



# NAEP FACTS

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## 1998 Reading Results for Low-Performing Students

**Abstract:** Data from the NAEP 1998 Reading Assessment show increased scores for low-performing students in the 4th and 8th grades in 1998 as compared to 1994, but no change at the 12th grade. Scores for low-performing students in the 8th grade were higher in 1998 than in either 1994 or 1992. Scores for low-performing 4th-graders were higher in 1998 than in 1994, but no higher than in 1992. Scores for the lowest performing 12th-graders were lower in 1998 than in 1992.

Reading is generally recognized as a skill basic to virtually all learning. The failure of students to learn to read well severely limits their capacity to obtain an education. For this reason, our educational system takes a particular interest in students who have problems learning to read. The reading assessments conducted by the National Center for Education Statistics (NCES) as part of the National Assessment of Educational Progress (NAEP) provide valuable information on the reading skills of low-performing students, defined for NAEP's purposes as those falling in the 10th and 25th percentiles.<sup>1</sup>

Low-performing students in the 4th and 8th grades increased their scores in the NAEP 1998 Reading Assessment, as compared to the 1994 assessment.<sup>2</sup> Scores for low-performing 8th-graders were also higher than in 1992. Low-performing 12th-graders showed no change.<sup>3</sup> However, according to the reading achievement levels established by the National Assessment Governing Board (NAGB), low-performing students at all three grades still fail to display even "partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade."

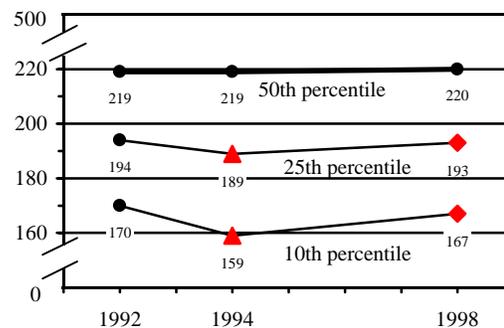
This issue of *NAEPfacts* analyzes the scores of low-performing students in grades 4, 8, and 12 in the following ways:

- over time;
- in comparison to middle- and higher performing students (those at the 50th and 75th percentiles); and
- in comparison to the national average, which includes the scores for all students.

### Grade 4

As figure 1 indicates, the scale scores for low-performing 4th-graders, those in the 10th and 25th percentiles, rose in 1998 as compared to 1994, increasing by 8 and 4 points,

**Figure 1.—Fourth-grade reading scale scores for low-performing students: 1992, 1994, and 1998**



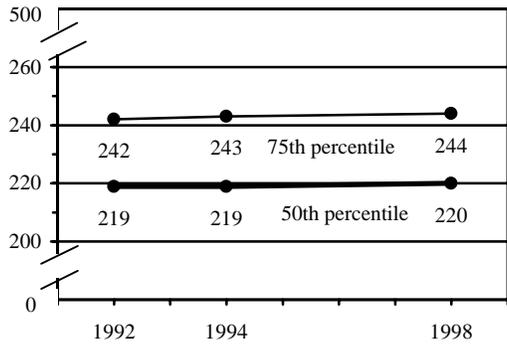
◆ Indicates the scale score is significantly different from 1994.

▲ Indicates the scale score is significantly different from 1992.

All differences are significant at the .05 level with appropriate adjustments for multiple comparisons.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1998 Reading Assessments.

**Figure 2.—Fourth-grade reading scale scores for middle- and higher performing students: 1992, 1994, and 1998**



SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1998 Reading Assessments.

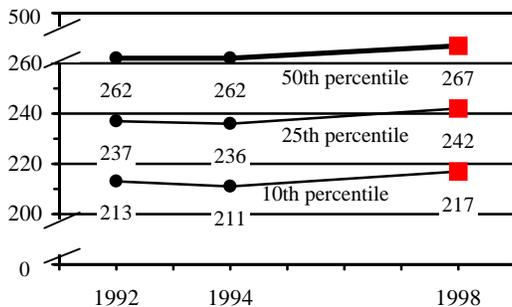
respectively.<sup>4</sup> These increases erased the declines from 1992 to 1994. Scores for middle- and higher scoring 4th-graders were essentially flat over the years 1992–98 for all three assessments (figure 2).

Reading scores for low-performing 4th-graders showed more variability over the years 1992–98 than middle- and higher performing 4th-graders. However, in 1998 scores for all three groups were similar to their 1992 scores.

