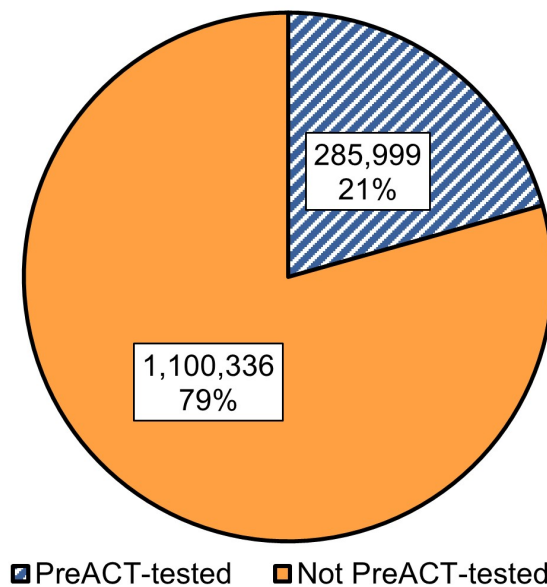


# PreACT<sup>®</sup>-Tested Students in the 2023 ACT<sup>®</sup>-Tested Graduating Class: A Summary of Performance and Growth

Jeff Allen, PhD

Among students in the 2023 ACT<sup>®</sup>-tested graduating class, over 285,000 took the PreACT<sup>®</sup> test before taking the ACT. In this issue brief, we compare the ACT scores and college enrollment rates for students who took the PreACT test versus those who did not. We also examine average PreACT-to-ACT gain scores by performance in high school courses, racial/ethnic group, and family income level. Figure 1 shows the number of students in the 2023 ACT-tested graduating class by PreACT testing status.

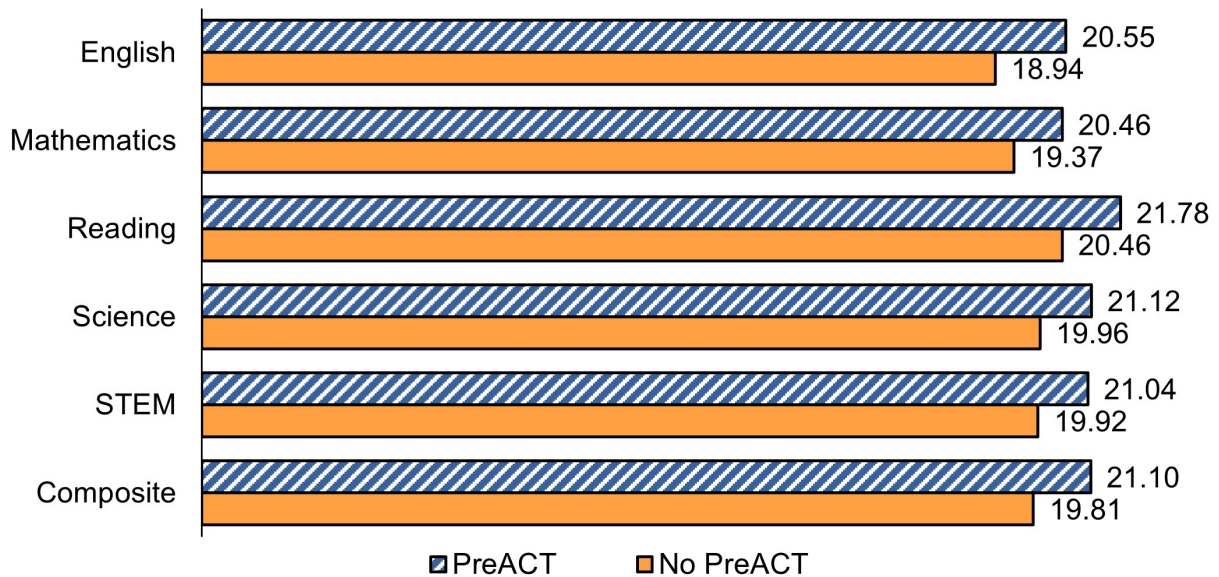
**Figure 1.** Number of Students in 2023 ACT-Tested Graduating Class by PreACT Testing Status



*Note.*  $N = 1,386,335$  for the 2023 ACT-tested graduating class.

