# General Achievement Trends — Texas

*K-12 enrollment — 4,651,516*

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 No Child Left Behind. In the Document Library, look for the most recent report on student achievement since 2002. 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.

## Overall Achievement — Key Findings

### General results

The tables in this profile present state test results in reading and math at two achievement levels (proficient, and advanced) and at one grade each at the elementary, middle, and high school levels. (None of Texas' three achievement levels is equivalent to the basic level, so trends at this level could not be determined.) These data are more complete than the percentage of students scoring proficient that is the main indicator used to determine adequate yearly progress under the No Child Left Behind Act.

Texas students made gains across the board at the **proficient** and **advanced** levels.

### Specific results

- Since 2005, the percentage of students at the **proficient** level and above in both reading and math has increased at a moderate-to-large rate at all three grade levels analyzed.

- The percentage of students reaching the **advanced** level increased slightly in reading at the elementary level and rose at a moderate-to-large rate at the middle and high school grades analyzed. In math, there was a slight gain in the percentage of advanced students at the elementary level and a moderate-to-large increase at the middle and high school levels.

## Data Limitations

Years of comparable percentage proficient data                          2005 through 2008

| Years of data needed to compute effect sizes | 2005 through 2008 |
|---|---|
| Disaggregated data for all subgroups and comparison groups | In 2007, students who were not English language learners (ELLs) were further categorized as non-ELL monitored first year; non-ELL monitored second year; and other non-ELL. Because of the lack of a single non-ELL comparison group, the ELL subgroup is compared with all students in the state. |

## 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 | Texas Assessment of Knowledge and Skills (TAKS), English and Spanish versions<br>Texas Assessment of Knowledge and Skills (Accommodated) for students with disabilities who meet criteria for being tested with accommodations<br>Texas Assessment of Knowledge and Skills–Modified (TAKS-M) for certain students with disabilities<br>Texas Assessment of Knowledge and Skills–Alternate (TAKS-Alt) for students with the most significant cognitive disabilities<br>Linguistically Accommodated Testing for Mathematics (LAT) for recent immigrant English language learners (ELLs)<br>Texas English Language Proficiency Assessment System (TELPAS) to measure growth in reading for certain ELLs |
|---|---|
| Grades tested for NCLB accountability | 3–8, 10 |
| State labels for achievement levels | TX uses three achievement levels: Did Not Meet Standard, Met Standard, and Commended Performance. For our analyses we treated Met Standard as Proficient and Commended Performance as Advanced. No TX achievement level was treated as our Basic. |
| High school NCLB test also used as an exit exam? | No (grade 10 TAKS used for NCLB; grade 11 TAKS currently used as exit exam but being phased out) |
| First year test used | 2003 for TAKS |

Time of test administration

Spring

Major changes in testing system (2002–present)

2002 through 2005: State phased in higher passing standards for TAKS grades 3–11. In 2003, the passing standard was 2 standard errors of measurement (SEM) below the panel-recommended standard; in 2004, it was 1 SEM below the panel-recommended standard; and in 2005, it was fully phased in.

2004: Added following alternative assessments and English proficiency tests to AYP determinations: SDAA II, LDAA, RPTE, and LAT

2008: SDAA II, LDAA, and RPTE no longer administered; Implemented TAKS-Modified, TAKS-Alternate, TELPAS.

