PreACT-Tested Students in ACT's 2021 Graduating Class: A Summary of Performance and Growth

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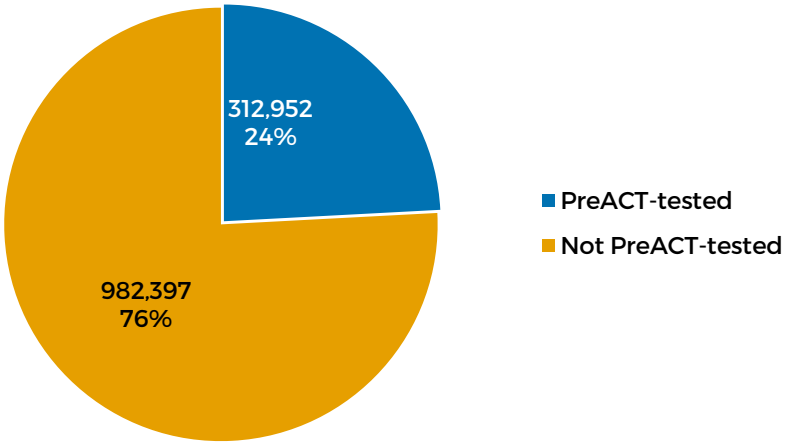
Among students in the 2021 ACT-tested graduating class, over 300,000 took the PreACT® test before taking the ACT® test. In this data byte, we compare performance on the ACT test for students who took the PreACT test versus those who did not. We also examine average PreACT-to-ACT gain scores by performance in high school courses, racial/ethnic group, and family income level. Figure 1 shows the number of students in the 2021 ACT-tested graduating class by PreACT testing status.

Figure 1. Number of Students in 2021 ACT-Tested Graduating Class by PreACT Testing Status

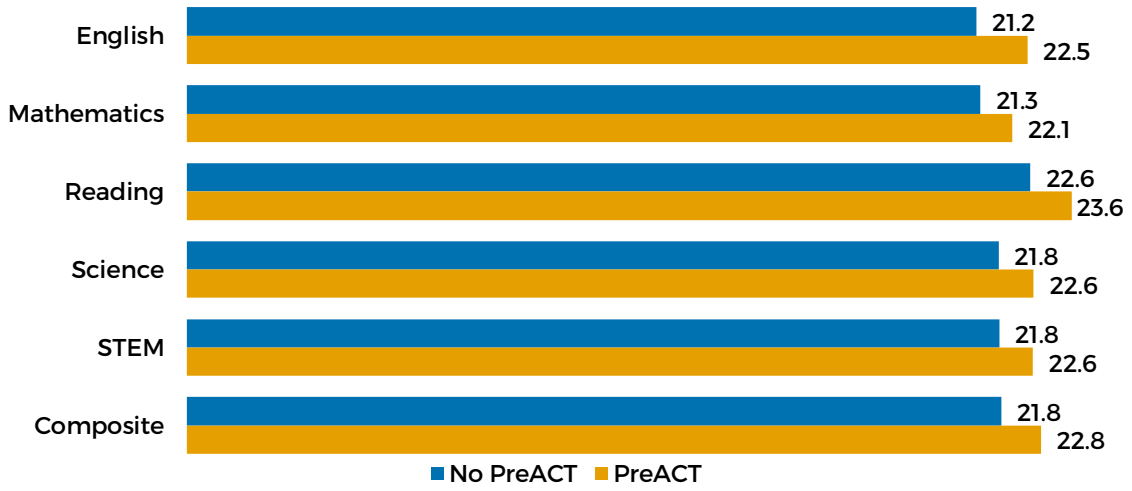


Note. N = 1,295,349 for ACT's 2021 ACT-tested graduating class.

Finding 1: PreACT-tested students scored higher on the ACT test.

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 22.8 for students who took the PreACT and 21.8 for students who did not.