## Finding 1: PreACT-tested students scored higher on the ACT test and were more likely to be ready for college courses.

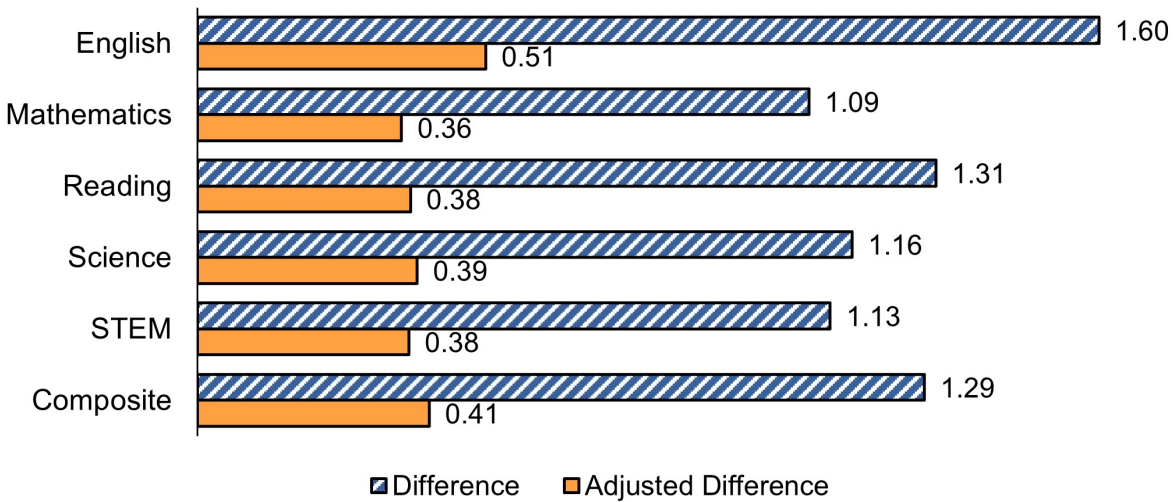
The average ACT score for students who took the PreACT was higher than the average ACT score for students who did not (Figure 2). Results varied across states, but on average the state mean ACT Composite score was 21.10 for students who took the PreACT and 19.81 for students who did not.

**Figure 2.** Mean ACT Scores by PreACT Testing Status

*Note.* For each state, mean ACT scores were obtained for students who took the PreACT test and for those who did not. The mean scores were then averaged across 29 states to produce Figure 2. Each of the 29 states had at least 1,000 PreACT-tested students in the 2023 ACT-tested graduating class.

The difference in average scores ranged from 1.09 for mathematics to 1.60 for English (Figure 3). The PreACT and No PreACT groups are not randomly equivalent groups. Differences between the two groups may be due to factors other than taking the PreACT test. Linear regression was used to estimate the adjusted difference between the two groups, accounting for academic and background variables that are associated with ACT scores. The adjusted difference estimates what the difference in average ACT scores would be for students who took the PreACT test versus those who did not, if the two groups had the same academic and background variables. The academic and background variables included the ACT Rigor Index (a measure of high school grades and course rigor; Allen & Mattern, 2019), student demographics (gender, race/ethnicity, and family income level), high school characteristics (public/private status and school mean ACT Composite score), and months remaining until high school graduation (determined by ACT test date). After the statistical adjustment, the differences in mean scores are much smaller, as shown in Figure 3.

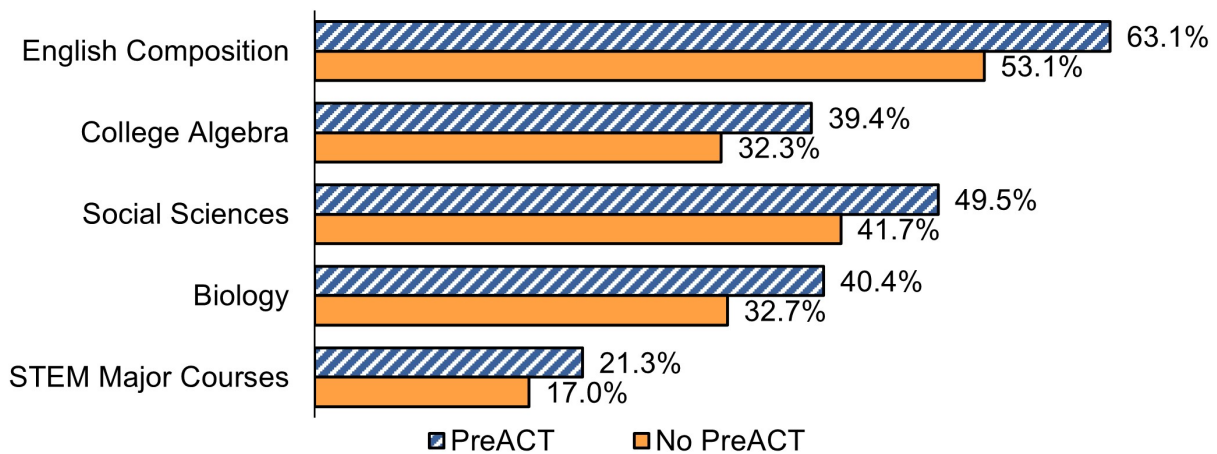
**Figure 3.** Difference in Mean ACT Scores (PreACT Group – No PreACT Group)



*Note.* Results are averaged across 29 states.

