

The SAT logo is rendered in a dark brown, serif typeface. The letters are tall and closely spaced, with a registered trademark symbol (®) positioned at the top right of the 'T'.

SAT[®]

The ACT logo is rendered in a dark blue, serif typeface. A red swoosh is located under the 'A'. The letters are tall and closely spaced, with a registered trademark symbol (®) positioned at the top right of the 'T'.

ACT[®]

Understanding the causes of change in participation for SAT and ACT exams from 2017 to 2018

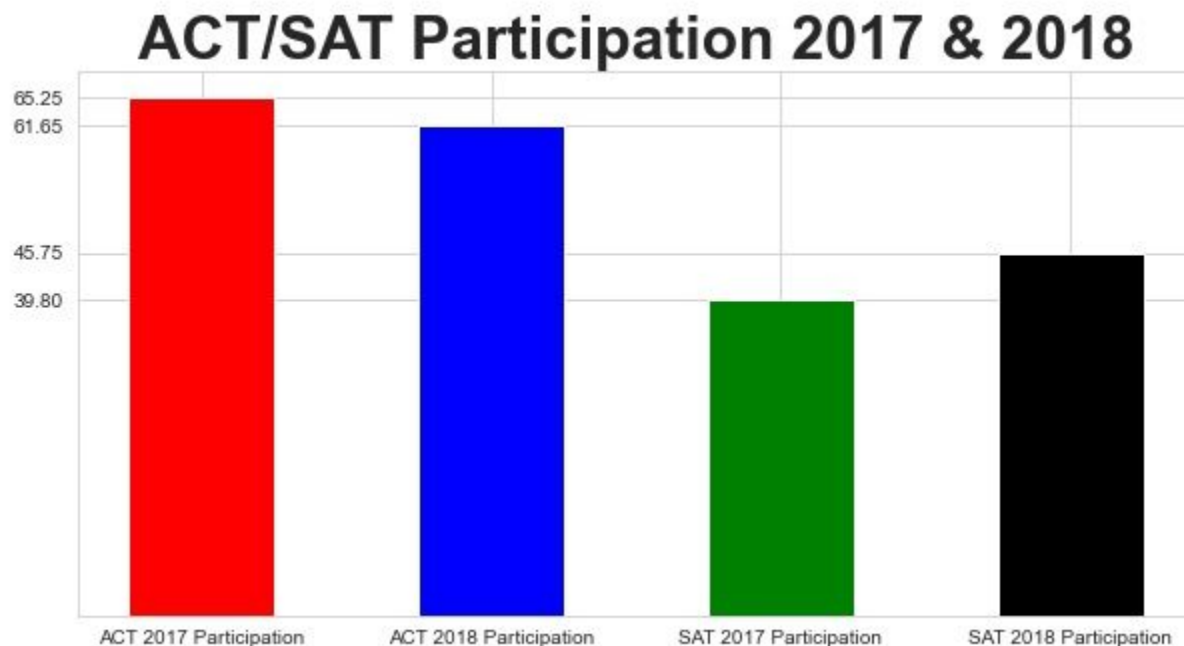
By: Eugene, Darion, Asyraf



Dataset Details

- State name
- SAT:
 - a. Participation Rate
 - b. Evidence-Based Reading & Writing
 - c. Math
 - d. Total Score
- ACT:
 - a. Participation Rate
 - b. Reading
 - c. English
 - d. Math
 - e. Science
 - f. Composite Score

