



# SAT AND ACT TESTING ANALYSIS

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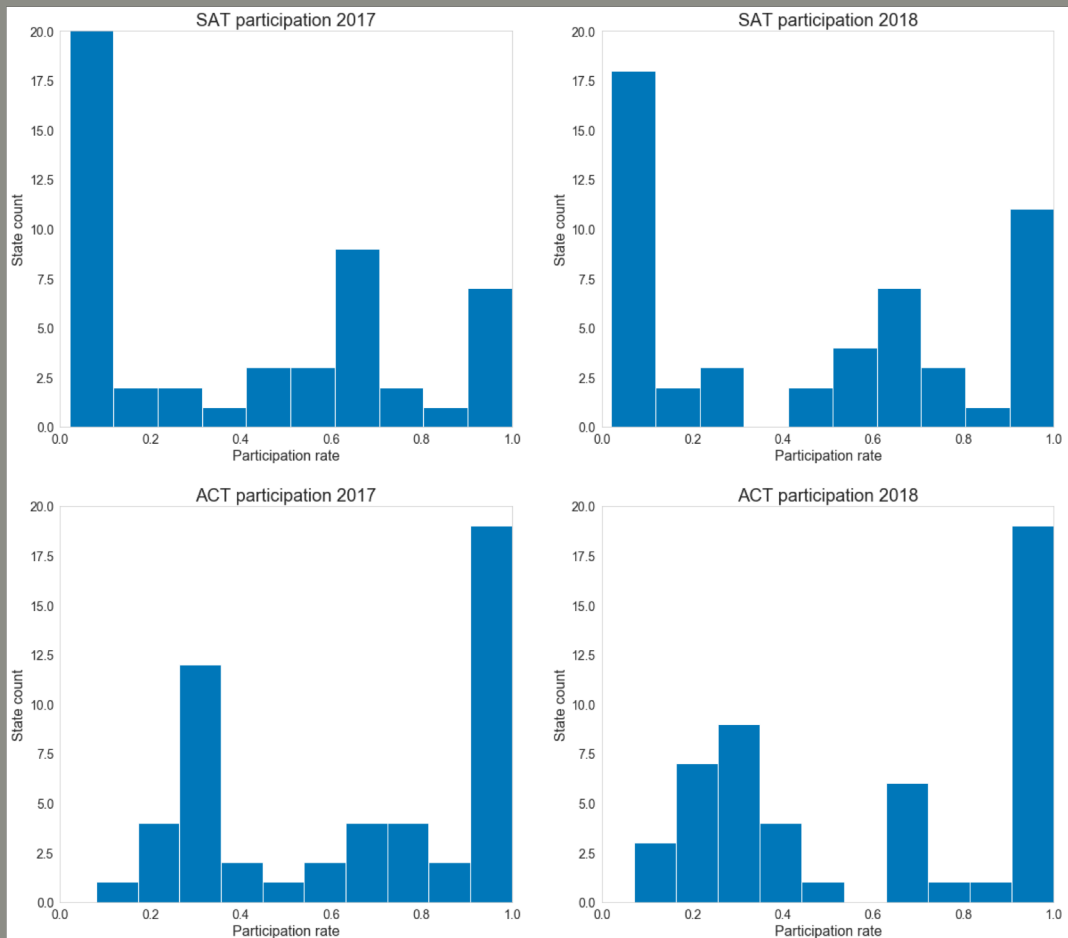


# PROBLEM STATEMENT

What actions can be taken to increase the participation rates among high school students in taking the SAT and ACT college entrance exams?

# Participation

- Participation rates vary across states with concentrations around very high ( $> 90\%$ ) and very low participation ( $< 10\%$ )
- Many states require testing usually picking one test
- 18 states require the ACT, 11 the SAT<sup>5</sup>, 3 one of two but allow students to choose<sup>6</sup>
- No state requires both
- Counselors often recommend sticking with one test since individual scores are frequently similar