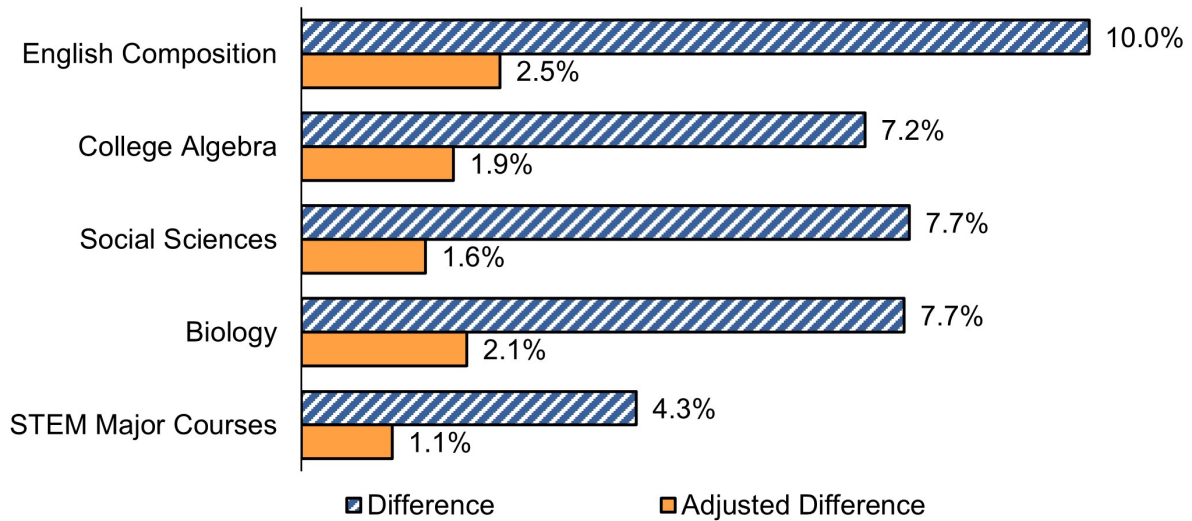
The difference in average ACT scores means that PreACT-tested students are more likely to demonstrate readiness for first-year college courses and earn exemptions from remedial coursework. Figure 4 shows the percentage of students meeting ACT’s College Readiness Benchmarks by PreACT testing status. The percentages in Figure 4 were obtained by calculating the average percentages across the 29 states that had at least 1,000 PreACT tested students in the 2023 ACT-tested graduating class.

**Figure 4.** Percent Ready for First-Year College Courses by PreACT Testing Status



The difference in readiness for college courses ranged from 4.3% for courses commonly taken by STEM majors to 10.0% for English Composition (Figure 5). After we made the statistical adjustments described earlier, the differences in college readiness are much smaller. The adjusted differences in college readiness rates favor PreACT-tested students, with adjusted differences ranging from 1.1% for STEM major courses to 2.5% for English Composition.

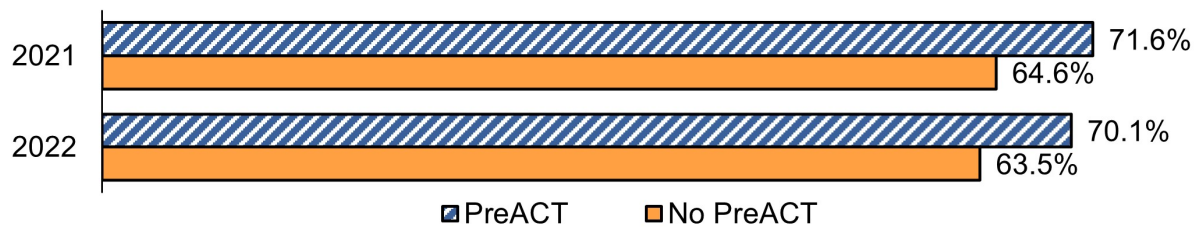
**Figure 5.** Difference in College Readiness Rates (PreACT Group – No PreACT Group)



**Finding 2: College enrollment rates are higher for PreACT-tested students.**

For ACT-tested high school graduates of 2021 and 2022, we compared college enrollment rates by PreACT testing status. For both cohorts, college enrollment rates were higher for students who took the PreACT test versus those who did not (Figure 6). The college enrollment rates presented in Figure 6 were obtained by calculating the average rates across states that had at least 1,000 PreACT tested students in the respective (2021 or 2022) ACT-tested graduating class.

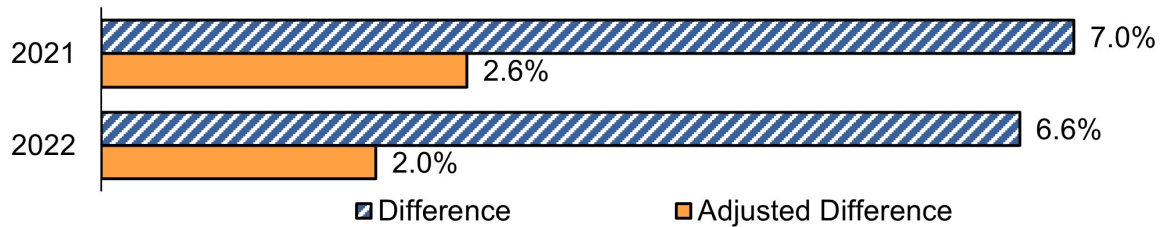
**Figure 6.** College Enrollment Rates, by Cohort Year and PreACT Testing Status



*Note:* Using college enrollment data obtained from the National Student Clearinghouse, we counted students as enrolled if they were enrolled at a postsecondary institution for any term beginning during their year of high school graduation through March 1 of the year after their high school graduation.