Let's look at the participation between 2017 and 2018



ACT Participation Dropped from 2017 to 2018

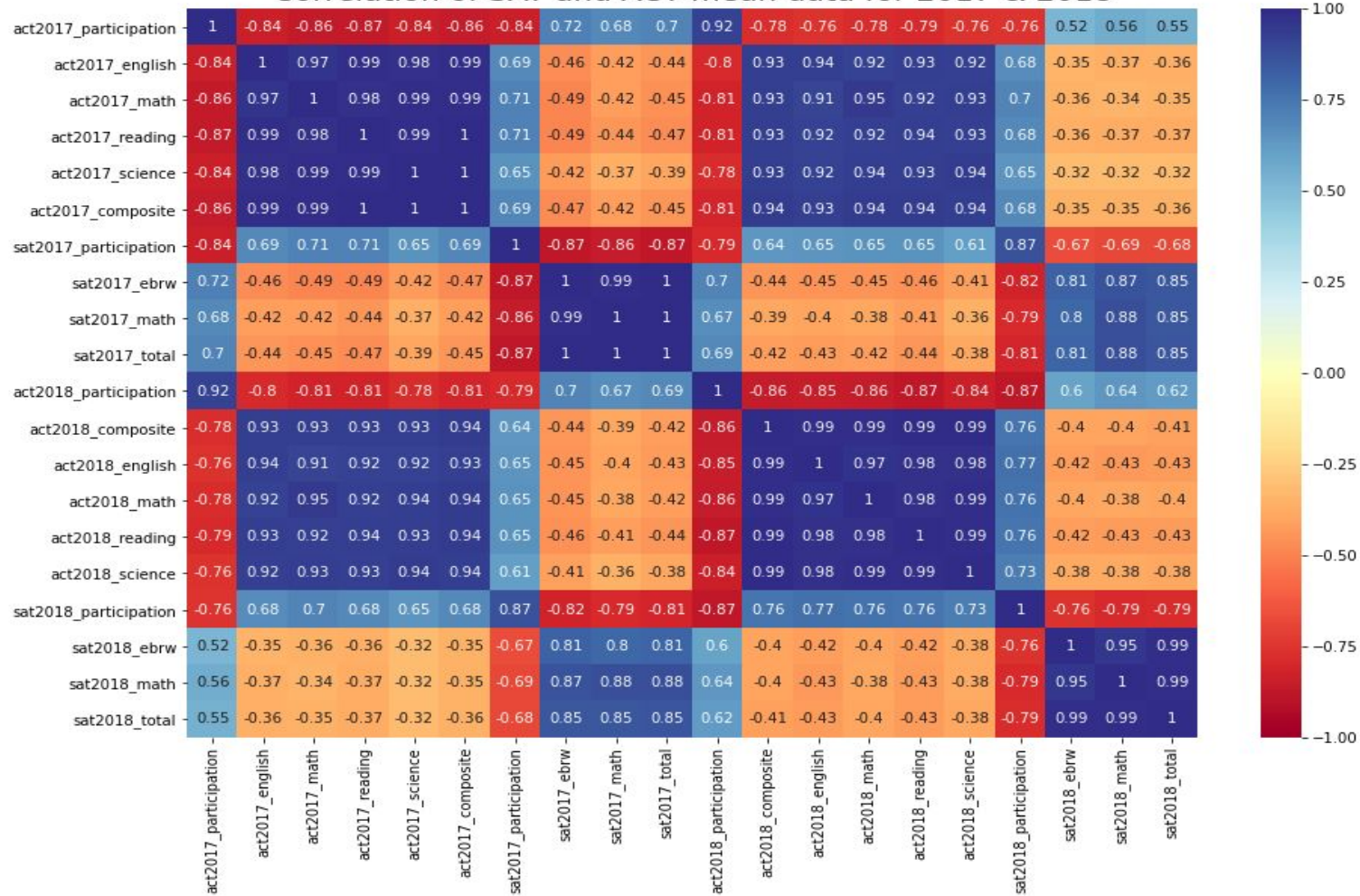
SAT Participation Increased from 2017 to 2018



At a glance, what does it tell us?