## Overall Achievement — Percentages Proficient

**Figure TX-1. Percentage of Students Scoring at the Proficient Level and Above in Reading**
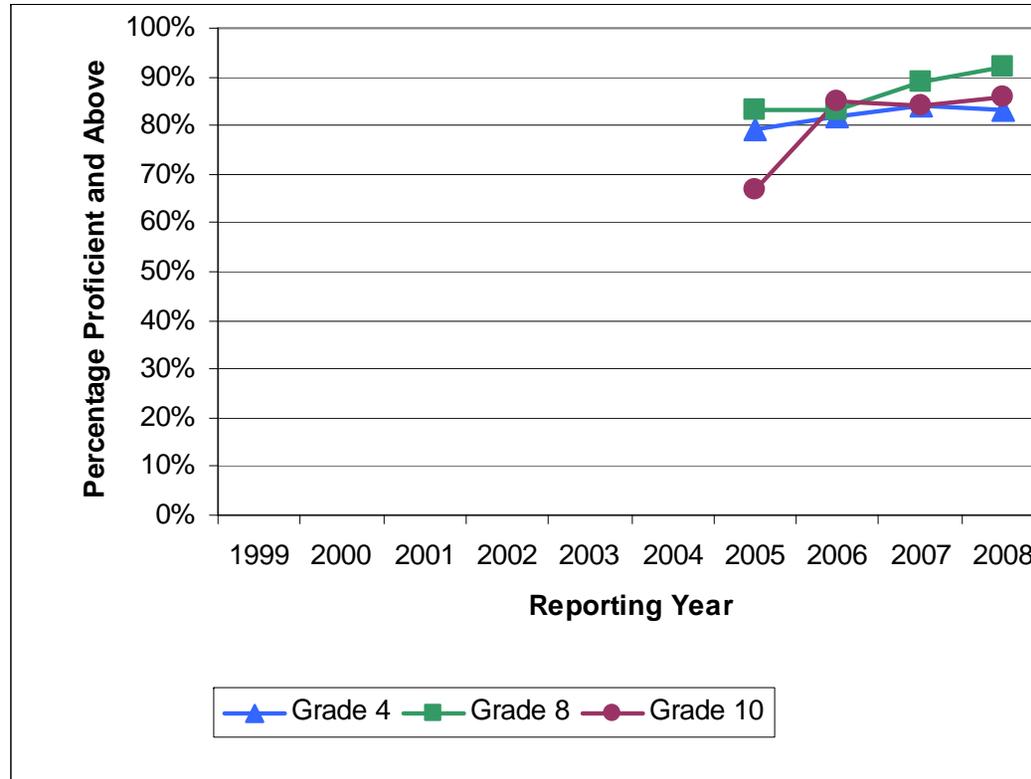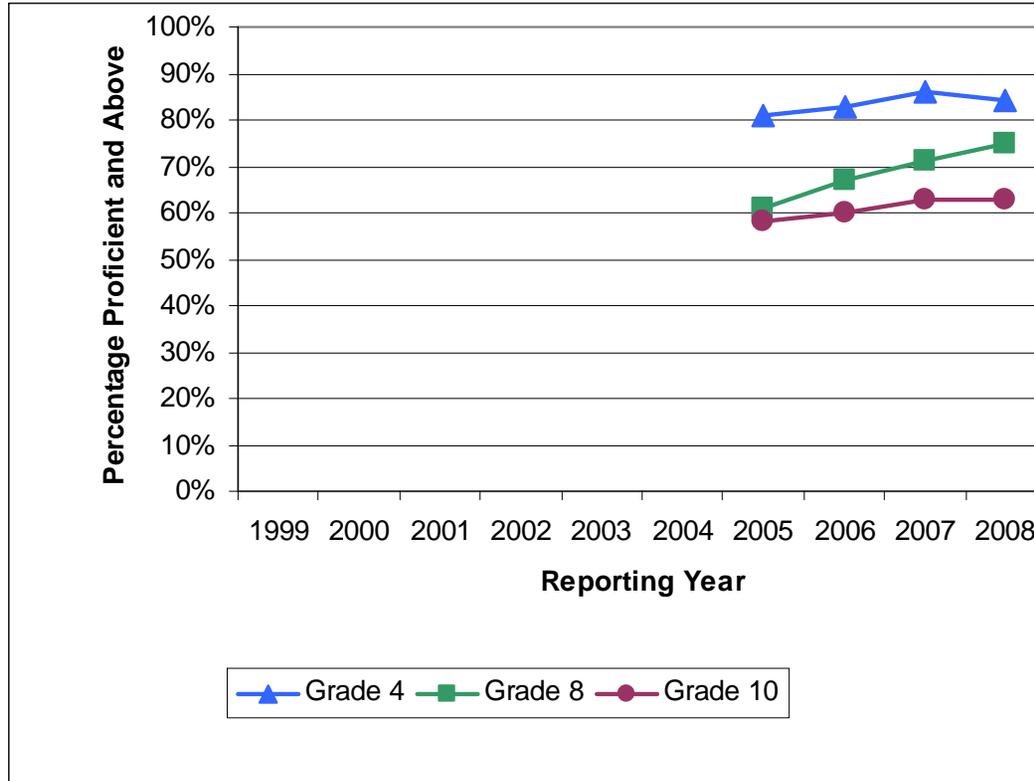
**Table TX-1. Percentage of Students Scoring at the Proficient Level and Above in Reading**

| Grade Level | Reporting Year | | | | | | | | | | Pre-NCLB Average Yearly Percentage Point Gain 1999-2002[1] | Post-NCLB Average Yearly Percentage Point Gain 2002-2008[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | | |
| Grade 3 | | | | | | | 89% | 89% | 89% | 88% | NA | -0.3 |
| **Grade 4** | | | | | | | **79%** | **82%** | **84%** | **83%** | **NA** | **1.3** |
| Grade 5 | | | | | | | 75% | 80% | 82% | 83% | NA | 2.7 |
| Grade 6 | | | | | | | 85% | 91% | 92% | 91% | NA | 2.0 |
| Grade 7 | | | | | | | 81% | 79% | 85% | 84% | NA | 1.0 |
| **Grade 8** | | | | | | | **83%** | **83%** | **89%** | **92%** | **NA** | **3.0** |
| **Grade 10** | | | | | | | **67%** | **85%** | **84%** | **86%** | **NA** | **6.3** |

Table reads: The percentage of 3rd graders who scored at the proficient level and above on the state reading test decreased from 89% in 2005 to 88% in 2008. The average yearly loss in the percentage proficient in grade 3 reading was 0.3 percentage points per year after NCLB was enacted.