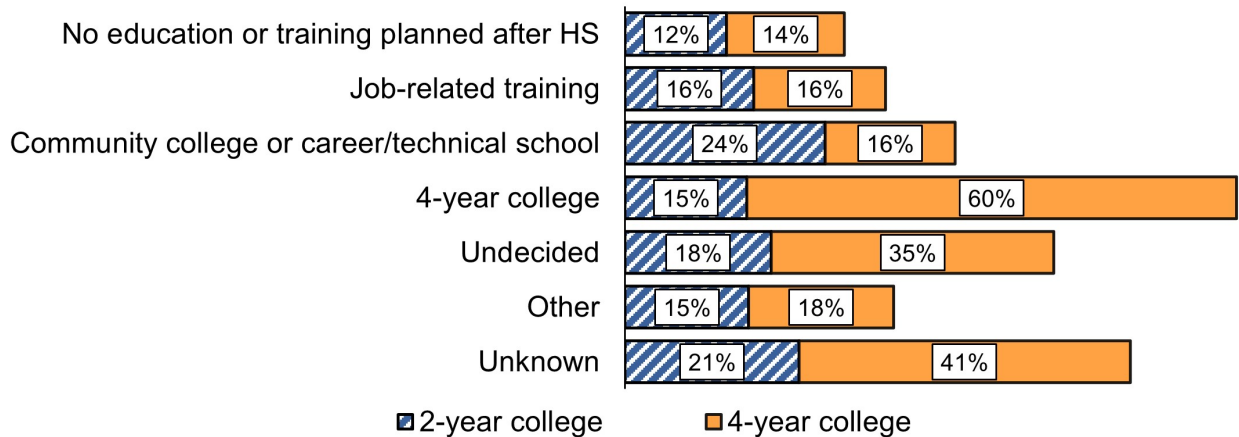
The PreACT and No PreACT groups are not randomly equivalent groups. Differences between the two groups in college enrollment may be due to factors other than taking the PreACT test. After being statistically adjusted for high school grades and course rigor, student demographics (gender, race/ethnicity, and family income), high school characteristics, and months remaining until high school graduation (determined by ACT test date), the differences in college enrollment rates are much smaller (Figure 7).

**Figure 7.** Differences in College Enrollment Rates (PreACT Group – No PreACT Group), by Cohort Year



When students are preparing to take the PreACT, they are asked to complete a survey which includes a question about their educational plans. Using the survey data, we examined college enrollment rates for students within each educational plan group, combining data for the 2021 and 2022 ACT-tested graduating cohorts (Figure 8).

