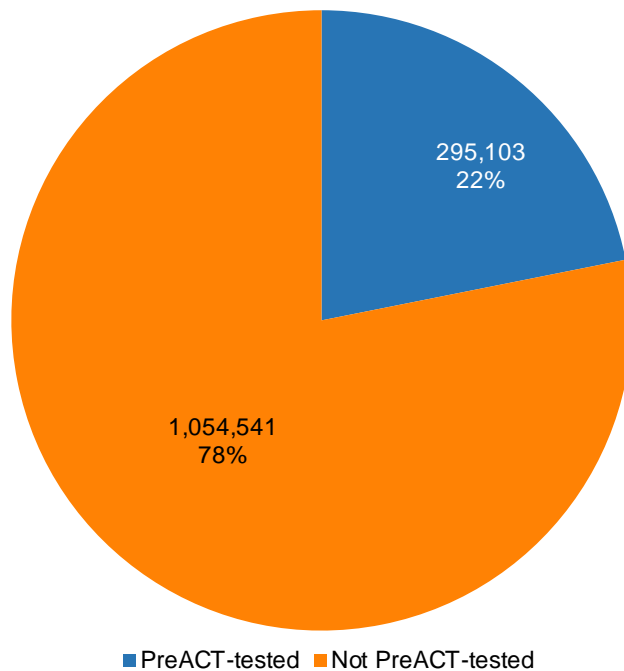


PreACT-Tested Students in the 2022 ACT-Tested Graduating Class: A Summary of Performance and Growth

Jeff Allen, PhD

Among students in the 2022 ACT-tested graduating class, over 295,000 took the PreACT® test before taking the ACT® test. In this issue brief, we compare performance on the ACT test 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 2022 ACT-tested graduating class by PreACT testing status.

Figure 1. Number of Students in 2022 ACT-Tested Graduating Class by PreACT Testing Status

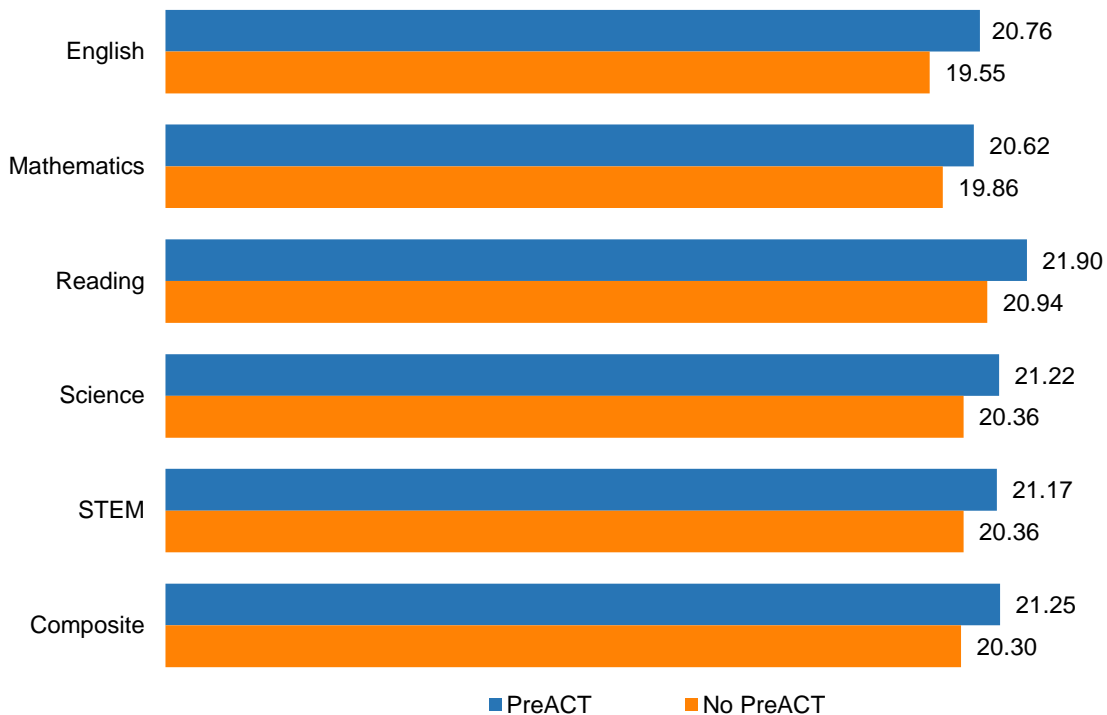


Note. $N = 1,349,644$ for the 2022 ACT-tested graduating class.