[1]Averages are subject to rounding error.

**Figure TX-2. Percentage of Students Scoring at the Proficient Level and Above in Mathematics**

**Table TX-2. Percentage of Students Scoring at the Proficient Level and Above in Mathematics**

| Grade Level | Reporting Year | | | | | | | | | | Pre-NCLB Average Yearly Percentage Point Gain 1999-2002[1] | Post-NCLB Average Yearly Percentage Point Gain 2002-2008[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | | |
| Grade 3 | | | | | | | 82% | 82% | 82% | 83% | NA | 0.3 |
| **Grade 4** | | | | | | | **81%** | **83%** | **86%** | **84%** | **NA** | **1.0** |
| Grade 5 | | | | | | | 79% | 81% | 85% | 83% | NA | 1.3 |
| Grade 6 | | | | | | | 72% | 79% | 79% | 80% | NA | 2.7 |
| Grade 7 | | | | | | | 64% | 70% | 76% | 76% | NA | 4.0 |
| **Grade 8** | | | | | | | **61%** | **67%** | **71%** | **75%** | **NA** | **4.7** |
| **Grade 10** | | | | | | | **58%** | **60%** | **63%** | **63%** | **NA** | **1.7** |

Table reads: The percentage of 3rd graders who scored at the proficient level and above on the state math test increased from 82% in 2005 to 83% in 2008. The average yearly gain in the percentage proficient in grade 3 math was 0.3 percentage points per year after NCLB was enacted.

[1]Averages are subject to rounding error.

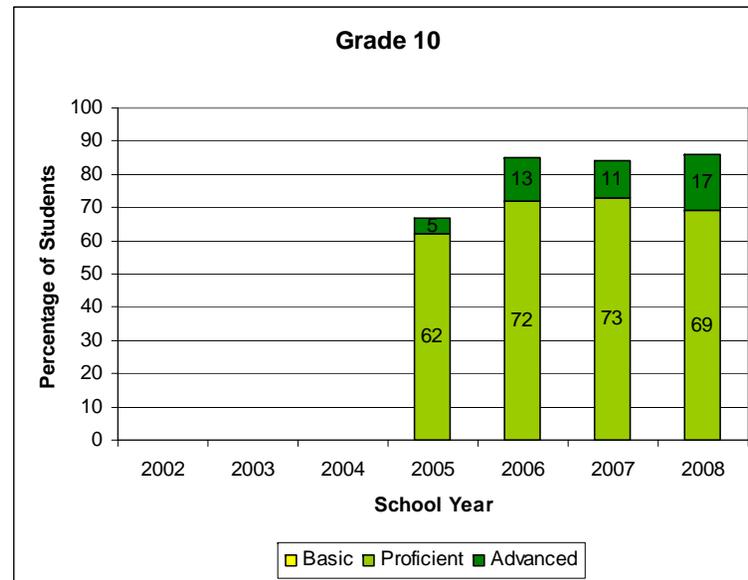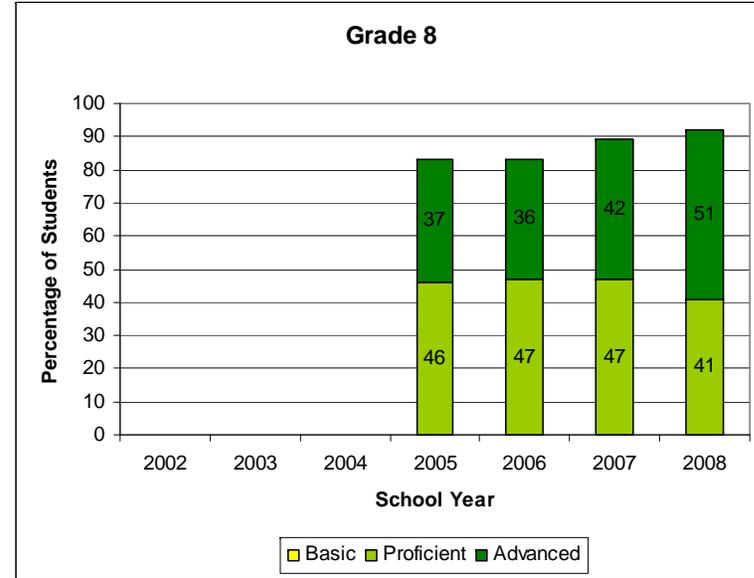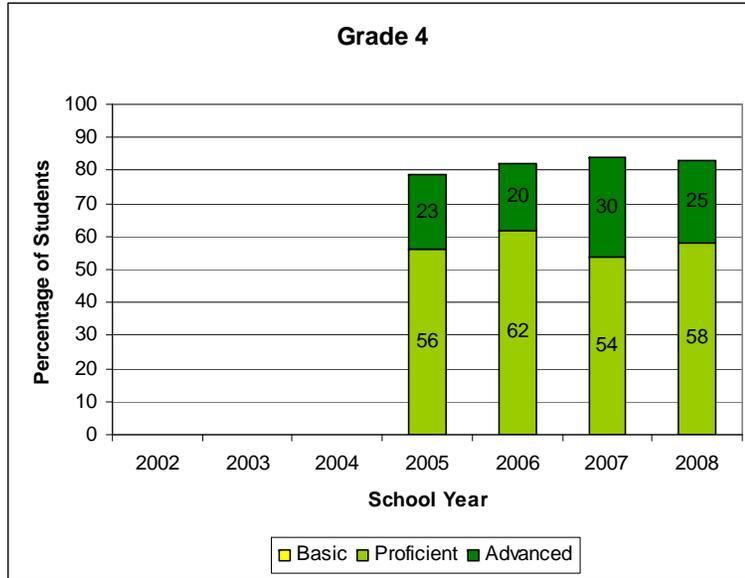## Overall Achievement — Percentages Advanced, Proficient, and Basic