**Figure 8.** College Enrollment Rates Among PreACT-Tested Students, by Institution Type and Educational Plans

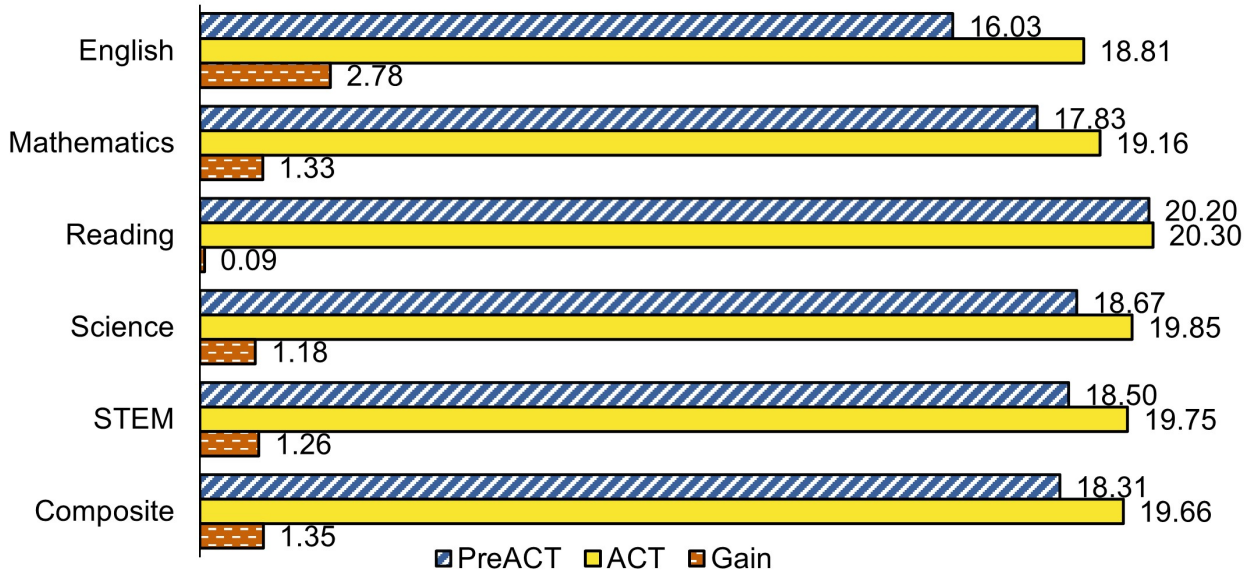


As expected, college enrollment rates were higher for students who planned on attending college, especially for those who planned to attend a 4-year college. Among students who had no education or training planned, 26% still enrolled in college, with 14% enrolling at 4-year colleges and 12% enrolling at 2-year colleges. This suggests that student plans often change during the last few years of high school, and that PreACT and ACT testing programs are important for providing all students guidance for postsecondary opportunities.

### Finding 3: Average gain from the PreACT to the ACT varies across subjects.

Figure 9 shows the average PreACT and ACT test scores for the 285,999 students who took both assessments. The average gain from the PreACT test to the ACT test varied across subjects from a low of 0.09 points in reading to a high of 2.78 in English. The average Composite gain was 1.35 points.

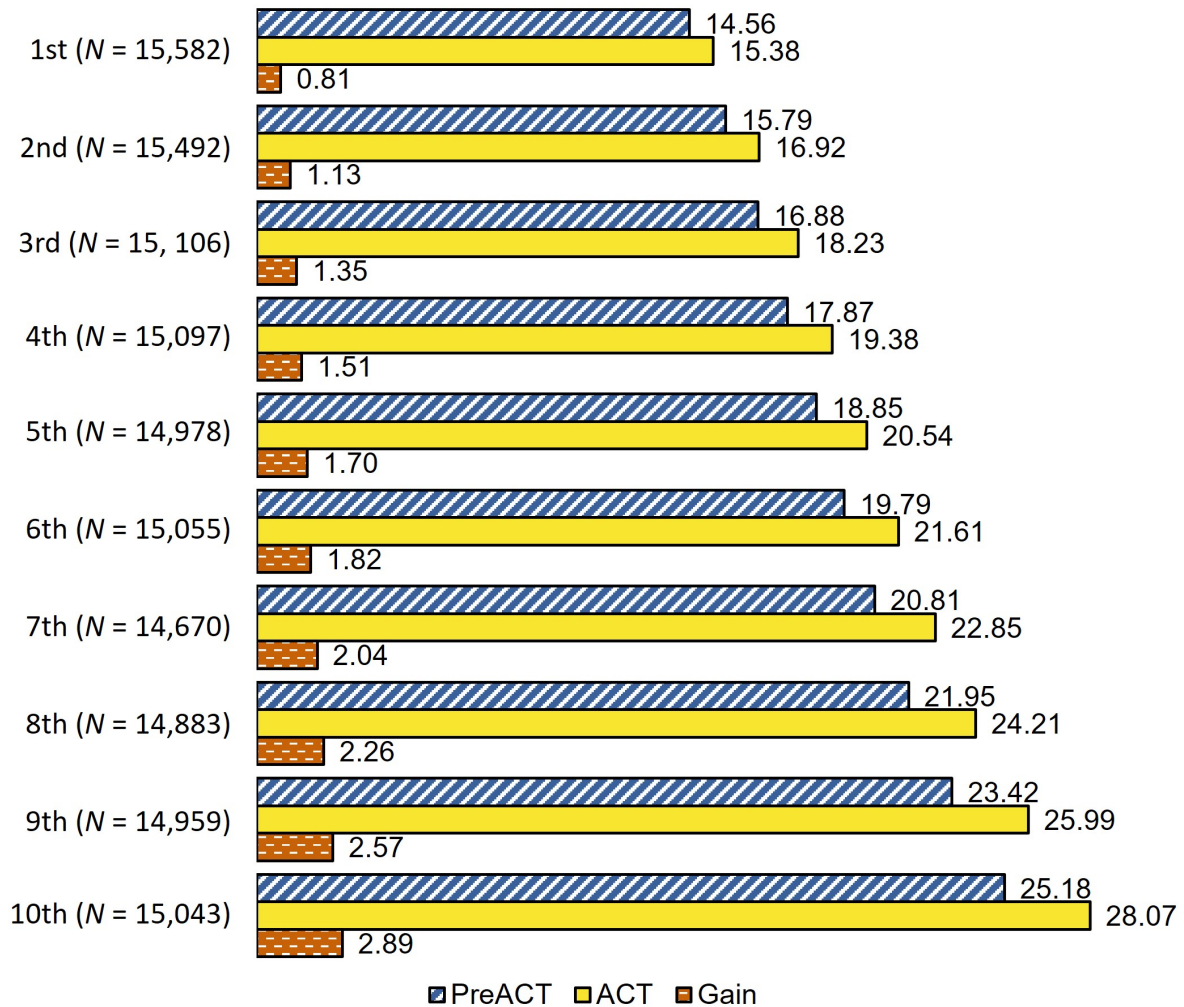
**Figure 9.** Average PreACT, ACT, and Gain Scores



## Finding 4: Average gain from the PreACT to the ACT increases with course rigor and performance.

The average Composite gain steadily increased with grades earned and rigor of high school coursework (Figure 10).