Finding 1: Average ACT scores were higher for PreACT-tested students.

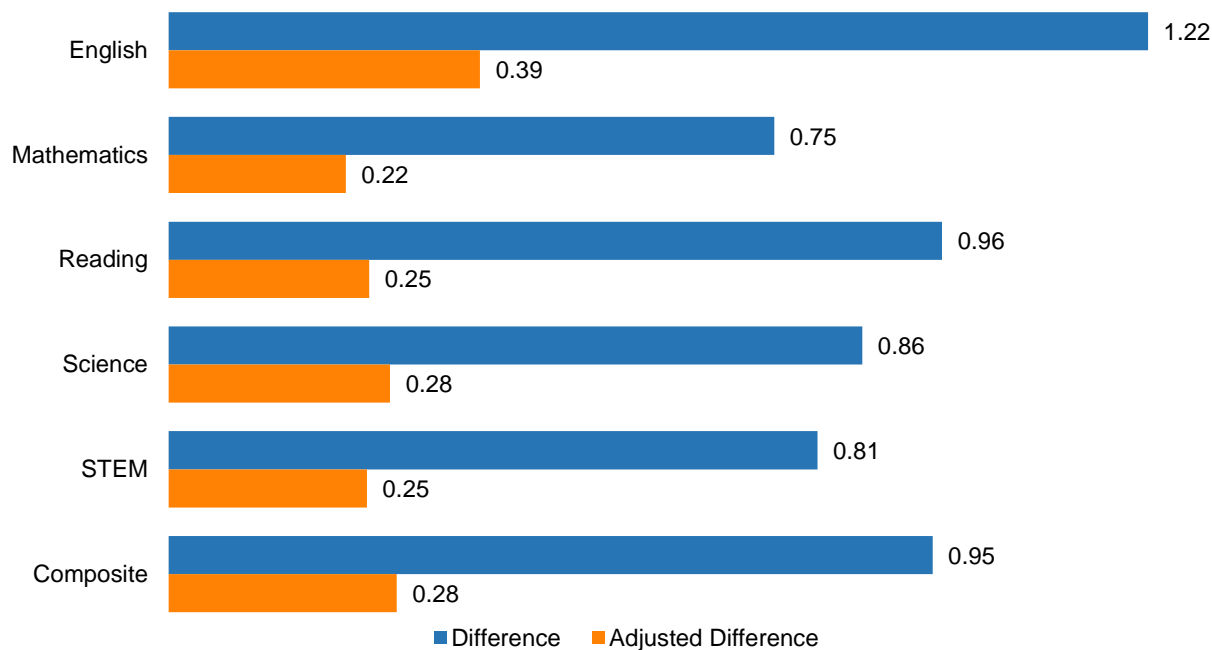
The average ACT score for students who took the PreACT was higher than the average ACT score for students who did not (Figure 2). Results varied across states, but on average the state mean ACT Composite score was 21.25 for students who took the PreACT and 20.30 for students who did not.

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 31 states to produce Figure 2. Each of the 31 states had at least 1,000 PreACT-tested students in the 2022 ACT-tested graduating class.

The difference in average scores ranged from 0.75 for mathematics to 1.22 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. 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 mean scores are much smaller.

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

Note. Results are averaged across 31 states.

Finding 2: Average gain from the PreACT to the ACT varies across subjects.

Figure 4 shows the average PreACT and ACT test scores. The average gain from the PreACT test to the ACT test varied across subjects from a low of -0.05 points in reading to a high of 2.11 in English (Figure 5). The average Composite gain was 1.15 points.

For most students in the 2022 graduating class, the onset of the COVID-19 pandemic occurred between their PreACT and ACT tests. The pandemic may have contributed to lower academic growth during that period, resulting in lower score gains. The score gains for students in the 2020 graduating class were not affected by the pandemic, and the average Composite gain was 2.1 points (Allen, 2020), substantially higher than what was observed for the 2022 cohort. The score gains for students in the 2021 graduating class were partially affected by the pandemic, and the average Composite gain was 1.5 points (Allen, 2022).