### How to read figures 3 and 4 and tables 3 and 4

The stacked bars in figures 3 and 4 show the percentages of students scoring at the proficient and advanced levels on the state tests used for NCLB accountability. Because none of Texas' three achievement levels is equivalent to the NCLB basic achievement level, no analyses could be conducted of performance at the basic level and above.

The following information may be helpful in interpreting the figures:

- The percentage proficient and above—the benchmark used to determine adequate yearly progress under NCLB—is the sum of the middle and top segments of the bars (percentage proficient plus percentage advanced). The resulting sum corresponds with the percentage proficient and above shown in tables 3 and 4. In a few instances, however, the sums in the figures may differ from those in the tables by a percentage point due to rounding.

- The bars do not total 100% because students who score at the basic or *below* basic levels are not displayed.

- By looking at the percentages in each segment of the bars, one can see how achievement trends at different levels interact. Ideally, one would want to see increases at all three levels, as more students move from below basic to basic achievement, from basic to proficient, and from proficient to advanced. But other scenarios may also be illuminating. For example, if the percentage proficient has grown while the percentages advanced has shrunk, this suggests most of the academic attention was focused on moving "bubble kids" from the basic to proficient levels, with little or no attention to the highest-performing students.

- Some states use different labels for their achievement levels instead of basic, proficient, and advanced. The specific state labels are listed in the Test Characteristics section at the beginning of this profile.