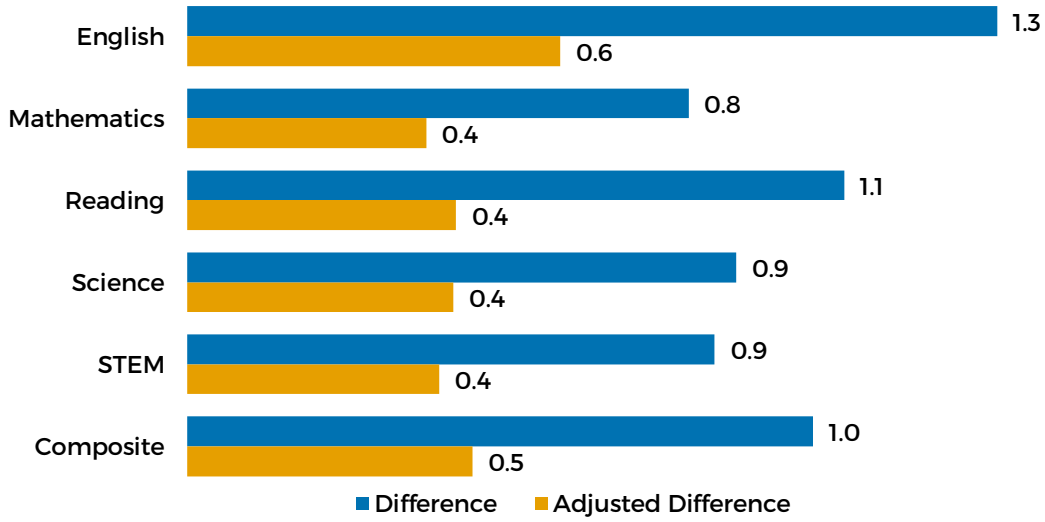
Figure 2. Mean ACT Scores by PreACT Testing Status



Note. For each state, mean ACT scores were obtained for students who took the PreACT test and for those that did not. The mean scores were then averaged across 34 states to produce Figure 2. Each of the 34 states had at least 1,000 PreACT-tested students in the 2021 ACT-tested graduating class.

The difference in average scores ranged from 0.8 for mathematics to 1.3 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 smaller. The adjusted difference in ACT Composite score is 0.5 points, which corresponds to an effect size (Cohen's *d*) of 0.08.

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



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 0.3 points in reading to a high of 2.5 in English (Figure 5). The average Composite gain was 1.5 points.

Figure 4. Average PreACT and ACT Test Scores

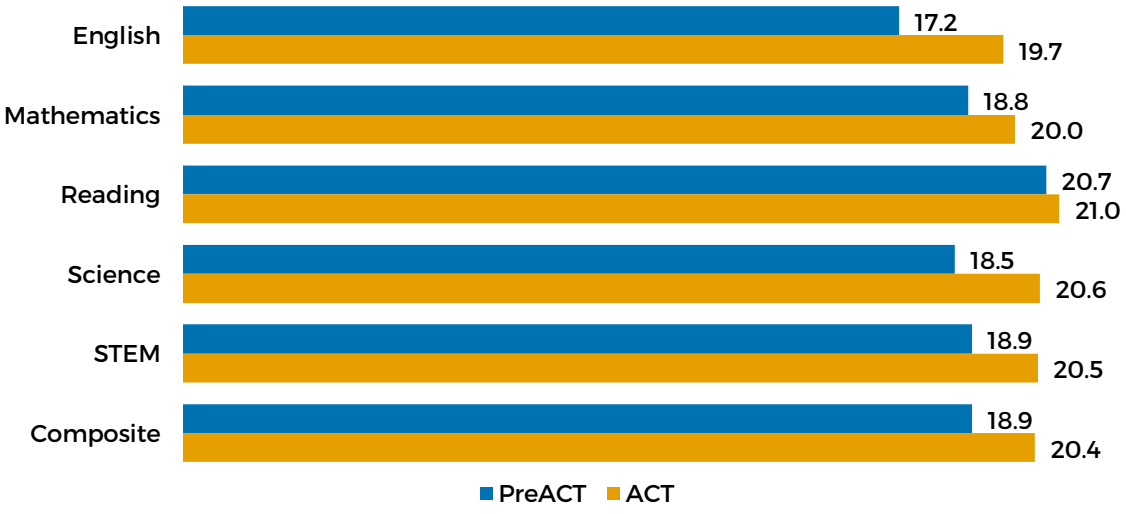
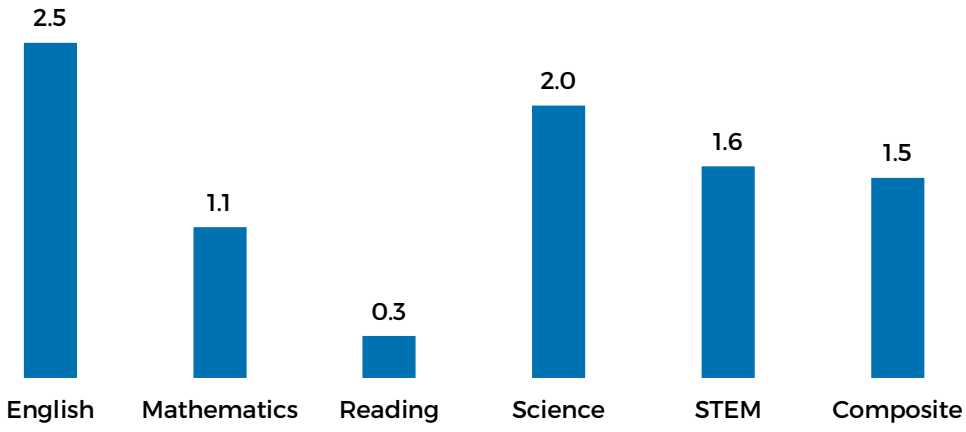