Figure 4. Average PreACT and ACT Test Scores

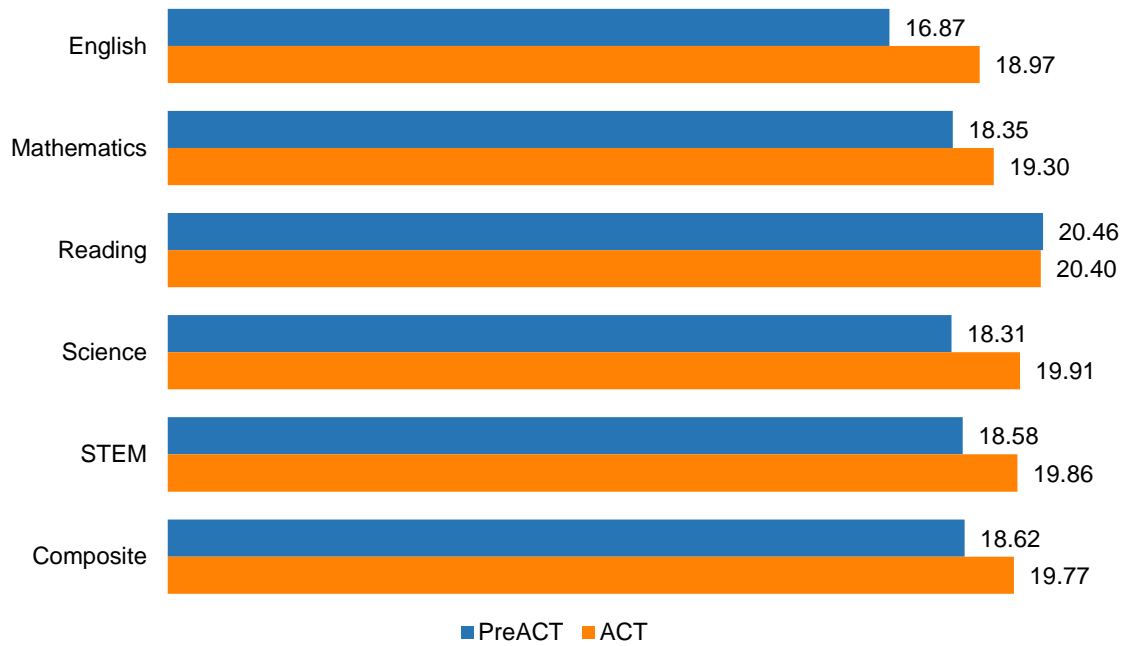
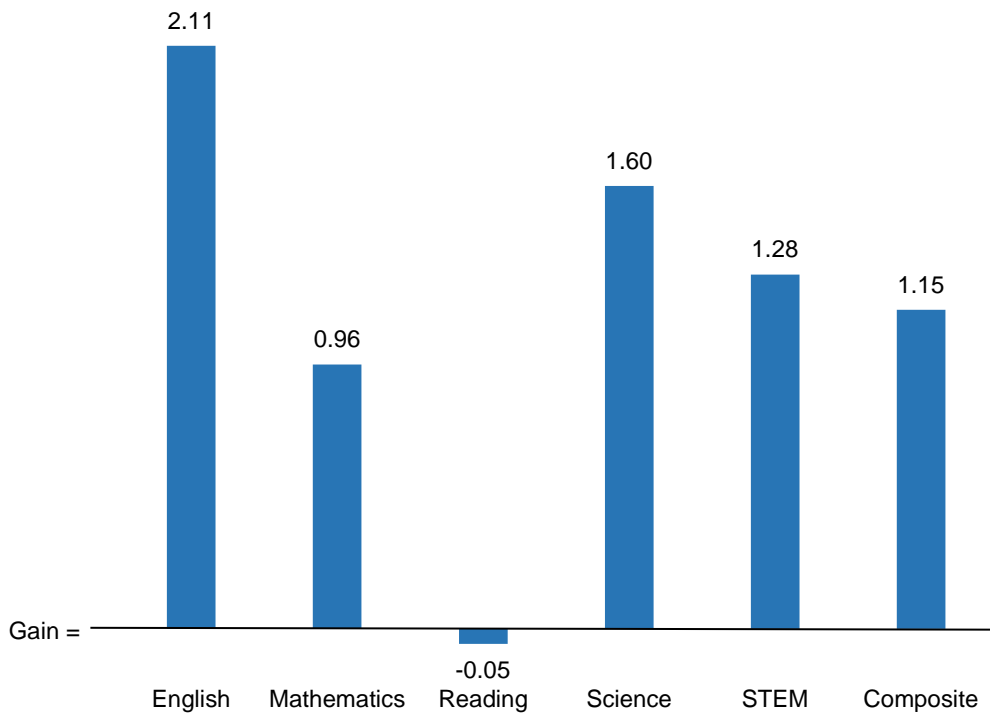