**Figure TX-3. Percentages of Students Scoring at the Advanced, Proficient, and Basic Levels in Reading**
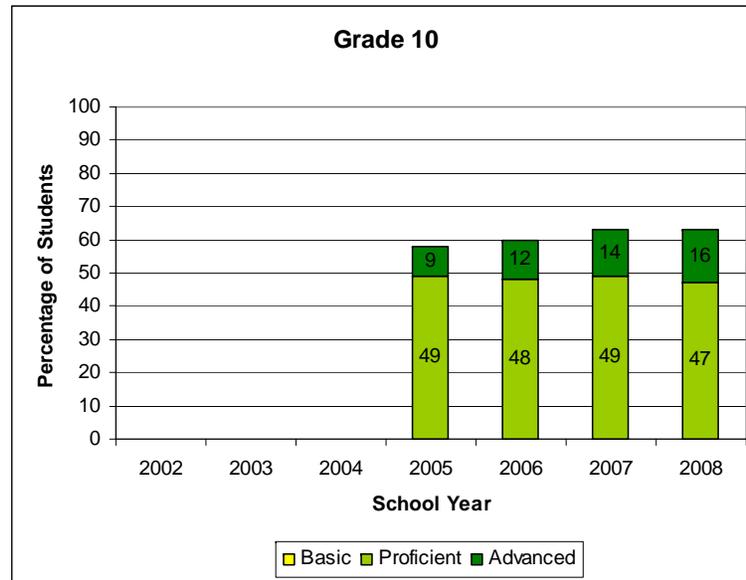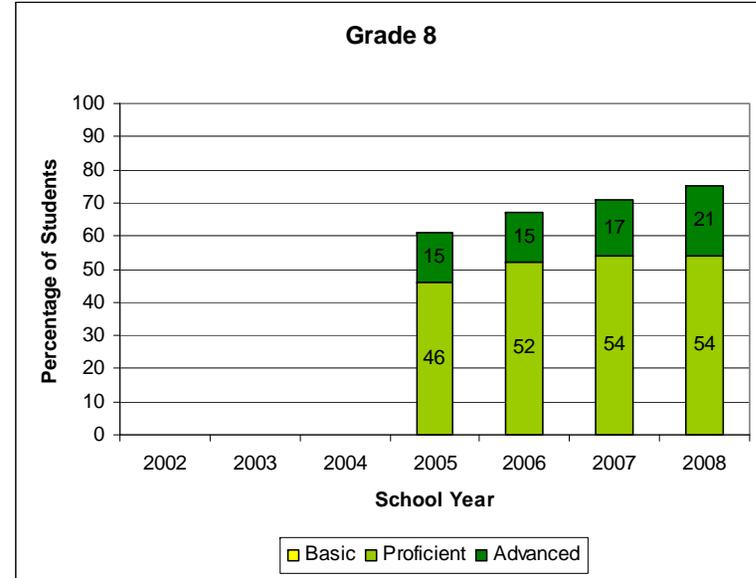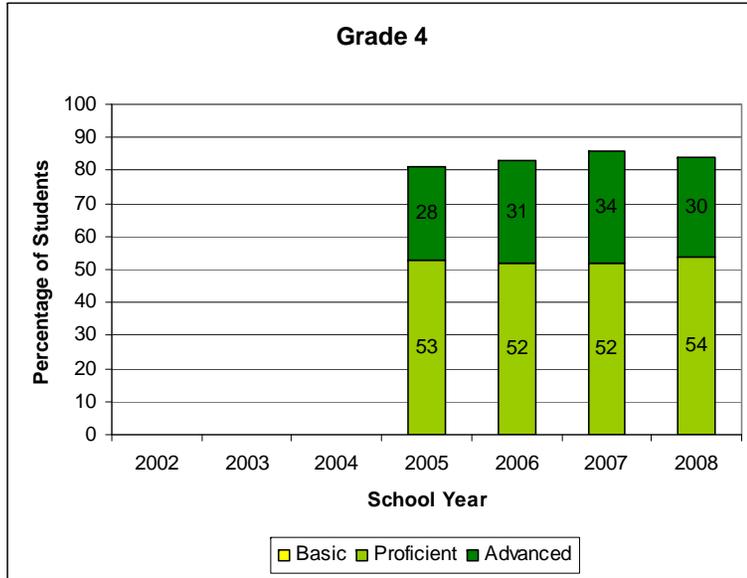


Grade 4



Grade 8



Grade 10

**Table TX-3. Percentages of Students Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Reading**

| Achievement Level | Reporting Year | | | | | | | Average Yearly Percentage Point Gain[1] |
|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | |
| Grade 4 | | | | | | | | |
| Advanced | | | | 23% | 20% | 30% | 25% | 0.7 |
| Proficient and Above | | | | 79% | 82% | 84% | 83% | 1.3 |
| Basic and Above | | | | NA | NA | NA | NA | NA |
| Grade 8 | | | | | | | | |
| Advanced | | | | 37% | 36% | 42% | 51% | 4.7 |
| Proficient and Above | | | | 83% | 83% | 89% | 92% | 3.0 |
| Basic and Above | | | | NA | NA | NA | NA | NA |
| Grade 10 | | | | | | | | |
| Advanced | | | | 5% | 13% | 11% | 17% | 4.0 |
| Proficient and Above | | | | 67% | 85% | 84% | 86% | 6.3 |
| Basic and Above | | | | NA | NA | NA | NA | NA |

Table reads: The percentage of 4th graders who scored at the advanced level on their state reading test increased from 23% in 2005 to 25% in 2008. During this period, the average yearly gain in the percentage advanced was 0.7 percentage points per year in grade 4 reading.

[1]Averages are subject to rounding error.