- At a national level, there is an increasing shift in SAT as compared to ACT
 - Policy change ?
 - SAT assessment change?
 - Admission requirement change?
- There might be a correlation between the change in one as compared to the other (inversely correlated)

Correlation of SAT and ACT mean data for 2017 & 2018





Correlation of the Data

Based on the heatmap from the previous slide, the following are our findings about the data:

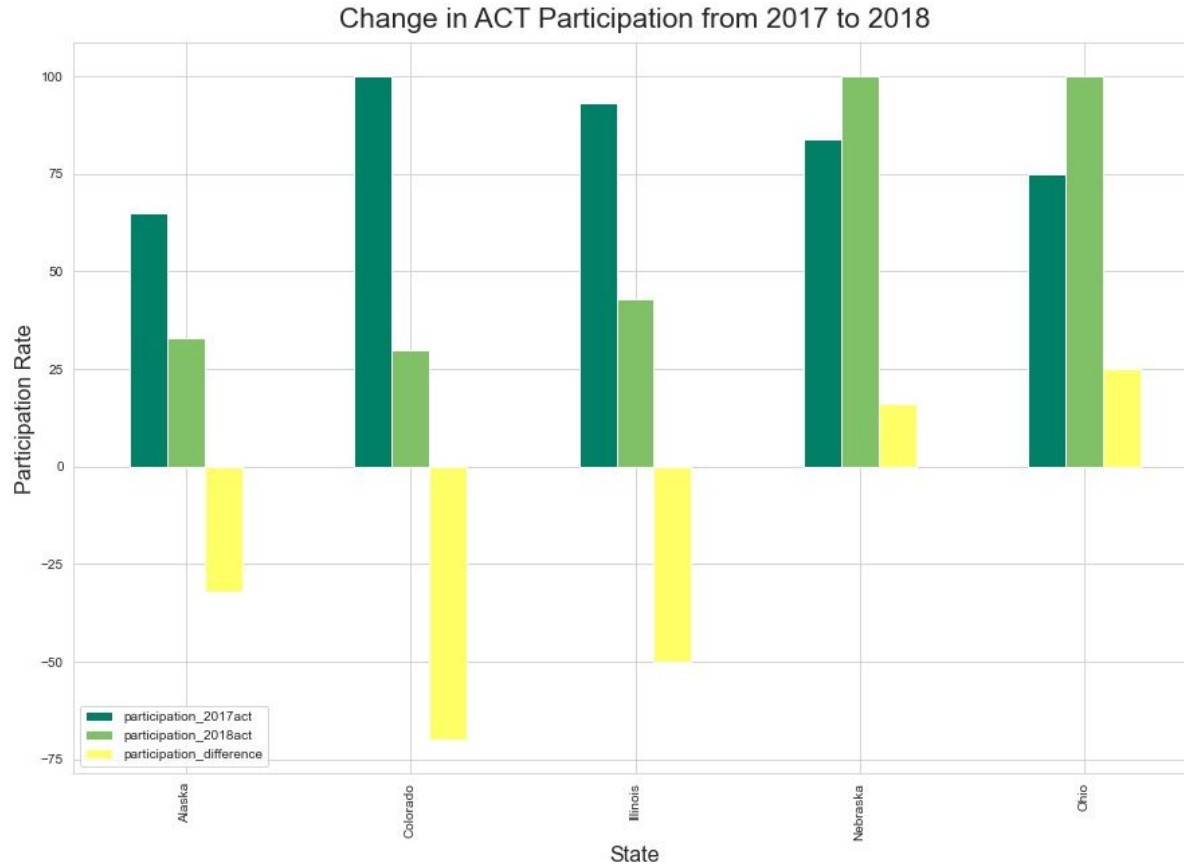
1. There is a negative correlation between the participation of ACT and SAT in both years. Not a big incentive to take both!
2. There is a negative correlation between the SAT participation and SAT total mean score in both years. When the participation rate increase, the mean score tends to decrease.
3. There is a positive correlation between the SAT total mean score and its sub-tests mean score. This is due to the sub-tests are being part of its total score.



In order to understand at a deeper level...