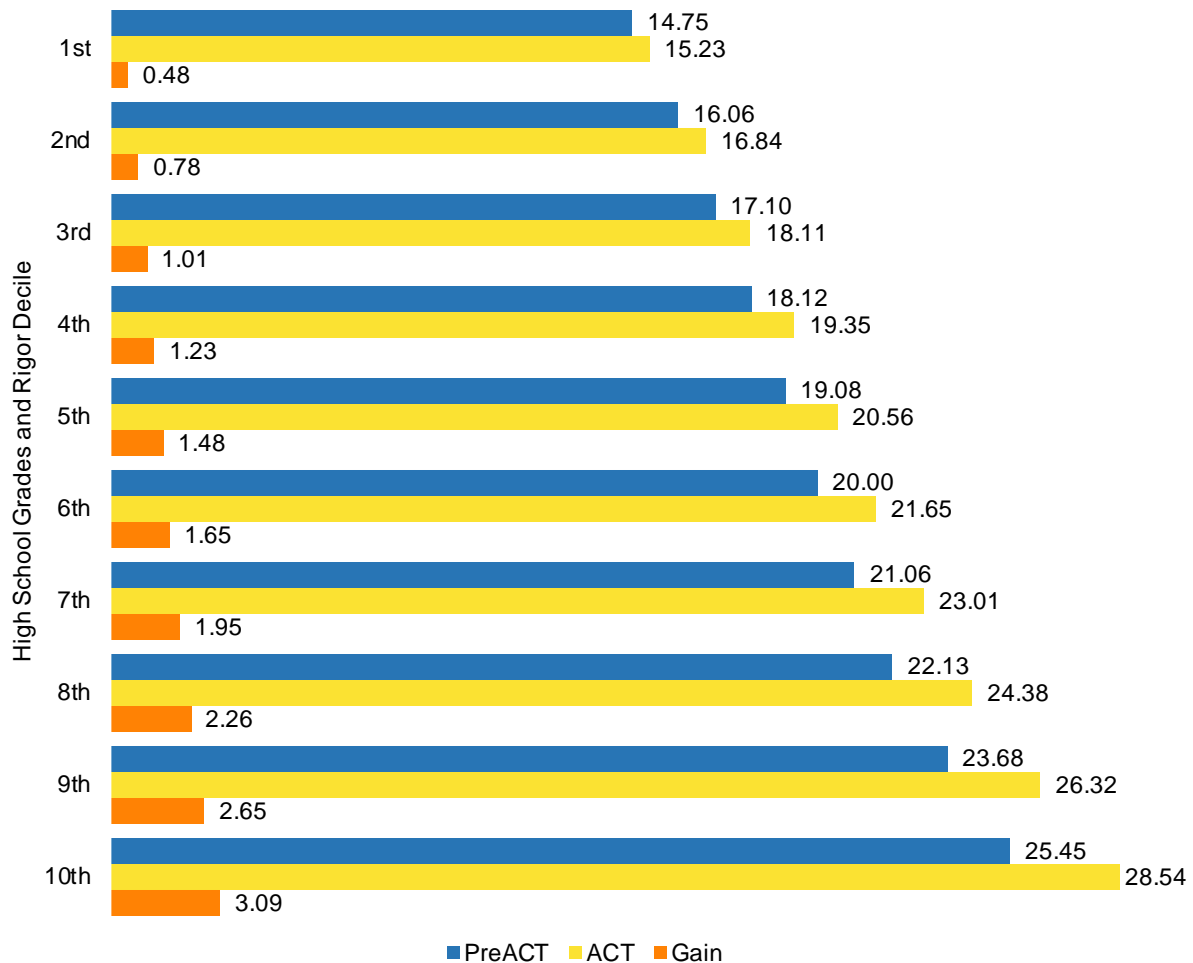
Figure 5. Average Gains from the PreACT to the ACT Test



Finding 3: 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 6).