### Grade 8

As figure 3 indicates, scores for low-performing 8th-graders were higher in 1998 than in 1992 and 1994. The same pattern of increase occurred for 8th-graders overall

**Figure 3.—Eighth-grade reading scale scores for low-performing students: 1992, 1994, and 1998**



■ Indicates the scale score is significantly different from 1994 and 1992.

All differences are significant at the .05 level with appropriate adjustments for multiple comparisons.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1998 Reading Assessments.

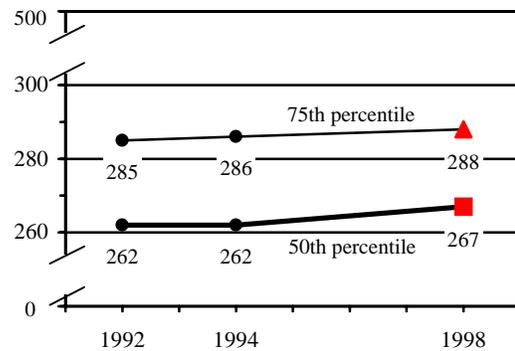
(not shown), and for middle-performing 8th-graders. Higher performing 8th-graders showed an increase in 1998 as compared to 1992 only (figure 4).

Reading scores for low-, middle-, and higher performing 8th-graders showed a generally similar pattern over the years 1992–98. Scores in 1998 for all three groups were higher than they had been in 1992.

### Grade 12

As figure 5 indicates, reading scores for 12th-graders in both the 10th and 25th percentiles fell from 1992 to 1994. In 1998 the score for students in the 25th percentile was not significantly higher than in 1994.<sup>5</sup> The 1998 score for students in the 10th percentile remained lower than in 1992.

**Figure 4.—Eighth-grade reading scale scores for middle- and higher performing students: 1992, 1994, and 1998**



■ Indicates the scale score is significantly different from 1994 and 1992.

▲ Indicates the scale score is significantly different from 1992.

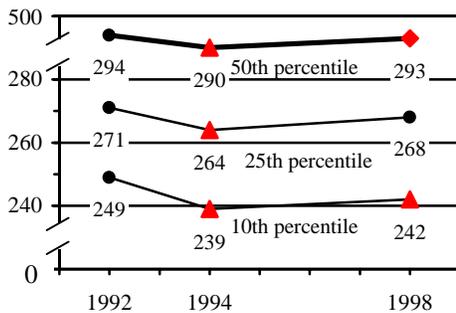
All differences are significant at the .05 level with appropriate adjustments for multiple comparisons.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1998 Reading Assessments.

The overall average for 12th-graders (not shown) fell in 1994 and increased in 1998. This same pattern was evident for students in the 50th percentile. Twelfth-graders in the 75th percentile did not show a significant decrease for 1992–94, but did show an increase for 1994–98 (figure 6).

Reading scores for low-, middle-, and higher performing 12th-graders showed different patterns over the years 1992–98. Scores for the lowest performing students (10th percentile) were lower in 1998 than they had been in 1992. Scores for 12th-graders in the 25th, 50th, and 75th percentiles in 1998 were similar to their scores in 1992.

**Figure 5.—Twelfth-grade reading scale scores for low-performing students: 1992, 1994, and 1998**

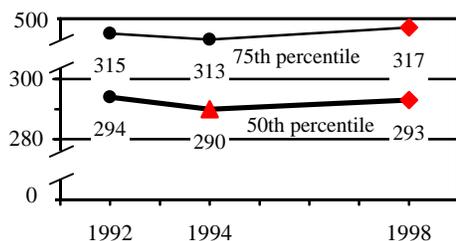


◆ Indicates the scale score is significantly different from 1994.  
 ▲ Indicates the scale score is significantly different from 1992.  
 All differences are significant at the .05 level with appropriate adjustments for multiple comparisons.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1998 Reading Assessments.

*Subgroup Comparisons:* NAEP data for some subgroups that historically have shown limited performance in reading show patterns that are similar to those for low-performing students. These subgroups include male students, who have had lower scores than female students over the past three reading assessments, at all three grades, and black students, who have had lower scores than white students over the past three reading assessments, at all three grades. Comparison of scores for the various groups shows some tendency for male and black scores to parallel scores for low-performing students, while scores for whites and females show a different pat-

**Figure 6.—Twelfth-grade reading scale scores for middle- and higher performing students: 1992, 1994, and 1998**



◆ Indicates the scale score is significantly different from 1994.  
 ▲ Indicates the scale score is significantly different from 1992.  
 All differences are significant at the .05 level with appropriate adjustments for multiple comparisons.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1998 Reading Assessments.

tern. However, this is not consistent across grades.

