
Does Politics Play a Role in SAT and ACT Participation Rates?

By: Aidan Curley

Data Issues

There were a handful of data issues that we first had to resolve before doing analysis on the different datasets. I resolved these and merged all the datasets together to have a complete and final overview of what I was working with.

However, after looking on the surface I dived deeper into some specific values and found another huge error.

In the final dataset Florida's participation rate in 2017 is 83% then in 2018 it is 56% then in 2019 it is 100%.

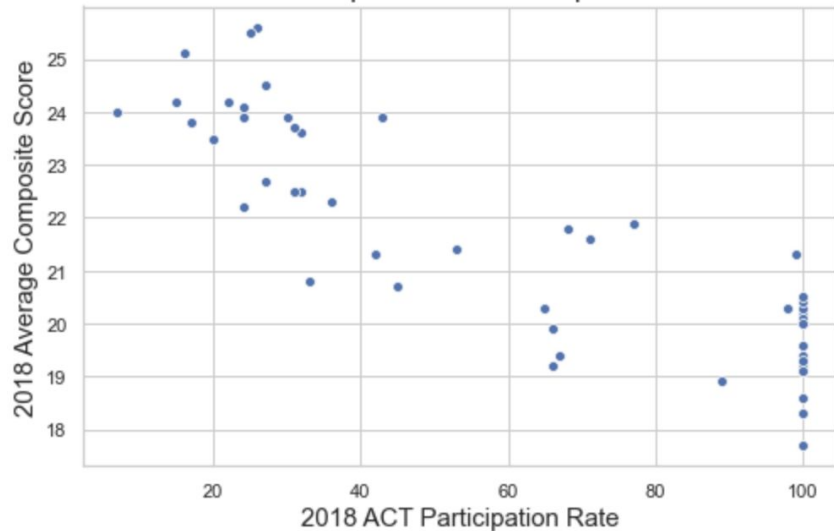
However in a [report](#) from college board Florida, in 2018 had a 97% participation rate.

Primary Findings:

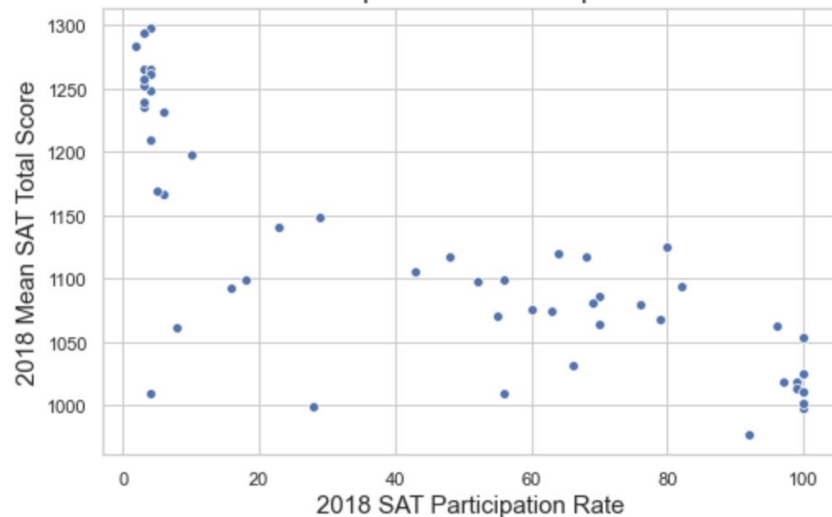
- Colorado had a 70 % decrease in act participation rates from 2017 to 2018 and an 89% increase in SAT participation rates from 2017 to 2018. [Source](#)
- Illinois had a 90% increase in SAT participation rates from 2017 to 2018. [Source](#)
- Middle states and southern states are predominantly ACT focused meanwhile Eastern and Western states are predominantly SAT focused.
- There is an inverse relationship between participation rates and mean scores.