Figure 6. Average PreACT, ACT, and Gain Scores by High School Grades and Rigor Decile



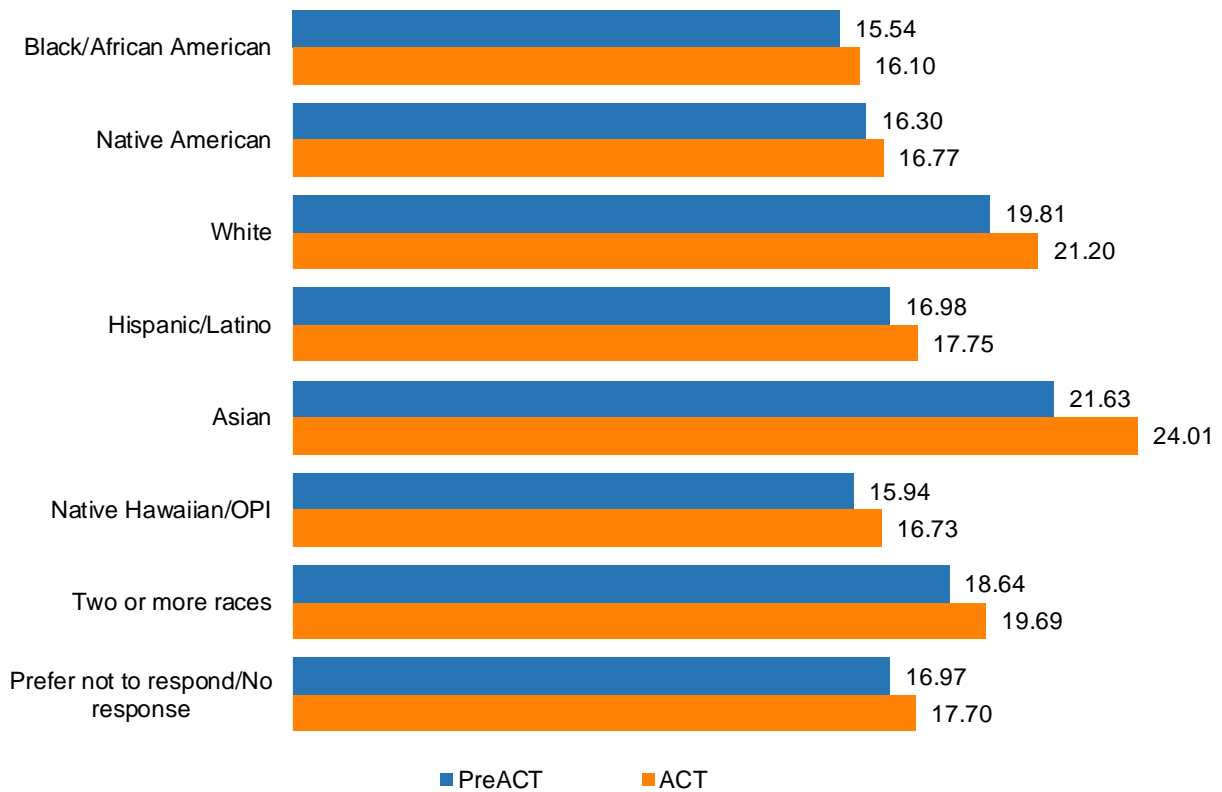
Note. This chart is based on data from 170,008 students who took the PreACT and ACT tests and reported their high school coursework and grades when they registered for the ACT test. The high school grades and rigor decile is based on the ACT Rigor Index, which is similar to high school GPA but awards 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 4: Average gains from the PreACT to the ACT are lower for underrepresented racial/ethnic groups, but much of the difference is explained by course performance, rigor, and school characteristics.