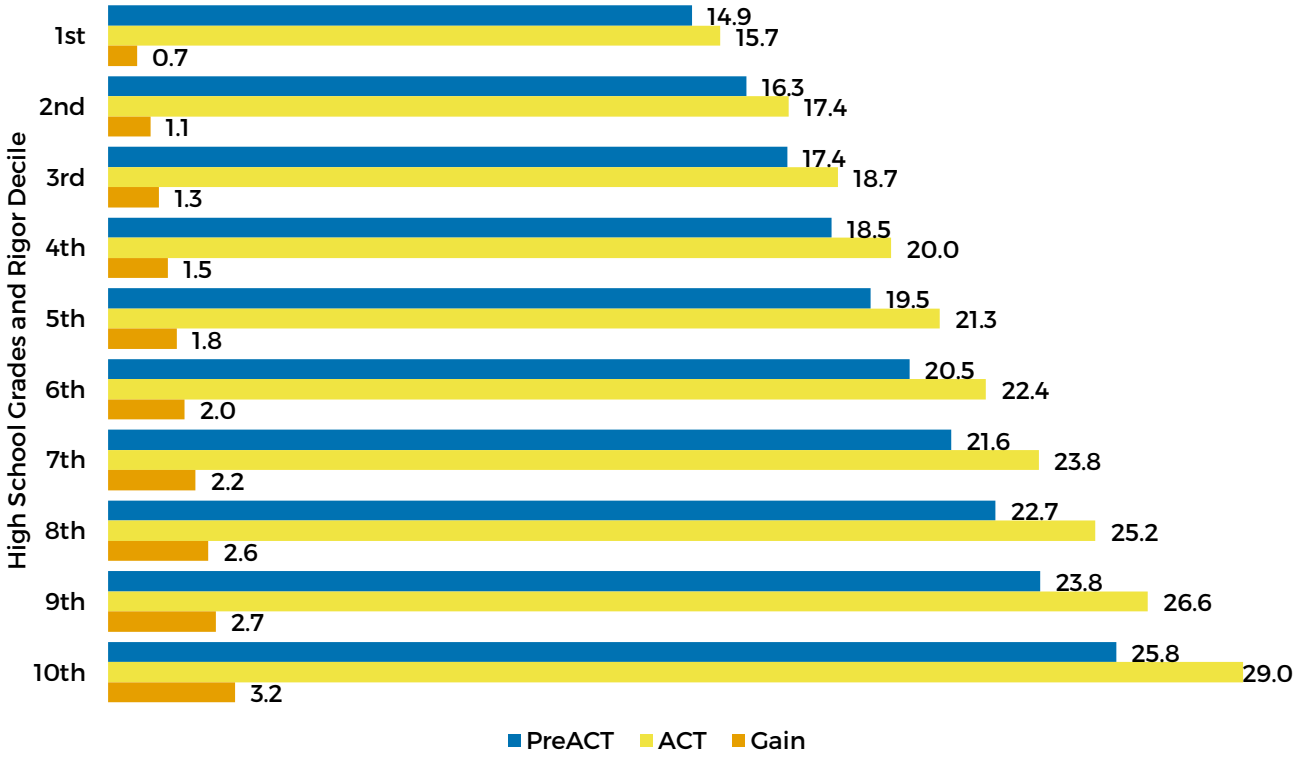
Figure 5. Average Gains from the PreACT to the ACT Test