Selection Bias

2018 Inverse Relationship Between Participation and Mean Scores



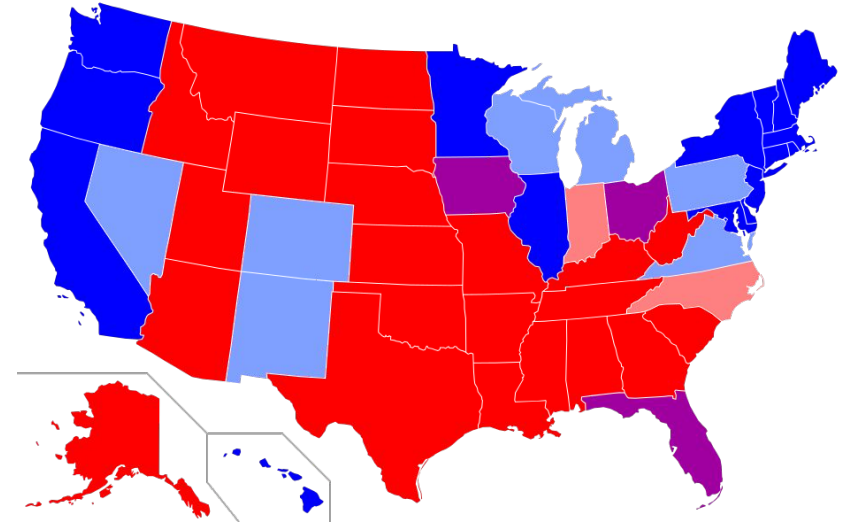
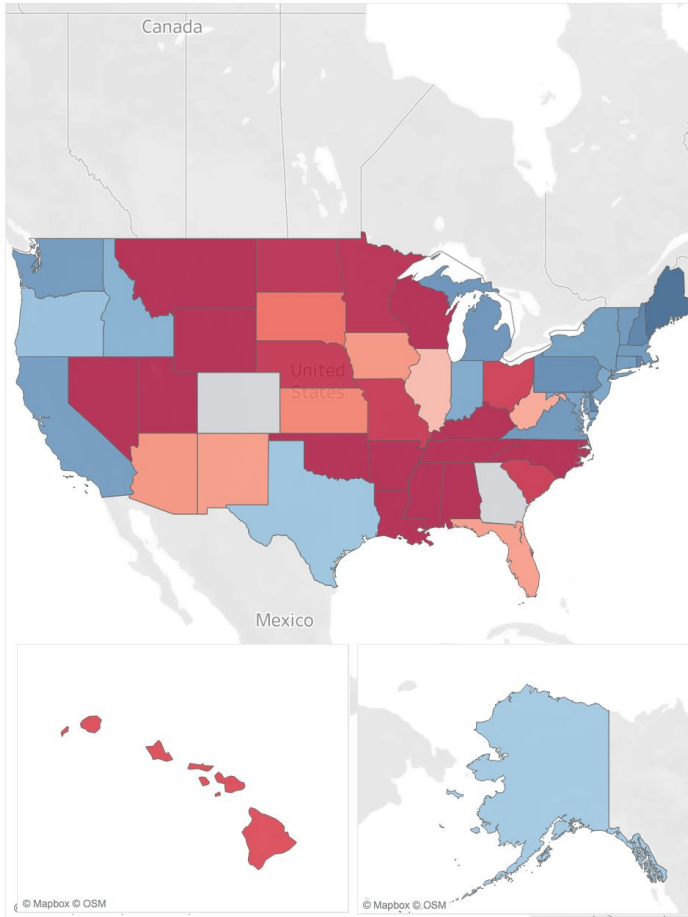
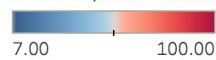
2018 Inverse Relationship Between Participation and Mean Scores



For both tests, higher mean scores correspond with lower rates of participation. This is due to the selection bias. For states where participation rates are lower the mean score is higher because the small percentage of people who take the test are more motivated to do well on the test in comparison to states where everyone is forced to take the test. The small group of students who take both tests are the high scorers which inflate the mean score making the states have higher scores with a low participation rate.

Average ACT Participation Rate for 2017, 2018, 2019

ACT Participation Percent




[Link](#)