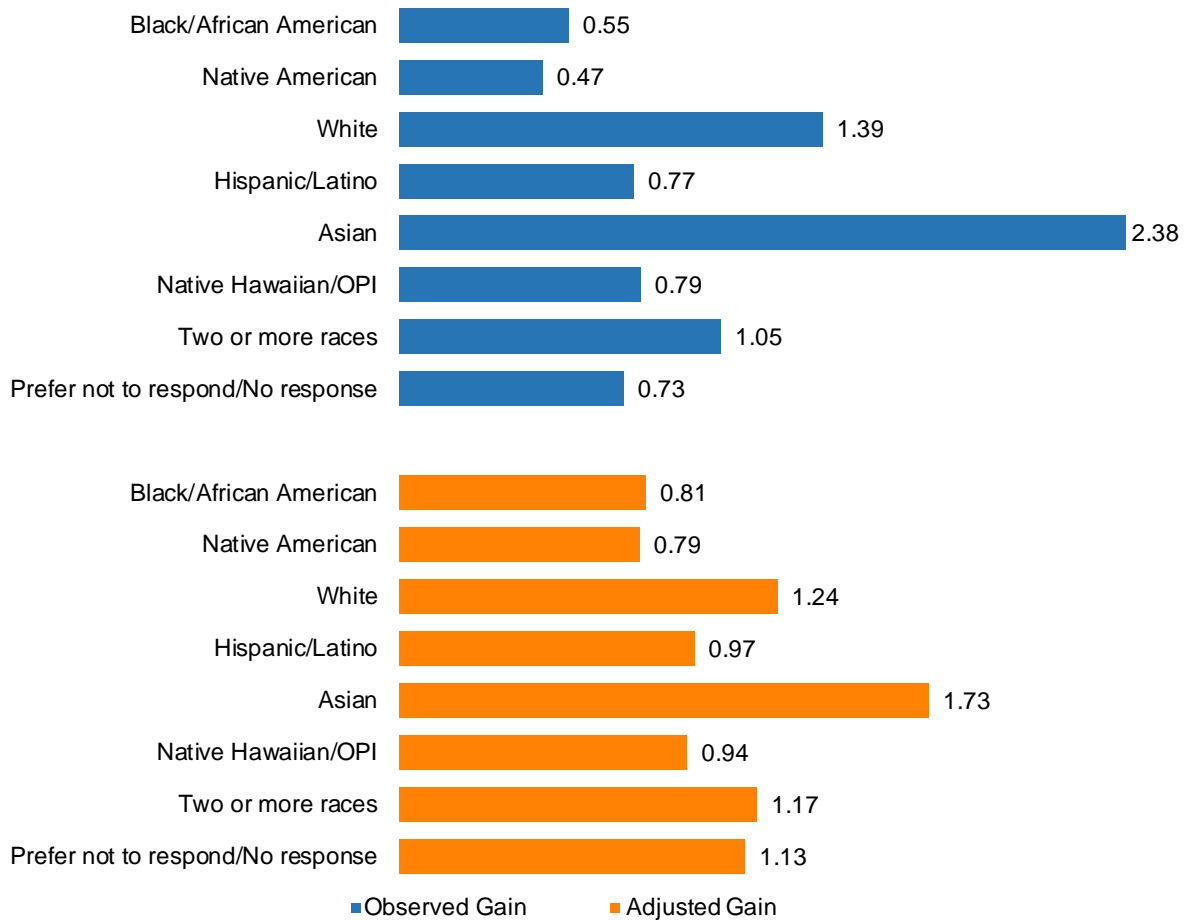
Figure 7 shows the average PreACT and ACT Composite scores by race/ethnicity. The average Composite gain from the PreACT test to the ACT test varied across racial/ethnic groups from a low of 0.47 points for students who are Native American to a high of 2.38 for students who are Asian (Figure 8). After 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 much smaller.

Figure 7. Average PreACT and ACT Composite Scores by Race/Ethnicity



Note. OPI = other Pacific Islander.

Figure 8. Average Composite Gains by Race/Ethnicity



Note. OPI = other Pacific Islander.

Finding 5: 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 9). 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 10).