**Figure 10.** Average PreACT, ACT, and Composite Gain Scores by High School Grades and Rigor Decile

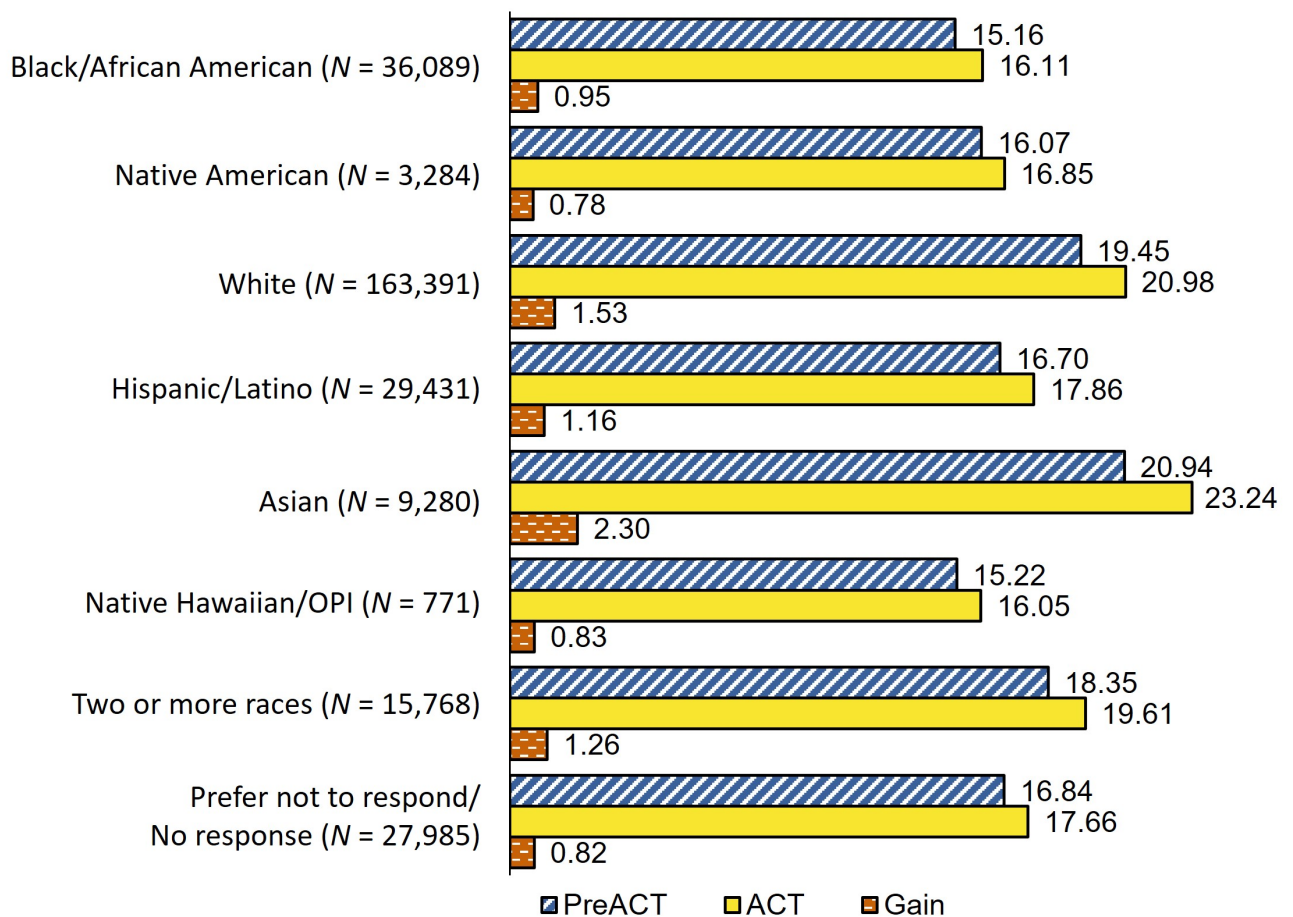


*Note.* This chart is based on data from 150,865 students who took the PreACT and ACT tests and reported their high school coursework and grades when they registered for the ACT test. The high school grades and rigor decile is based on the ACT Rigor Index, which is similar to high school GPA but awards more points for taking more difficult courses (Allen & Mattern, 2019). The ACT Rigor Index is based on student-reported grades in up to 30 different high school courses and incorporates indicators for advanced coursework and students’ plans for taking upper-level STEM courses (chemistry, physics, advanced math, and calculus).