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).

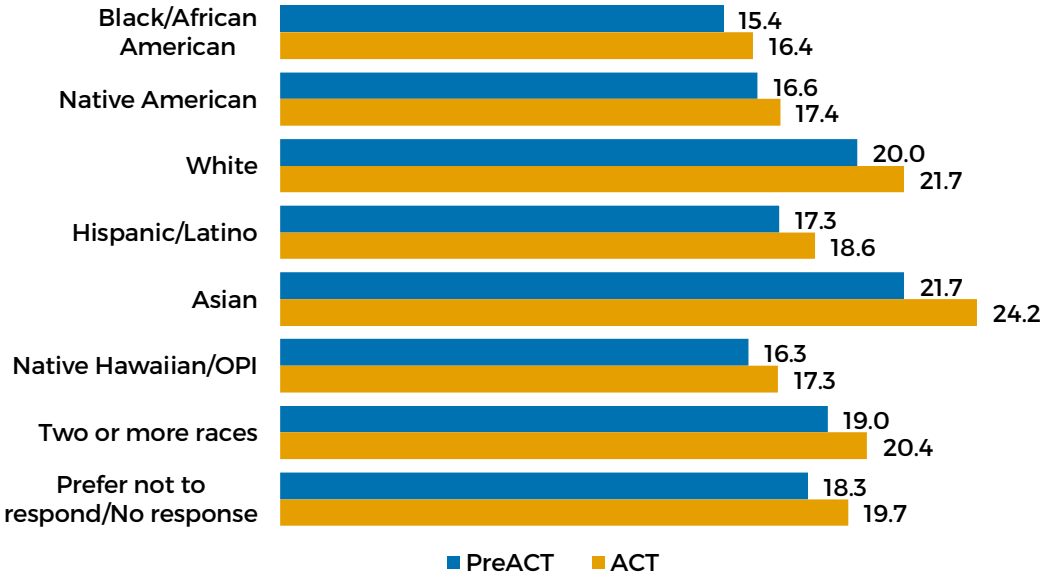
Figure 6. Average PreACT, ACT, and Gain Scores by High School Grades and Rigor Decile



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.

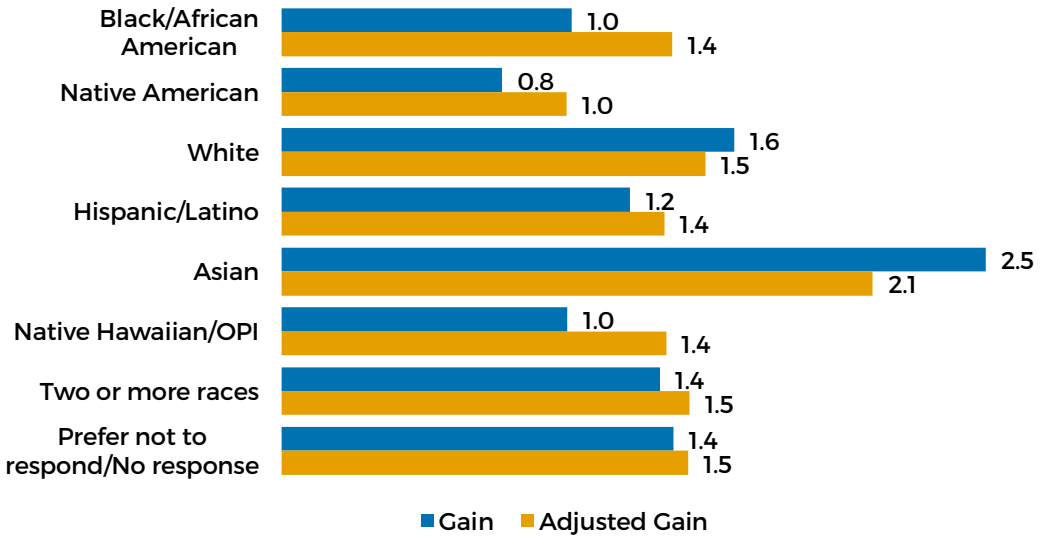
Figure 7 shows the average PreACT and ACT Composite scores by race/ethnicity. The average Composite gain from the PreACT test to the ACT test varied across racial/ethnic groups from a low of 0.8 points for Native American students to a high of 2.5 for Asian students (Figure 8). After being statistically 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 smaller (Figure 10).

