

NEWS RELEASE

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Grade 12 Reading Score Declines, Mathematics Score Unchanged on The Nation's Report Card *Scores decline for lower-performing students in both subjects since 2015*

WASHINGTON (October 28, 2020)—The average reading score for the nation's twelfth-graders declined between 2015 and 2019 and there was no statistically significant change in twelfth-graders' average mathematics score for the same time period, according to the latest results from the National Assessment of Educational Progress (NAEP)—also known as The Nation's Report Card—released today by the National Center for Education Statistics (NCES).

“The decline in twelfth-grade reading scores resembles the declines in fourth- and eighth-graders' reading scores, where we saw the largest declines among the lowest-performing students,” said Peggy G. Carr, the associate commissioner of assessment at NCES. “There is an urgent need for research into this phenomenon, which we have now observed in multiple reading assessments, in the NAEP U.S. history assessment, in the NAEP geography assessment, and in some of our international assessments. This pattern of decline concentrated among lower-performing students—across grades and across subjects—is a troubling indication that too many students are falling behind.”

In comparison to 1992, reading scores in 2019 improved only for the highest-performing students—those at the 90th percentile. The score for twelfth-graders performing at the 75th percentile in 2019 was not measurably different from 1992. However, scores for lower- and middle-performing students (10th, 25th, and 50th percentiles) declined compared to 1992, with the largest decrease (20 points) seen among the lowest-performing students (10th percentile).

Though there was no statistically significant change in the overall average mathematics score since 2015, scores declined for lower-performing students (10th and 25th percentiles). Scores for students at the 50th, 75th, and 90th percentiles were not measurably different compared to 2015. Compared to 2005, the earliest comparable point for mathematics scores at grade 12, there was no measurable difference in the overall score for twelfth-graders or in the scores for students at the 10th, 25th, 50th, and 75th percentiles. Scores for the highest-performing students (90th percentile) improved by 2 points compared to 2005.

“Our analysis of the background questionnaires students completed about their educational experiences revealed that twelfth-graders have been taking more advanced math courses, and this shift toward more rigorous courses is particularly notable among lower-performing students,” explained NCES Commissioner Lynn Woodworth. “Yet this shift toward more rigorous coursetaking has not corresponded with an increase in scores, as one might expect; instead, this shift toward more rigorous coursetaking runs parallel to a decline in scores for lower-performing twelfth-graders. We need a closer examination of the relationship between coursetaking and achievement.”

Woodworth noted that a past NCES study of high school mathematics courses showed that course titles can be misleading, and what students actually cover in the classroom may not be as rigorous as they expected.

“The average score never tells the full story, and that is particularly true for these results. The static overall mathematics score since the first assessment year, 2005, obscures progress among many student groups—a phenomenon known as ‘Simpson's paradox,’” Carr said. “Compared to 2005, mathematics

scores for most racial and ethnic groups improved, but the population's demographics also changed significantly. This shift counteracts score gains when student groups are pooled together to represent average performance for the nation overall."

NAEP—also known as The Nation's Report Card—is the largest nationally representative and continuing assessment of what students in the United States know and can do in various subject areas. It is considered the “gold standard” of large-scale student assessments and is administered by NCES. The NAEP mathematics and reading assessments were administered to 52,100 twelfth-graders from public and private schools across the nation between January and March 2019. Students were assessed in only one subject. The 2019 assessment was the first time the NAEP mathematics and reading assessments were administered digitally at grade 12. Students and school administrators completed questionnaires that help contextualize results from the assessment. Students completed questionnaires about their demographic characteristics, opportunities to learn in and outside of the classroom, and educational experiences; school administrators completed questionnaires about school policies and characteristics.

Additional Mathematics Results

Student performance is reported using average scale scores, which range from 0 to 300 for mathematics at grade 12, as well as achievement levels. In 2019, the average scale score of all twelfth-grade students who took the NAEP mathematics assessment was 150. This was not statistically significantly different from 2015, when the average scale score for all students was 152. There was also no significant difference in the overall score for 2019 compared to the first assessment year in 2005.