### Finding 5: Average gains from the PreACT to the ACT are lower for underrepresented racial/ethnic groups, and the difference is partly explained by course performance, rigor, and school characteristics.

Figure 11 shows the average PreACT and ACT Composite scores by race/ethnicity. The average Composite gain from the PreACT test to the ACT test varied across racial/ethnic groups from a low of 0.78 points for students who are Native American to a high of 2.30 for students who are Asian. After being statistically adjusted for high school grades and course rigor, high school characteristics, and number of months between tests, the differences in average gains across racial/ethnic groups are smaller (Figure 12).

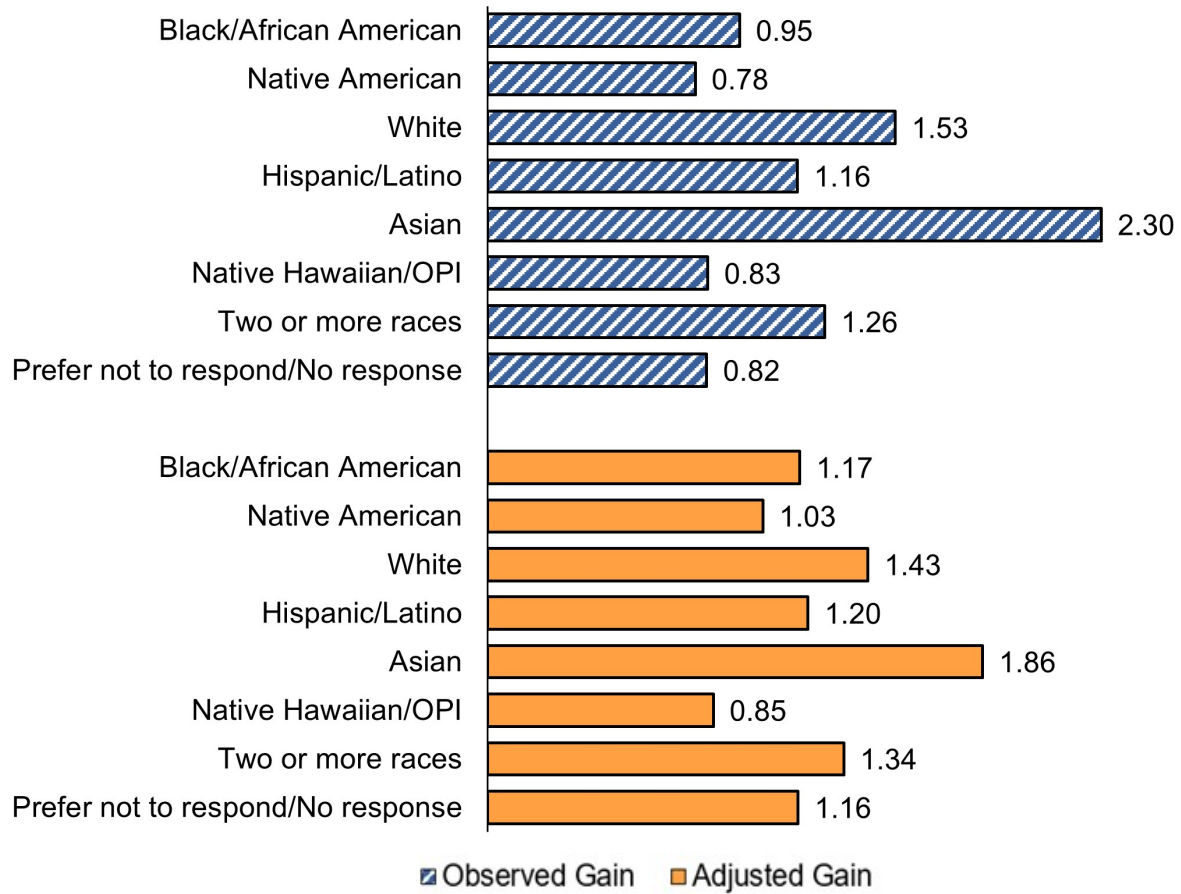
**Figure 11.** Average PreACT, ACT, and Composite Gain Scores by Race/Ethnicity



Note. OPI = Other Pacific Islander.