**Figure TX-4. Percentages of Students Scoring at the Advanced, Proficient, and Basic Levels in Mathematics**



Grade 4



Grade 8



Grade 10

**Table TX-4. Percentages of Students Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Mathematics**

| Achievement Level | Reporting Year | | | | | | | Average Yearly Percentage Point Gain[1] |
|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | |
| Grade 4 | | | | | | | | |
| Advanced | | | | 28% | 31% | 34% | 30% | 0.7 |
| Proficient and Above | | | | 81% | 83% | 86% | 84% | 1.0 |
| Basic and Above | | | | NA | NA | NA | NA | NA |
| Grade 8 | | | | | | | | |
| Advanced | | | | 15% | 15% | 17% | 21% | 2.0 |
| Proficient and Above | | | | 61% | 67% | 71% | 75% | 4.7 |
| Basic and Above | | | | NA | NA | NA | NA | NA |
| Grade 10 | | | | | | | | |
| Advanced | | | | 9% | 12% | 14% | 16% | 2.3 |
| Proficient and Above | | | | 58% | 60% | 63% | 63% | 1.7 |
| Basic and Above | | | | NA | NA | NA | NA | NA |

Table reads: The percentage of 4th graders who scored at the advanced level on their state math test increased from 28% in 2005 to 30% in 2008. During this period, the average yearly gain in the percentage advanced was 0.7 percentage points per year in grade 4 math.
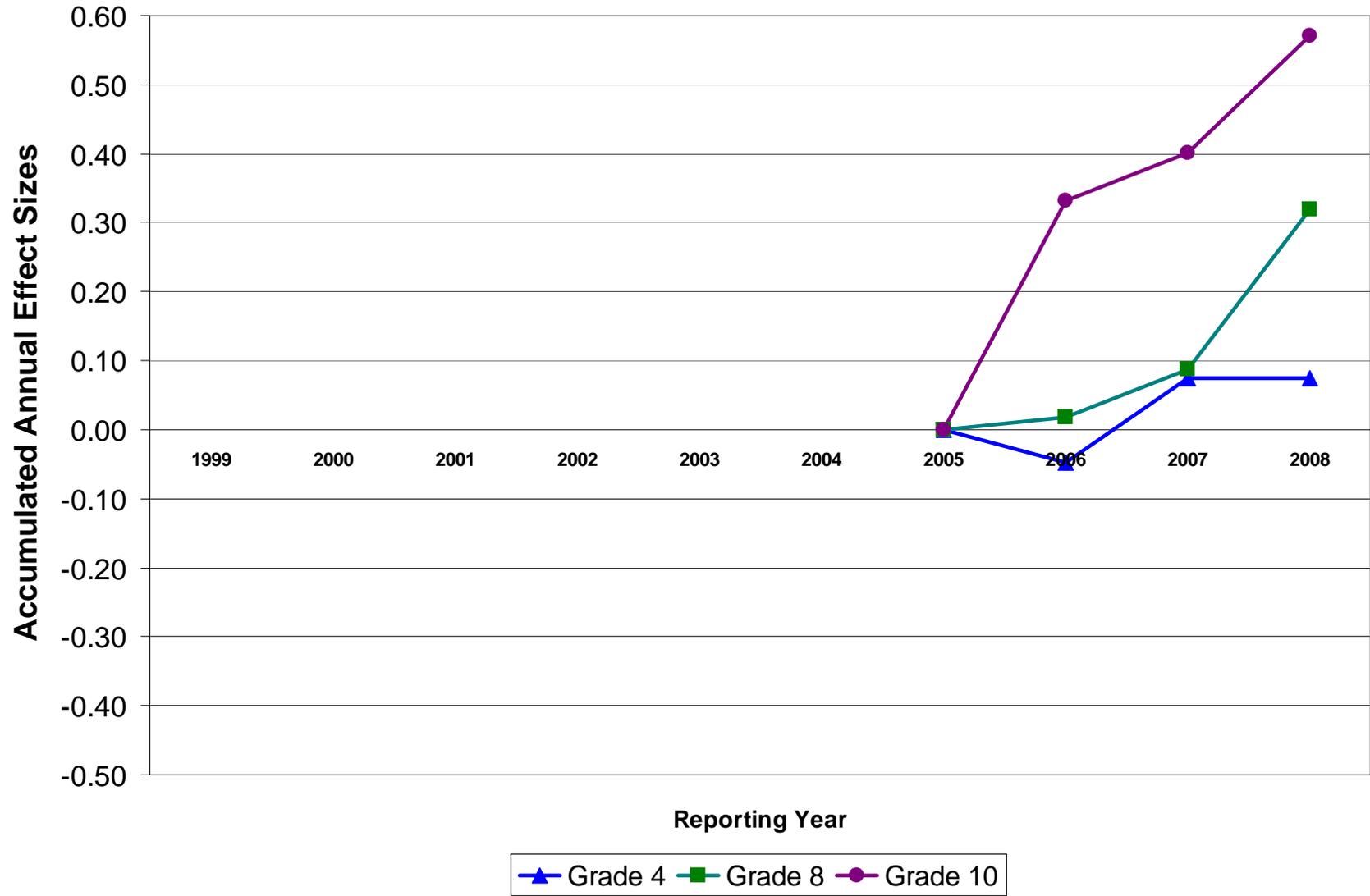
[1]Averages are subject to rounding error.