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

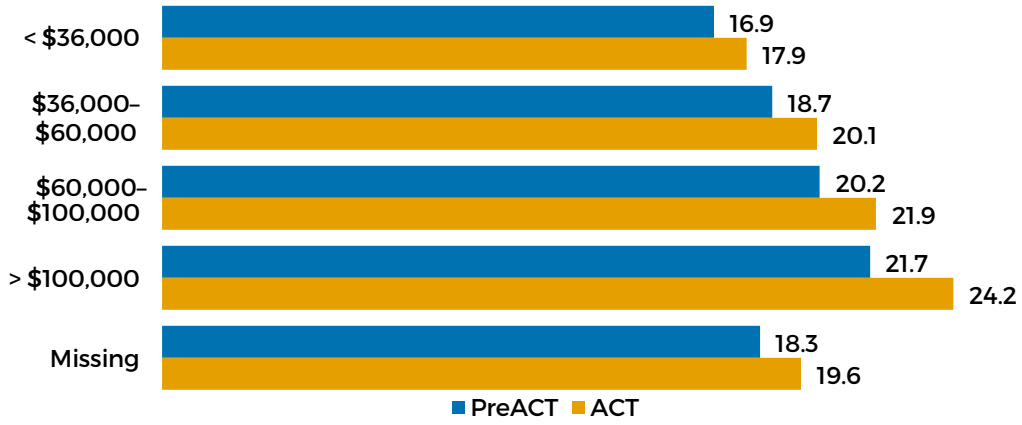
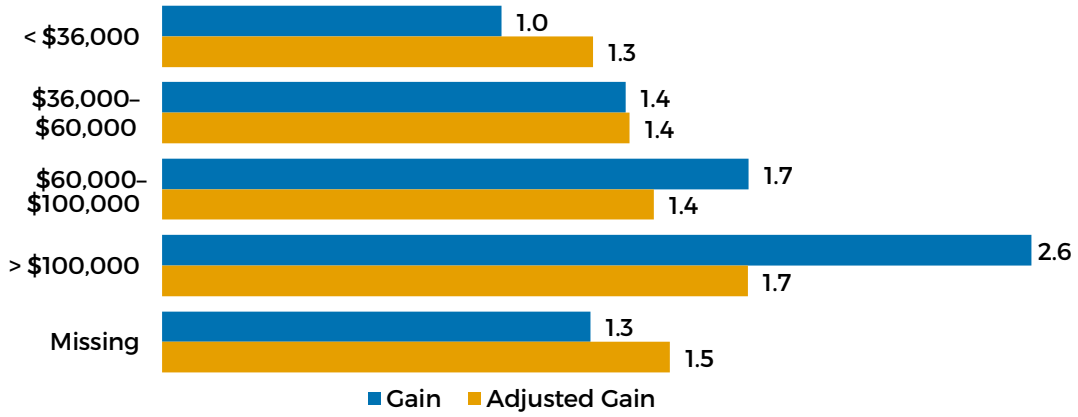


Figure 10. Average Composite Gains by Family Income



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.