	06-08	4,439	4,102	-7.6%	12.2%
English language learners	Reading	06-08	1,201	1,516	26.2%	4.8%	06-08	801	881	10.0%	2.7%	06-08	497	604	21.5%	1.8%
	Math	06-08	1,201	1,517	26.3%	4.8%	06-08	801	879	9.7%	2.7%	06-08	500	606	21.2%	1.8%
Female	Reading	04-08	16,632	15,393	-7.4%	49.0%	04-08	18,539	16,029	-13.5%	48.8%	04-08	16,809	16,581	-1.4%	49.2%
	Math	04-08	16,603	15,357	-7.5%	49.0%	04-08	18,494	16,002	-13.5%	48.8%	04-08	16,801	16,564	-1.4%	49.2%
Male	Reading	04-08	17,373	15,991	-8.0%	51.0%	04-08	19,293	16,844	-12.7%	51.2%	04-08	17,652	17,094	-3.2%	50.8%
	Math	04-08	17,365	15,957	-8.1%	51.0%	04-08	19,252	16,816	-12.7%	51.2%	04-08	17,641	17,098	-3.1%	50.8%

Table reads: In 2004, 28,945 students in the white subgroup took the state 4th grade reading test. By 2008, the number of white test-takers had fallen to 26,685 students, a decrease of 7.8%. In 2008, the white subgroup made up 85.0% of the 31,384 4th graders taking the reading test that year.

Note: **Bold** type indicates that the number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data.

Key Terms

Percentage proficient (and above) — The percentage of students in a group who score at and above the cut score for “proficient” performance on the state test used to determine progress under NCLB. The Act requires states to report student test performance in terms of at least three achievement levels: basic, proficient, and advanced. Adequate yearly progress determinations are based on the percentage of students scoring at the proficient level and above.

Percentage basic (and above) — The percentage of students in a group who score at and above the cut score for “basic” performance on the state test used to determine progress under NCLB.

Percentage advanced — The percentage of students in a group who reach or exceed the cut score for “advanced” performance on the state test used to determine progress under NCLB.

Moderate-to-large gain — For the percentage basic, proficient, or advanced, an average gain of 1 or more percentage points per year. For effect size, an average gain of 0.02 or greater per year.

Slight gain — For the percentage basic, proficient, or advanced, an average gain of less than 1 percentage point per year. For effect size, an average gain of less than 0.02 per year.

Moderate-to-large decline — For the percentage basic, proficient, or advanced, an average decline of 1 or more percentage points per year. For effect size, an average decline of 0.02 or greater per year.

Slight decline — For the percentage basic, proficient, or advanced, an average decline of less than 1 percentage points per year. For effect size, an average decline of less than 0.02 per year.

Effect size — A statistical tool that conveys the amount of difference between test results using a common unit of measurement which does not depend on the scoring scale for a particular test.

Accumulated annual effect size — The cumulative gain in effect size over a range of years.

Mean scale score — The arithmetical average of a group of test scores, expressed on a common scale for a particular state's test. The mean is calculated by adding the scores and dividing the sum by the number of scores.

Standard deviation — A measure of how much test scores tend to deviate from the mean—in other words, how spread out or bunched together test scores are. If students' scores are bunched together, with many scores close to the mean, then the standard deviation will be small. If scores are spread out, with many students scoring at the high or low ends of the scale, then the standard deviation will be large.

Cautions and Explanations

Different labels for achievement levels — For consistency, all of the state profiles developed for this report use a common set of labels (basic, proficient, and advanced) for the main achievement levels required by NCLB. In practice, however, some states may use different labels, such as “meets standard” instead of proficient, and some states have established additional achievement levels beyond those required by NCLB.

Different names for subgroups — For the sake of consistency and ease of data tabulation, all of the state profiles developed for this report use a common set of names for the major student subgroups. In practice, however, states use various names for subgroups that may differ from those used here (such as using “Hispanic” instead of “Latino,” or “special education students” instead of “students with disabilities”). Moreover, a few states separately track the performance of subgroups not included in the analyses for this report.

Special caution for students with disabilities and English language learners — Trends for students with disabilities and English language learners should be interpreted with caution because changes in federal guidance and state accountability plans may have altered which students in these subgroups are tested for accountability purposes, how they are tested, and when their test scores are counted as proficient under NCLB. These factors could affect the year-to-year comparability of test results.

Inclusion of former English language learners — In many states, the subgroup of English language learners (also known as limited English proficient students) includes students who were formerly English language learners but who have achieved English language proficiency or fluency in the last two years. Federal NCLB regulations permit states to include these formerly ELL students (sometimes referred to as “redesignated fluent English proficient” students) in the ELL subgroup for up to two years for purposes of NCLB accountability.

Limitations of percentage proficient measure — The percentage proficient, the main gauge of student performance under NCLB, can be easily understood and gives a snapshot of how many students have met their state’s performance expectations. But it also has several limitations as a measure of student achievement. Users of percentage proficient data should keep in mind these limitations, particularly the following:

- * “Proficient” means different things across different states. States vary widely in curriculum, learning expectations, and tests, and state tests differ considerably in their difficulty and cut scores for proficient performance.
- * Although this study has taken steps to avoid comparing test data where there have been “breaks” in comparability resulting from new tests, changes in content standards, revised cut scores, or other major changes in testing programs, the year-to-year comparability of test results in the same state may still be affected by less obvious policy and demographic changes.
- * Changes in student performance may occur that are not reflected in percentage proficient data, such as an increase in the number of students reaching performance levels below and above proficient (such as the basic or advanced levels).
- * The size of the achievement gaps between various subgroups depends in part on where a state sets its cut score for proficiency. For example, if a proficiency cut score is set so high that almost nobody reaches it or so low that almost everyone reaches it, there will be little apparent achievement gap. By contrast, if the cut score is closer to the mean test score, the gaps between subgroups will be more apparent.

Difficulty of attributing causes — Although the tables above show trends in test scores since the enactment of NCLB, one cannot assume that these trends have occurred *because* of NCLB. It is always difficult to determine a cause-and-effect relationship between test score trends and any specific education policy or program due to the many federal, state, and local reforms undertaken in recent years and due to the lack of an appropriate “control” group of students not affected by NCLB.