

Average ACT & SAT Scores by State



The Relationship Between SAT & ACT Participation Rates and
their Respective Total Scores

Introduction

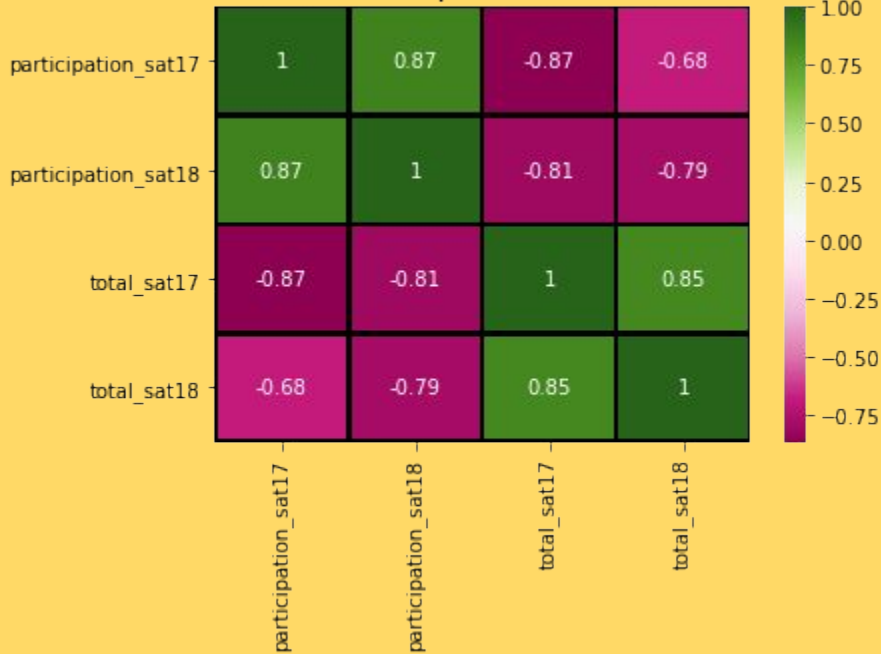
In recent years, we have seen decreased composite ACT & total SAT scores.

Decreased scores can result in a lowered State average - lower SAT & ACT scores may be indicative of the State's admissibility to a post-secondary institution; or even the quality of education provided as a State - but this may not necessarily be true.

In this presentation, we will see how various factors affect average SAT & ACT total & composite scores respectively. Primary data here is retrieved as averages of various subjects for each exam, over the years 2017 and 2018, across 50 states plus DC.

Starting point: Correlation

Correlation between Participation Rate & Total Score for SAT



Participation rates and average total SAT scores have a strong inverse correlation of -0.87 and -0.79 for 2017 and 2018 respectively.

Strong inverse correlations can be indicative of how strong the inverse relationships are of 2 given variables.

We observe a similar trend for ACT participation rates along with the composite scores as well.

State Example

For example - Colorado's participation rate increased from 11% in 2017 SATs to 100% in the 2018 SATs. The average SAT score decreased from 1201 in 2017 to 1025 in 2018.

On the other hand, Colorado's ACT participation rate decreased from 100% in 2017 to 30% in 2018. This was a result of a State rule that shifted the importance of ACT exams to SAT exams. Along with the fall in ACT participation rates, we have also seen an increase in Composite Score averages from 20.8 in 2017 to 23.9 in 2018.

Conclusion

The inverse relationship can be explained by the fact that students who already have the intention to take the standardized tests are more driven in their goals, and as a result are more prepared for the exams.

On the contrary, when a state as a whole is made to take the standardized tests, unprepared students who are unlikely to do as well also contribute to the total score, eventually pulling down the average total and composite scores.