## Overall Achievement — Effect Sizes

### How to read figures 5 and 6 and tables 5 and 6

An **effect size** is 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. An effect size is computed by subtracting the **mean scale score** (the average score) on a test for one year, such as 2006, from the mean scale score for another year, such as 2007, then dividing the result by the average standard deviation. (The **standard deviation** is a measure of how much test scores tend to deviate from the mean—in other words, how spread out or bunched together scores are.) If the mean score has not changed, then the effect size is 0. An effect size of +1 indicates an increase of 1 standard deviation from the previous year's mean score. Effect sizes can also be used to calculate differences in scores between two subgroups of students.

Tables 5 and 6 show mean scale scores, standard deviations, and the **accumulated annual effect size** (AAES), which is the cumulative gain in effect size over a range of years. For example, to determine the accumulated annual effect size between 2006 and 2008, one would calculate the change in effect size from 2006 to 2007, and from 2007 to 2008, then add the results together. In figures and tables 5 and 6, 2002 (or the closest year with comparable data) was used as a starting point (0.00) to calculate accumulated annual effect sizes after NCLB was enacted (and before, if available). Steady gains in AAES are represented by negative numbers before 2002 rising to positive numbers after 2002, so that pre- and post-NCLB trends can be shown on the same trend line. A positive AAES before 2002 or a negative AAES after 2002 indicates a decline in performance over time.

**Figure TX-5. Reading Achievement Trends in Terms of Effect Sizes**

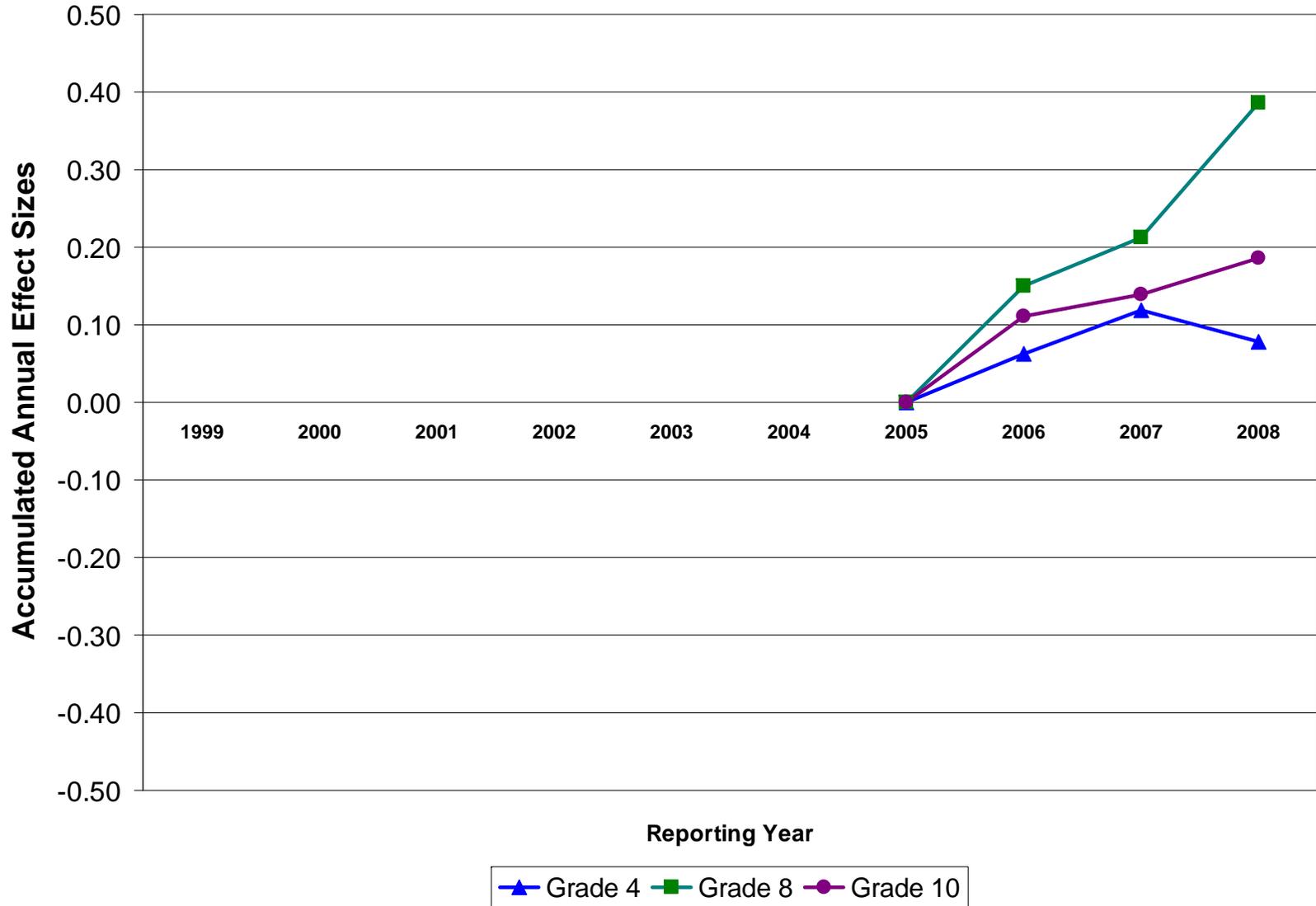**Table TX-5. Reading Achievement Trends in Terms of Effect Sizes**