- Looking at a more micro aggregation of the data (state level)
- Identify trends that had a significant change in participation rate (>10%)
- Identify state of interest. Highest and lowest as comparison

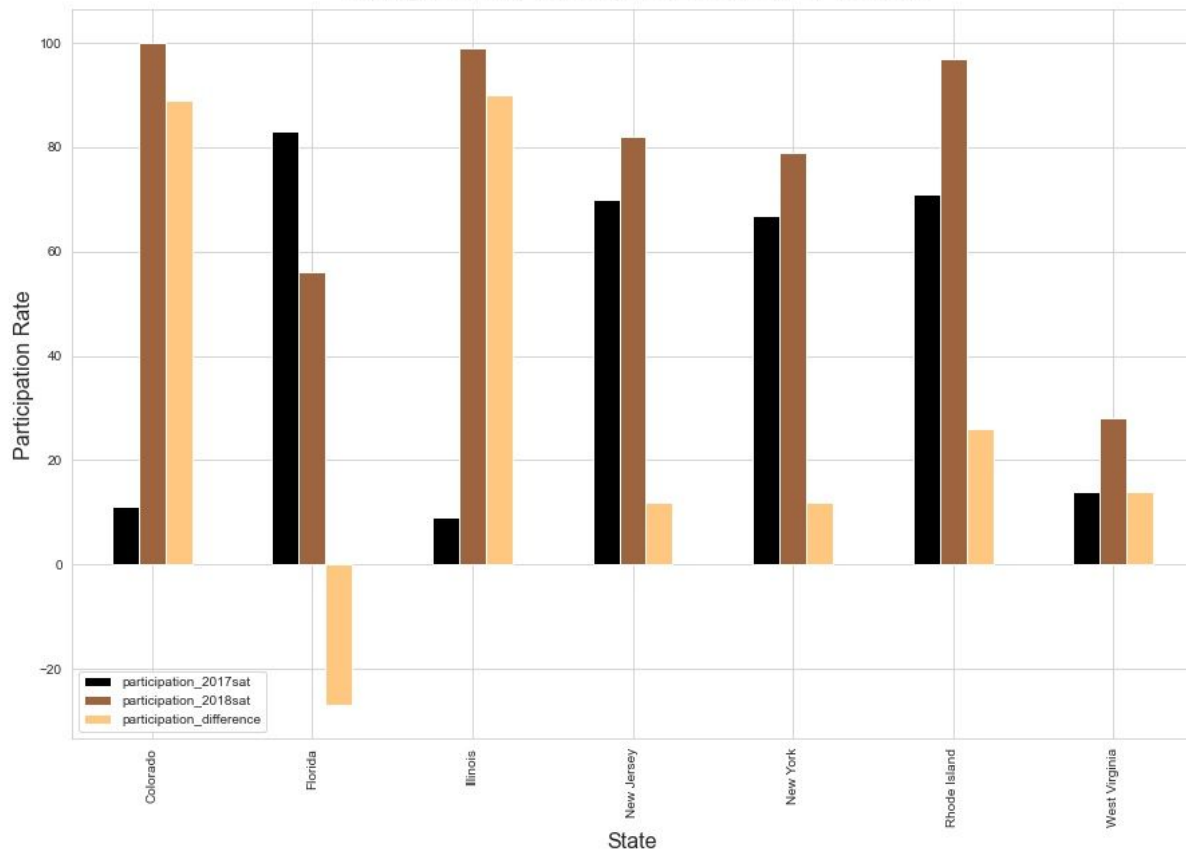
States with >10% change in ACT participation



- Colorado and Illinois have the biggest change, 70% and 50% declines respectively.
- Ohio increased by 25%

States with >10% change in SAT participation

Change in SAT Participation from 2017 to 2018



- Again, Colorado and Illinois produced the biggest change of 89% and 90% respectively.



What changed in Colorado & Illinois?

Policy change, making it mandatory for all students to sit for SAT in 2017.

- Accounted for the drastic shift from the more popular ACT to SAT.
- Students were not made to choose between the two tests.
- Sit for ACT as an additional test (only for those who are confident of doing well)



What about Ohio?

Introduced funding for tests, making it free for students to sit for either ACT or SAT.