There are three NAEP achievement levels: *NAEP Basic*, *NAEP Proficient*, and *NAEP Advanced*. *NAEP Proficient* represents competency over challenging subject matter. The achievement levels are set by the National Assessment Governing Board. The percentage of twelfth-grade students performing at or above *NAEP Proficient* for mathematics (24 percent) did not change significantly compared to 2015 or the first assessment year, 2005. The percentage of students scoring at *NAEP Basic* decreased from 37 percent in 2015 to 35 percent in 2019, while the percentage below *NAEP Basic* increased from 38 percent to 40 percent over that same time period.

The Nation's Report Card also reports data by different student characteristics, including race/ethnicity and gender. There were no statistically significant changes from 2015 in the average mathematics score of any racial/ethnic group. Compared to 2005, the first assessment year, scores increased for White, Hispanic, and Asian/Pacific Islander students, as well as for students of two or more races. Scores for Black and American Indian/Alaska Native students were unchanged. The average scores for males or females in 2019 did not change significantly compared to 2015 or 2005, and the achievement gap has remained steady across all three assessment years, with males scoring 3 points higher than females in 2019.

Additional Reading Results

Reading performance is reported as average scores on a scale of 0–500 and by achievement levels. In 2019, twelfth-grade students had an average reading score of 285, which was lower than the average score in 2015 (287) and 1992 (292). Students at the 10th and 25th percentiles (lower-performing students) scored lower in 2019 compared to both 2015 and 1992.

Thirty-seven percent of twelfth-grade students scored at or above *NAEP Proficient* in reading in 2019, which was not significantly different from 2015, but was lower than in 1992 (40 percent). The percentage of students who performed below *NAEP Basic* was 2 points higher in 2019 compared to 2015 and 10 percentage points higher in 2019 compared to 1992. There were no significant changes in average

scores for most student groups compared to 2015, though scores for White, Black, male, and female students were lower in 2019 than in 1992.

In 2019, forty-three percent of students reported being asked by their teachers to evaluate, analyze, and critique *often or more* when reading. A larger percentage of higher-performing students (at or above the 75th percentile) reported being asked to do these things *often or more*, compared to lower-performing students (below the 25th percentile).

About half of students reported reading literary texts outside of school once or twice a year or more. Twenty-six percent of students reported they never read stories or novels, and 51 percent of students reported they never read poems outside of school in 2019. Larger percentages of lower-performing students (below the 25th percentile) than higher-performing students (at or above the 75th percentile) reported never reading these types of literary texts.

Academic Preparedness for College

Based on research conducted by the National Assessment Governing Board, thirty-seven percent of twelfth-graders reached or exceeded the academic preparedness benchmarks for both the mathematics and reading assessments in 2019. This percentage was not significantly different from the estimated percentage in 2015. Preparedness is defined as qualifying for placement into entry-level college credit courses that meet general education requirements, without the need for remedial coursework in mathematics or reading, or qualifying for a job-training program without remediation in mathematics or reading.

Students' Plans After High School

The student questionnaire included questions about plans after high school graduation. In 2019, sixty-one percent of twelfth-grade students reported applying or being accepted to a four-year college; 33 percent of students reported that they had applied or been accepted to a two-year college; 6 percent of students reported that they had been accepted to a technical training program; 22 percent of students had no plans for four-year college, two-year college, or technical training program; and 26 percent of students had talked with a military recruiter.

Visit <http://nationsreportcard.gov/> to view the report.

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The National Assessment of Educational Progress (NAEP) is a congressionally authorized project sponsored by the U.S. Department of Education. The National Center for Education Statistics (NCES), within the Institute of Education Sciences, administers NAEP. The Commissioner of NCES is responsible by law for carrying out the NAEP project.

NCES, a principal agency of the U.S. Federal Statistical System, is the statistical center of the U.S. Department of Education and the primary federal entity for collecting and analyzing data related to education in the U.S. and other nations. NCES fulfills a Congressional mandate to collect, collate, analyze, and report complete statistics on the condition of American education; conduct and publish reports; and review and report on education activities internationally.

The National Assessment Governing Board is an independent, bipartisan board whose members include governors, state legislators, local and state school officials, educators, business representatives and members of the general public. Congress created the 26-member Governing Board in 1988 to set policy for NAEP.