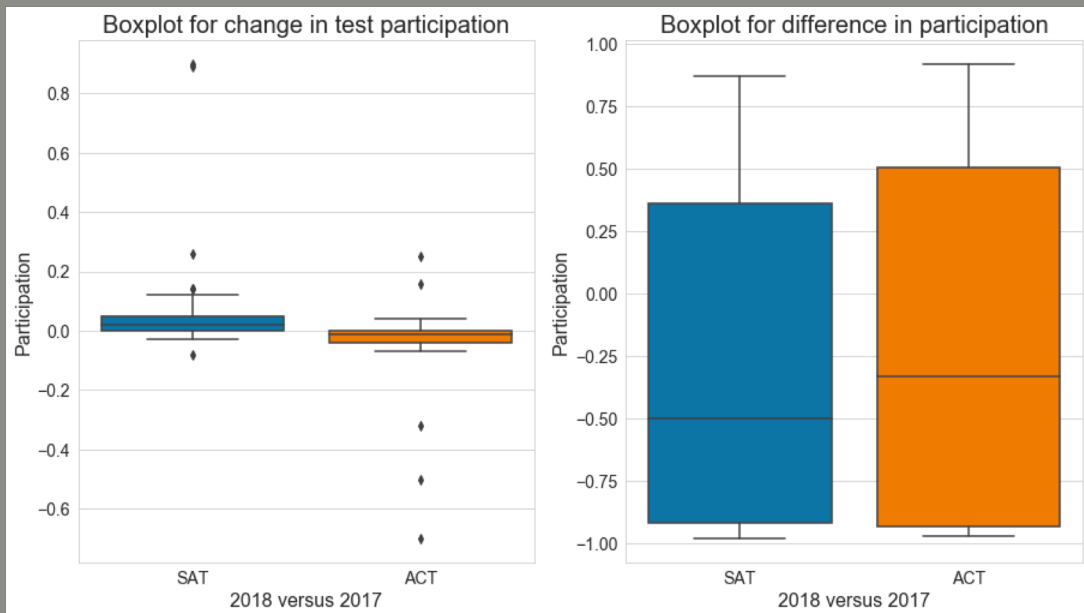


# Some questions

Question	Observation
Why a wide range in participation?	Most students take one often because it is required
Is correlation between SAT and ACT participation positive or negative?	Negative since it is usually one or the other
Why do some states, Alaska and Oregon, have similar SAT and ACT participation rates?	Tests are optional, Oregon uses another standardized test
Why do some state see over 50% participation on both, Florida, Georgia, Hawaii, North Carolina and South Carolina?	In Florida, credit free SAT “school day” events
Why did Colorado and Illinois see such dramatic shifts away from ACT to SAT testing?	Mandatory test switch

# Changes in participation

- Large changes in participation rates are rare
- Few states see large changes
- There is a wide range of differences in test participation among states



## SAT outliers

Dist. of  
Columbia -8%  
Illinois +90%  
Colorado +89%  
Rhode Island  
+26%

## ACT outliers

Ohio +25%  
Nebraska +16%  
Colorado -70%  
Illinois -50%  
Alaska -32%

# Case study: Colorado

## ■ Mandatory testing

- *Colorado switched from mandatory ACT to mandatory SAT testing*
- *Part of accountability standards and free to students*
- *Deemed more aligned with the state's academic standards*

## ■ Results

- *Standards designed to prepare students for college but only 6 in 10 are ready*