- Accounted for the change to full participation for ACT.
- Increase in SAT participation as well
- Incentive for students to sit for either or both tests
- Further increase in ACT participation due to familiarity (switching will require administrative and syllabus change)



What lessons can be drawn from these examples?

- State policies will go a long way to increase participation of exams
- Incentivise students to participate (making it free)
- Mandating the students to participate



Can we replicate it to other states?

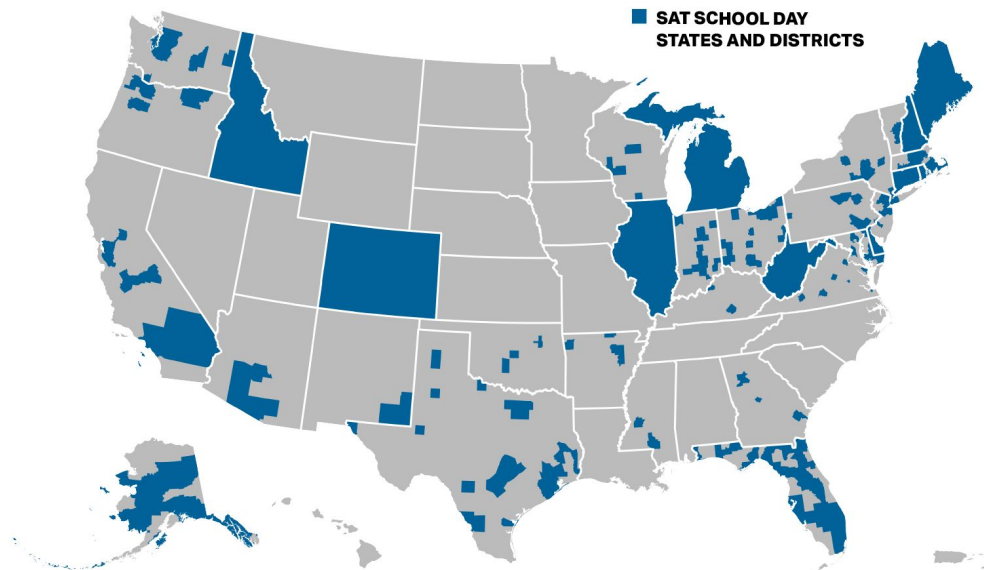
As you can see, crafting policies to boost participation works!

Many Ivy League universities use standardised test for their admission process which gives further incentive to move towards having these tests accessible to students.

Having more students participate for standardised tests also allows you to gauge the quality of the students amongst their peers.

Ultimately, we want education to flourish!