At the 4th-grade level, reading scores for males and blacks followed the same pattern over the three assessments as overall scores: there was no change between 1992 and 1994, while scores in 1998 showed an increase over 1994, but not over 1992.

Scores for female and white 4th-graders followed a different pattern, remaining flat over all three assessments. Neither pattern was the same as the one displayed by low-performing 4th-graders—a decline in 1994 as compared to 1992, and an increase in 1998 as compared to 1994 only.

At the 8th-grade level, the reading scores of male and black students followed the same pattern over time as the scores for the female and white students, which was the same pattern as the national average for that grade. Scores for 8th-grade male, female, black, and white students were all higher in 1998 than in either 1994 or 1992. Differences in scores did not translate into differences in patterns of scores.

However, at the 12th-grade level, there were differences. Scores for 12th-grade female and white students followed the same pattern over the past three assessments as the national average. That is, scores fell from 1992 to 1994, and then rose from 1994 to 1998. But scores for male 12th-grade students fell from 1992 to 1994, and then remained below the 1992 level in 1998, the same pattern shown by scores of 12th-graders at the 10th percentile. Scores for black 12th-graders were lower in 1994 than in 1992; in 1998, they were neither higher nor lower than in 1992 or 1994. This is the same pattern as scores for 12th-graders at the 25th percentile.

## Conclusion

The scores of low-performing students on the three NAEP reading assessments in 1992, 1994, and 1998 show a different pattern for each grade. Scores for low-performing students in both the 4th and 8th grades showed an increase in 1998. Scores for low-performing 4th-graders recovered from a 1994 decline, while scores for 8th-graders were higher in 1998 than in either 1992 or 1994. Scores for 12th-graders in the 25th percentile in 1998 were similar to earlier scores in both 1994 and 1992, while scores for 12th-graders in the 10th percentile in 1998 were similar to those in 1994 and lower than those in 1992.

NAEP data show similarities in the trends in reading scores for low-performing students and certain subgroups at the 12th-grade level, that is, male students and black

students. Readers should consult the *NAEP 1998 Reading Report Card* for information on school and home factors associated with differences in performance in reading.

## Endnotes

<sup>1</sup>Students in the 10th percentile had a score at or near the point on the scale that was higher than the scores of 10 percent of the students. Students in the 25th percentile had a score at or near the point on the scale that was higher than the scores of 25 percent of the students.

<sup>2</sup>The introduction since 1994 of revised inclusion criteria for students with disabilities and students with limited English proficiency had little effect on the percentage of students who were assessed at the national level in the sample that served as the basis for the NAEP 1998 Reading Assessment and did not alter the comparability of results with previous reading assessments. No students in this sample were given accommodations.

<sup>3</sup>Only statistically significant differences are discussed in the *NAEPfacts* series. "Statistically significant" means that observed differences are unlikely to be due to chance factors associated with sampling variability. The term significant is not intended to imply a judgment about the absolute magnitude of the educational relevance of the differences. It is intended to identify statistically dependable population differences to help focus subsequent dialogue among policymakers, educators, and the public. All differences reported are significant at the .05 level with appropriate adjustments for multiple comparisons.

<sup>4</sup>NAEP reading scores are reported on a scale ranging from 0 to 500. For details regarding the scale, see the *NAEP 1998 Reading Report Card* (Donahue et al. 1999), 168.

<sup>5</sup>However, it was on par with the 1992 score.

## For Further Information

*NAEP 1998 Reading Report Card* is the complete report. Single copies are available free from ED Pubs, P.O. Box 1398, Jessup, Md. 20794-1398. Copies may also be obtained over the World Wide Web (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=1999479>).

*NAEPfacts* briefly summarize findings from the National Assessment of Educational Progress (NAEP). The series is a product of the National Center for Education Statistics (NCES), Gary Phillips, Acting Commissioner, and Peggy Carr, Associate Commissioner for Education Assessment. This issue of *NAEPfacts* was written by Sheida White of NCES and Alan Vanneman of the Education Statistics Services Institute. To order other NAEP publications, call toll free 1-877-4ED-Pubs (1-877-433-7827), TTY/TDD 1-877-576-7734; e-mail: [edpubs@inet.ed.gov](mailto:edpubs@inet.ed.gov); internet: <http://www.ed.gov/pubs/edpubs.html>

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