## ■ Comparisons

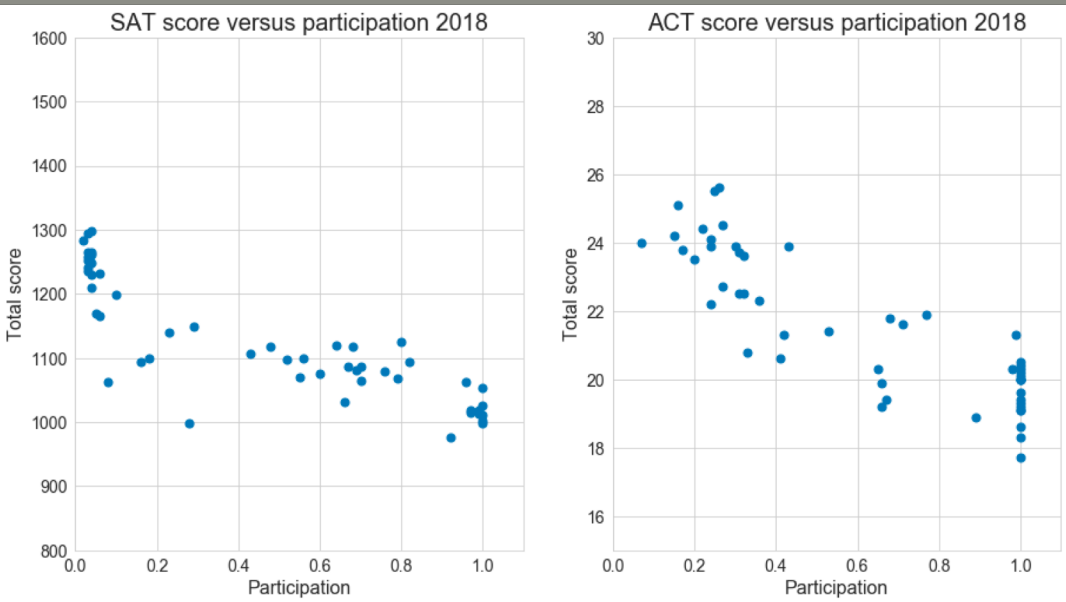
- *Illinois also switched to the SAT*
- *Alaska eliminated the testing requirement*

Testing results					
SAT			ACT		
Year	Participation	Avg Score	Year	Participation	Avg Score
2017	11%	1201	2017	100%	20.8
2018	100%	1025	2018	30%	23.9

# Some more questions

Question	Observation
How are scores related to participation rates?	When tests are optional, only better students take them
Is there a correlation between state income averages and test participation?	Some exists

# Participation and scores



- There is a strong negative relationship between participation and score
- States with the highest participation have some of the lowest average scores
- States with low participation have some of the highest average scores
- Selection bias exists when participation is optional

Correlation between score  
and participation

SAT 2018

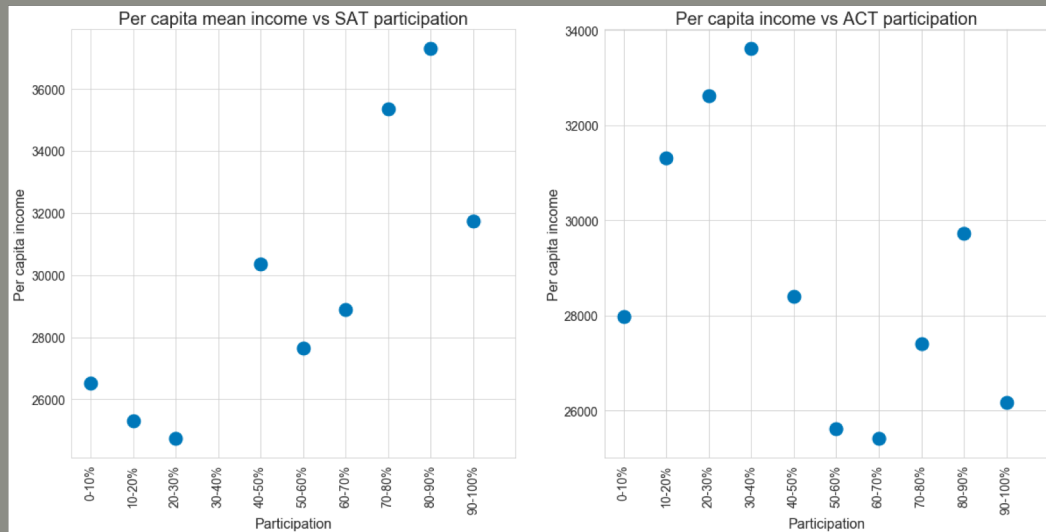
ACT 2018

-85%

-86%



# Income and participation



- Higher SAT participation rates are associated with higher state average per capita income
- Higher ACT participation rates are associated with lower state average per capita income
- Relationship is moderately strong

# Recommendations

- Work with state education boards to make SAT or ACT testing a part of graduation requirements
- Make one test mandatory but encourage students to take both
- Work with local boards to make it easy
  - *Testing days*
  - *Fee assistance*
- Additional research on influencers of test choice
  - *Gather more data on who takes the test and how they perform*

# References

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