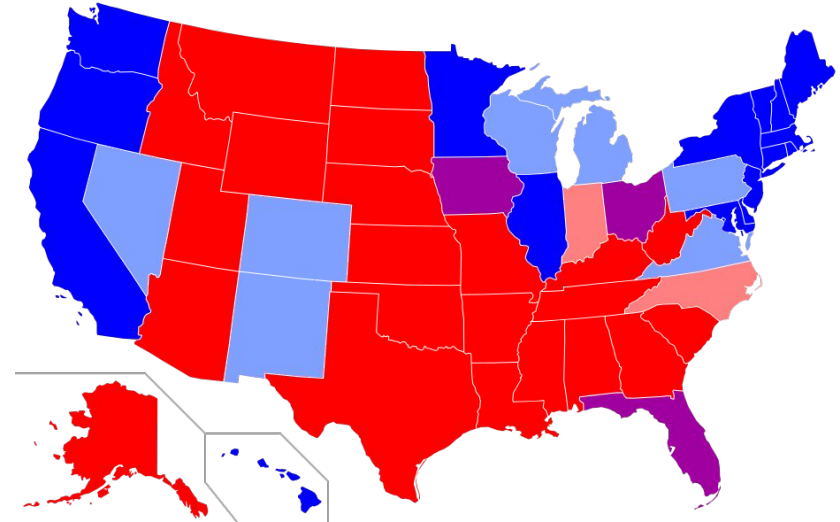
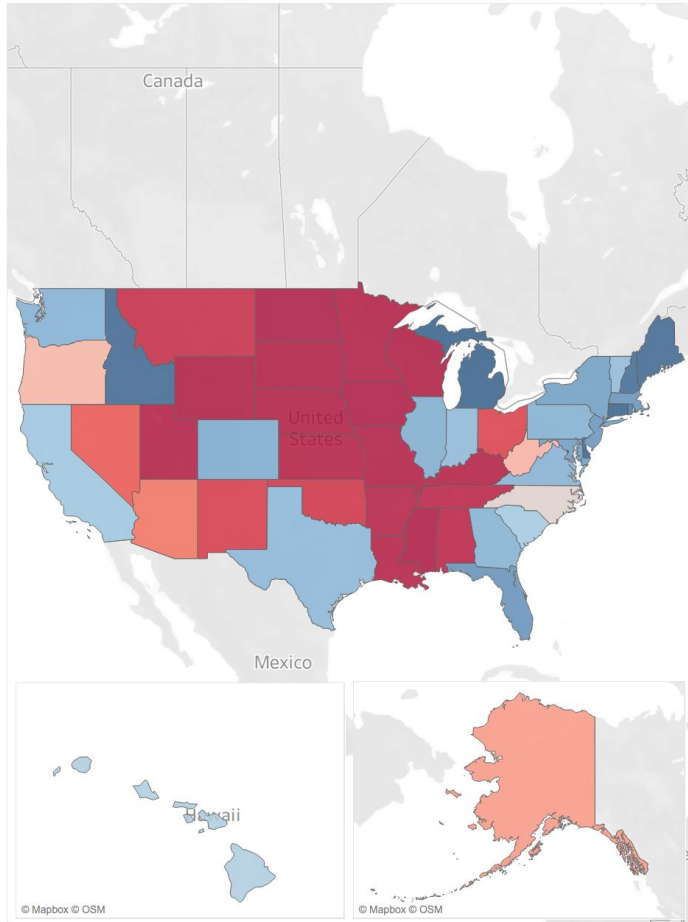
https://en.wikipedia.org/wiki/Red_states_and_blue_states

Average SAT Participation Rate for 2017, 2018, 2019

Avg Participation Percent



2.00 100.00



Summary of results of the 2004, 2008, 2012 and 2016 presidential elections

States carried by the Republicans in all four elections

States carried by the Republicans in three of the four elections

States carried by each party twice in the four elections

States carried by the Democrats in three of the four elections

States carried by the Democrats in all four elections

https://en.wikipedia.org/wiki/Red_states_and_blue_states

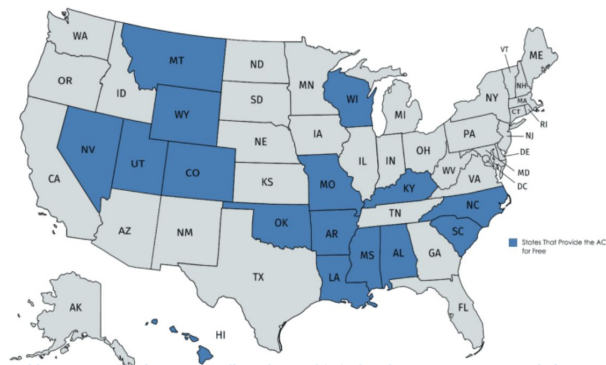
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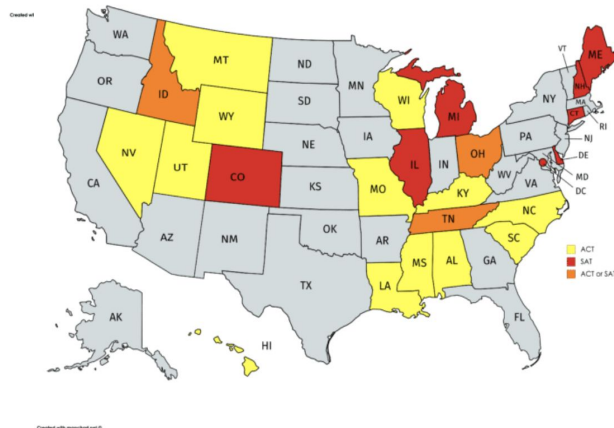
Not Necessarily

In the map to the right the blue states indicate where the ACT is free to take.



<https://magoosh.com/hs/act/2017/states-provide-act-free/>

In this map to the right the yellow and orange states indicate where the ACT is mandatory to take.



<https://magoosh.com/hs/act/2017/states-that-require-the-act-or-sat/>

Conclusions & Recommendations

- If states would like a guaranteed increase in participation rate for a given state I would recommend offering the test for free and making it mandated in that specific state. This is why there is such a high percentage of people in the southern and middle states who take the ACT instead of the SAT.
- Offering the SAT during regular school hours
- Covering all parts of the exam fees
- Increasing access to honors and AP courses
- Increasing access to PSAT/NMSQT