| Grade Level | | Reporting Year | | | | | | | | | | Pre-NCLB Average Yearly Effect Size Gain 1999-2002[1] | Post-NCLB Average Yearly Effect Size Gain 2002-2008[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | | |
| Grade 4 | MSS (SD) | | | | | | | 2235 (177.2) | 2227 (154.1) | 2247 (170.3) | 2247 (177.7) | | |
| | AAES | | | | | | | 0.00 | -0.05 | 0.07 | 0.07 | NA | 0.02 |
| Grade 8 | MSS (SD) | | | | | | | 2288 (216.6) | 2292 (216.8) | 2306 (189.2) | 2351 (199.8) | | |
| | AAES | | | | | | | 0.00 | 0.02 | 0.09 | 0.32 | NA | 0.11 |
| Grade 10 | MSS (SD) | | | | | | | 2187 (118.7) | 2229 (133.6) | 2238 (129.5) | 2261 (141.1) | | |
| | AAES | | | | | | | 0.00 | 0.33 | 0.40 | 0.57 | NA | 0.19 |

Table reads: The mean scale score (MSS) of 4th graders on the state reading test increased from 2235 in 2005 to 2247 in 2008. The standard deviation (SD) for the mean scale score in 2005 was 177.2. Using 2005 as a starting point (0.00), the accumulated annual effect size (AAES) for grade 4 reading totaled 0.07 by 2008. For the post-NCLB period, the average yearly gain in effect size at grade 4 was 0.02.

Note: The TAKS is scored using linear transformations of the Rasch Partial Credit Model with proficiency estimates. Scales vary from grade to grade such that cutoffs are aligned: Met – 2100 and Commended – 2400. Standard scale scores range from approximately 1000-3200.

[1]Averages are subject to rounding error.

**Figure TX-6. Mathematics Achievement Trends in Terms of Effect Sizes**

**Table TX-6. Mathematics Achievement Trends in Terms of Effect Sizes**

| Grade Level | | Reporting Year | | | | | | | | | | | Pre-NCLB Average Yearly Effect Size Gain 1999-2002[1] | Post-NCLB Average Yearly Effect Size Gain 2002-2008[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | | | |
| Grade 4 | MSS (SD) | | | | | | | 2256 (194.1) | 2268 (192.1) | 2279 (193.0) | 2271 (194.2) | | | |
| | AAES | | | | | | | 0.00 | 0.06 | 0.12 | 0.08 | | NA | 0.03 |
| Grade 8 | MSS (SD) | | | | | | | 2156 (192.5) | 2185 (193.1) | 2197 (190.1) | 2231 (203.0) | | | |
| | AAES | | | | | | | 0.00 | 0.15 | 0.21 | 0.39 | | NA | 0.13 |
| Grade 10 | MSS (SD) | | | | | | | 2139 (176.7) | 2159 (183.1) | 2164 (185.4) | 2173 (193.5) | | | |
| | AAES | | | | | | | 0.00 | 0.11 | 0.14 | 0.19 | | NA | 0.06 |

Table reads: The mean scale score (MSS) of 4th graders on the state math test increased from 2256 in 2005 to 2271 in 2008. The standard deviation (SD) for the mean scale score in 2005 was 194.1. Using 2005 as a starting point (0.00), the accumulated annual effect size (AAES) for grade 4 math totaled 0.08 by 2008. For the post-NCLB period, the average yearly gain in effect size at grade 4 was 0.03.

Note: The TAKS is scored using linear transformations of the Rasch Partial Credit Model with proficiency estimates. Scales vary from grade to grade such that cutoffs are aligned: Met – 2100 and Commended – 2400. Standard scale scores range from approximately 1000-3200.

[1]Averages are subject to rounding error.

**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.