**Figure 12. Average Composite Gains by Race/Ethnicity**

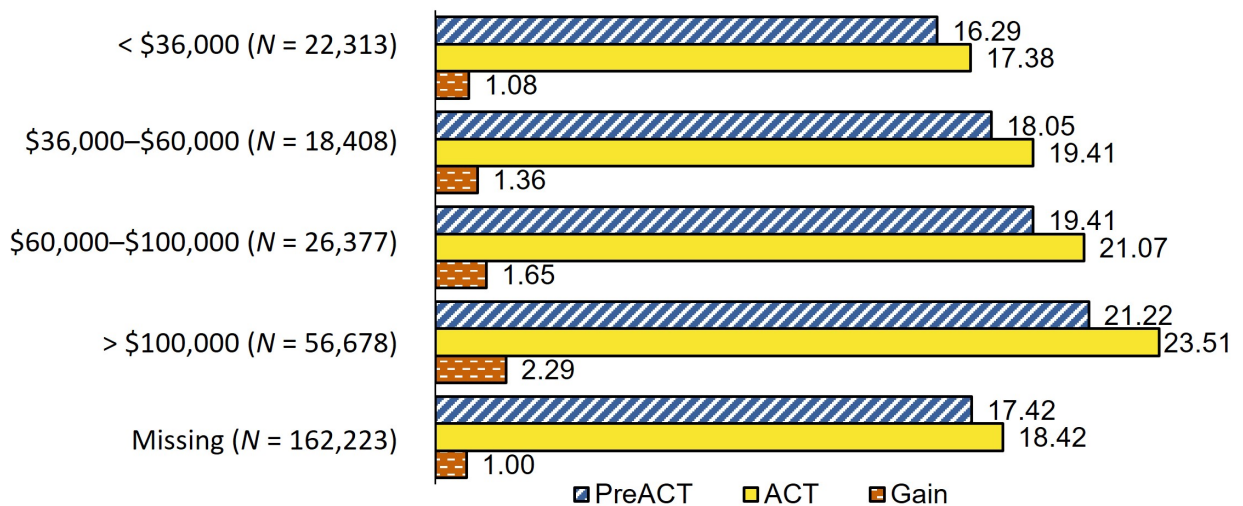


Note. OPI = Other Pacific Islander.

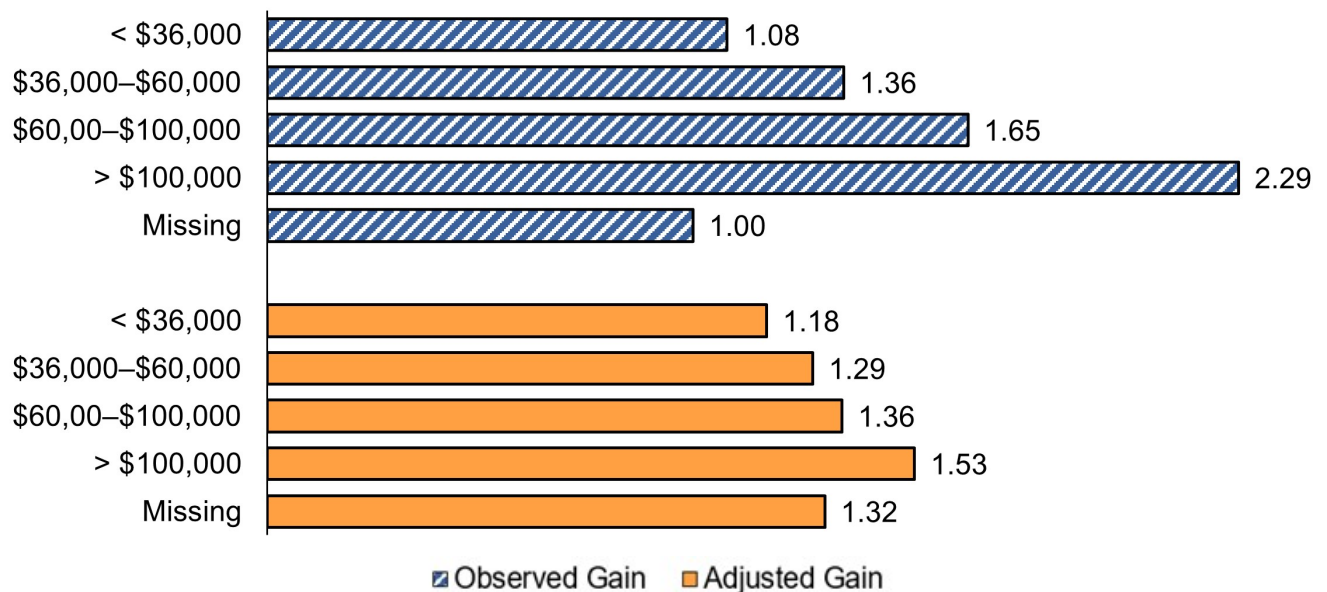
## Finding 6: Average gains from the PreACT to the ACT increased with family income level, but much of the increase is explained by course performance, rigor, and school characteristics.

The average Composite gain from the PreACT test to the ACT test increased with family income (Figure 13). After being statistically adjusted for high school grades and course rigor, high school characteristics, and number of months between tests, the differences in average gains across income groups are much smaller (Figure 14).

**Figure 13.** Average PreACT and ACT Composite Scores by Family Income



**Figure 14.** Average Composite Gains by Family Income



## Reference

Allen, J., & Mattern, K. (2019). Examination of indices of high school performance based on the graded response model. *Educational Measurement: Issues and Practice*, 38(2), 41–52.  
<https://doi.org/10.1111/emip.12250>

## About the Author

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Jeff Allen, PhD, is a principal research scientist in Applied Research. He specializes in longitudinal research of educational outcomes, student growth models, and validation of college readiness measures.



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