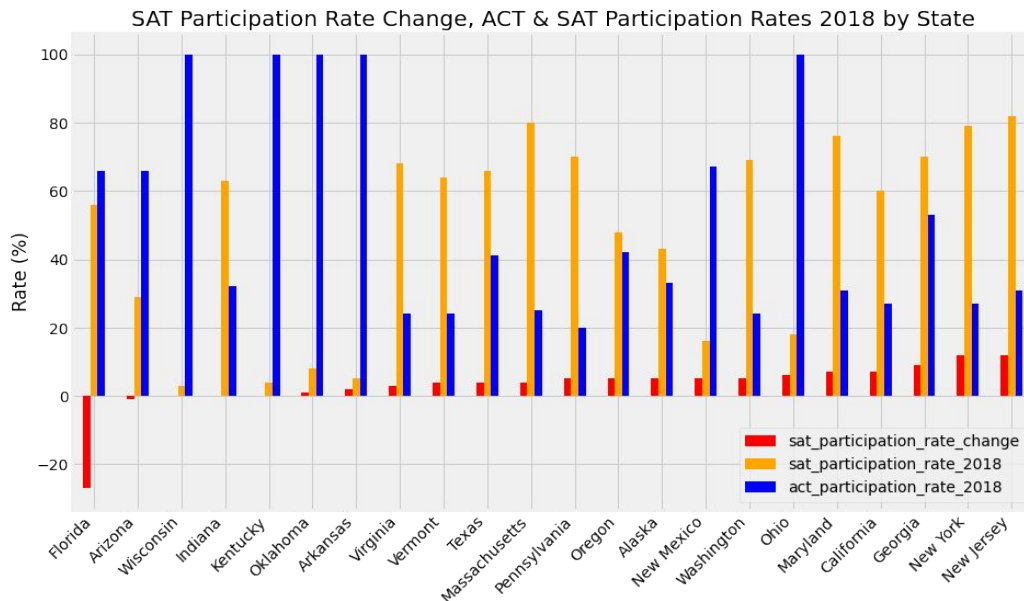
School SAT Day Program



- 10 states receiving full support in 2018:
 - Take test on a weekday.
 - Cost fully covered by state.
- 22 states receiving district/school level support for administering SAT.



Effect of School SAT Day partial support



- Varying degrees of improvement to SAT participation rate.



Noteworthy Considerations.

As the coronavirus continues to hit us, many colleges have waived ACT and SAT requirements in their admission process. As the trend continues to occur, it is noteworthy to also consider the implications on whether the recommendations made will be effective in the future.

We look at the case of Alaska and the trend of dropping ACT/SAT requirements for colleges



ACT and SAT in Alaska

- Alaska's participation rates in both ACT and SAT remain below 50% in 2018, despite having received partial support from the SAT School Day program.
- A state law requiring college or career readiness tests for high school students to graduate with diplomas has expired in mid-2016. Previously, SAT, ACT or WorkKeys were available options.
- 3 out of 5 universities in Alaska have open-admission policy, i.e. SAT/ACT results are not required.
- Fast-forward till present day, University of Alaska Fairbanks has extended their SAT/ACT requirements waiver for undergraduate admission through the fall 2021 semester, in an effort to remove barriers for prospective students who want to go to college, but may not have access to testing in their local communities due to COVID-19 pandemic closure of test centers.
- Extending more support to Alaska might not help if the universities are predominantly open-admissions.



SAT in Iowa

In Iowa, the SAT participation is one of the lowest, having only 2% participation in 2017 and 3% participation in 2018. Its ACT participation is 67% in 2017 and 68% in 2018.

Based on additional outside research, in Iowa, students currently do not have subsidy for SAT and ACT. To enter the university of Iowa, the applicant will require a ACT composite score of 26, or a SAT total of 1230.

Based on the table below, Iowa's median household income is lower than the national's median household, subsidies might be able to help some students.

Income & Poverty	United States	Iowa
Median household income (in 2018 dollars), 2014-2018	\$60,293	\$58,580
PEOPLE		
Income & Poverty		
Median household income (in 2018 dollars), 2014-2018	\$60,293	\$58,580
Per capita income in past 12 months (in 2018 dollars), 2014-2018	\$32,621	\$31,085
Persons in poverty, percent	10.5%	11.2%



SAT in Iowa

A recommendation will be working with the state of Iowa and implementing on SAT Day in the state. As SAT Day is on a school day, it can encourage students to participate. It does not cost the student and students might treat it as part of the curriculum.

Educational attainment for high school or higher in Iowa is 92.6%, which is higher than the national level. However, out of 92.6%, 31% is high school. Implementing SAT day might even promote more students to enter college after high school, as SAT is one of a requirements.

Education

Educational Attainment

92.6% +/- 0.3%

High school graduate or higher in Iowa

88.6% +/- 0.1%

High school graduate or higher in the United States

Table: DP02
Table Survey/Program: 2019
American Community Survey 1-Year Estimates

Education Attainment in Iowa

High School or equivalent degree - 31.0%

Some college, no degree - 20.4%

Associate's degree - 11.9%

Bachelor's degree - 19.8%

Graduate or professional degree - 9.5%

0 5 10 15 20 25 30 35



Conclusion...

- Changes to participation can be enforced via policy change or statewide support/funding
- Replicating over other states can work in achieving the desired outcome of participation
- Full participation as an act to make education accessible
- Important to also understand the changing admission college requirement in light of recent times
- Ultimately, must find a common ground between policy and college entry requirement