Figure 9. Average PreACT and ACT Composite Scores by Family Income

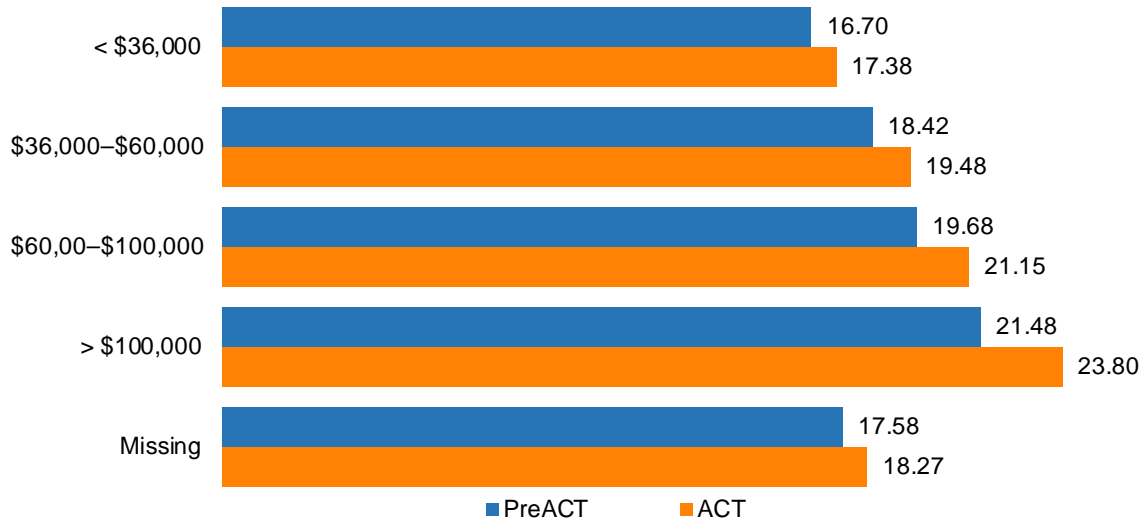
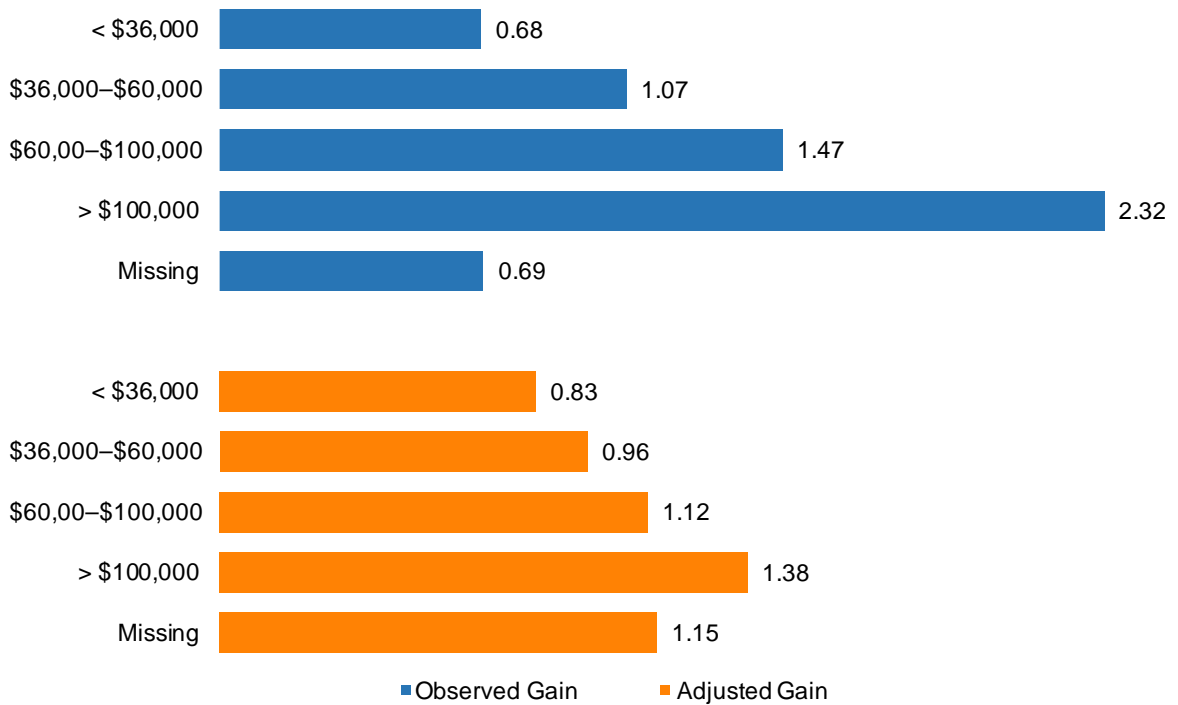


Figure 10. Average Composite Gains by Family Income



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About the Author

Jeff Allen

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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