



# DSI Project 1

Recommendations for College Board :

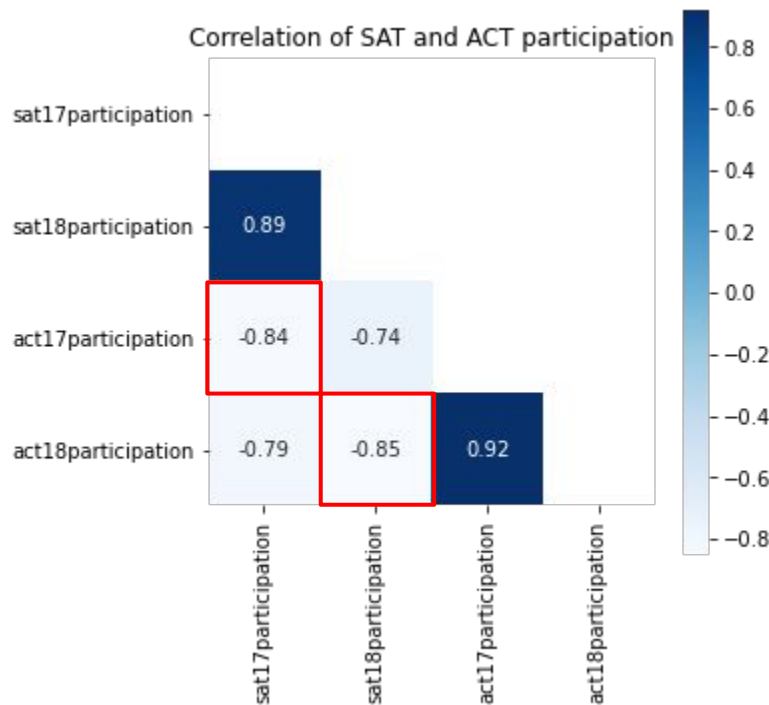
Which States should College Board invest in to boost SAT Participation Rates.

Dominic Ong, Dyan Lee, Anshu Dhingra, Mai Tze Woei - DSI 16

# Problem Statement

- Based on 2017 and 2018 SAT data, there is a great disparity in SAT participation rates across US states.
  - This project aims to investigate why certain states have low SAT participations rates and investigate whether there are any underlying trends or factors affecting a State's SAT Participation Rate.
  - Recommendations can be made to College Board on how to improve SAT participation rates.
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# Do students take the SAT or the ACT?



Source: SAT and ACT 2017 and 2018 Data

# 17 states

Have less than 8% of their student population taking the SAT

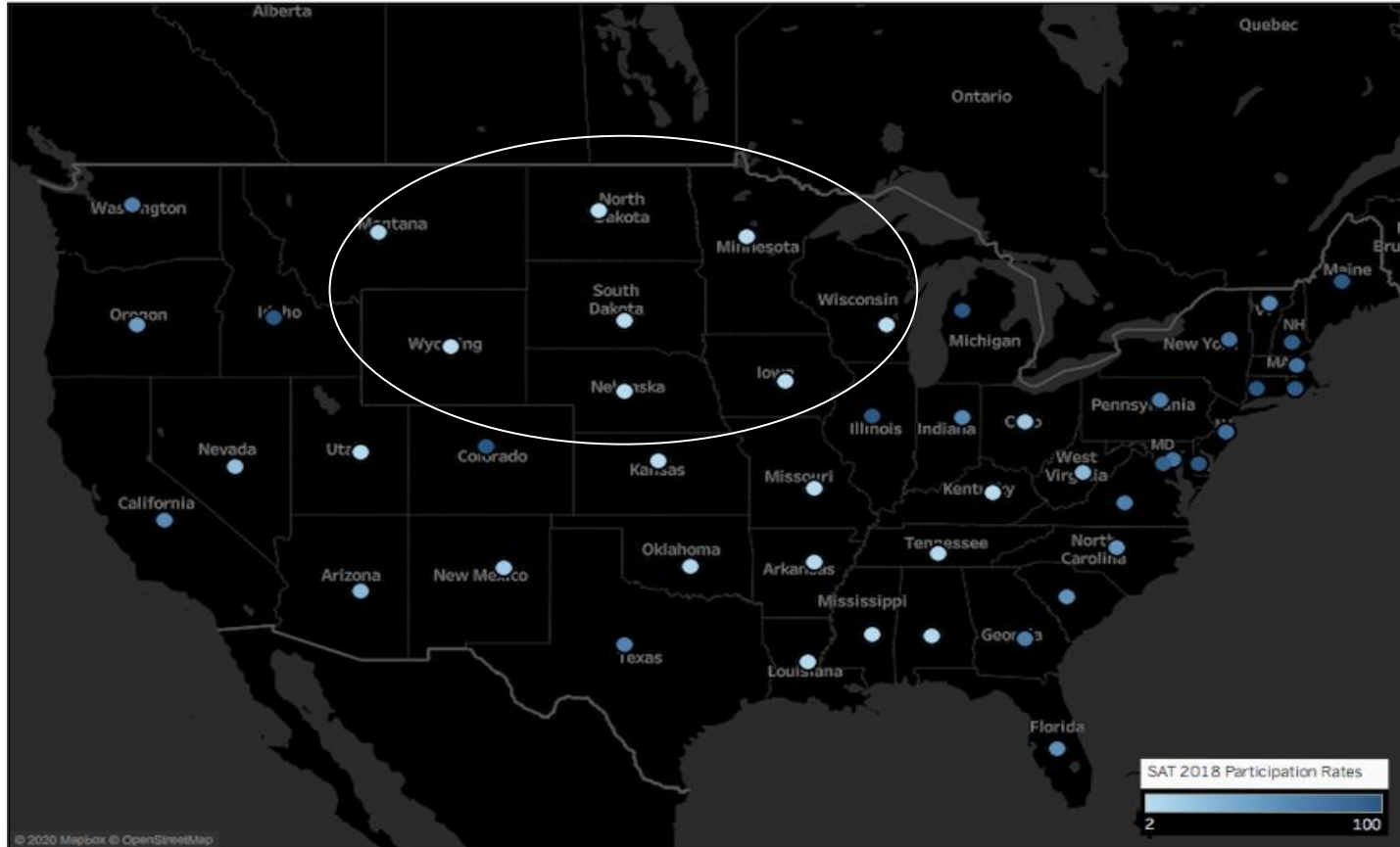


# States with the lowest SAT participation

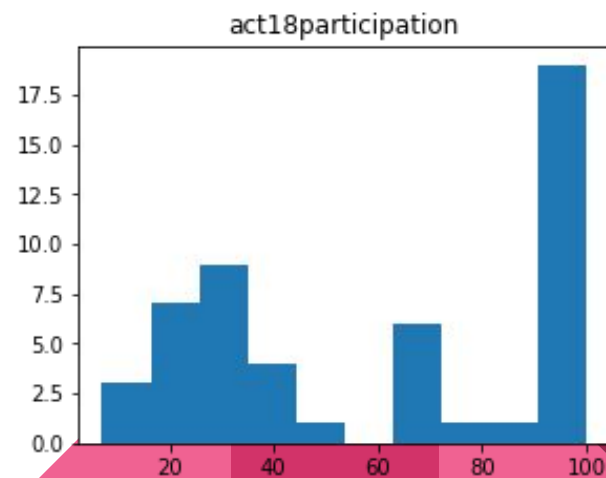
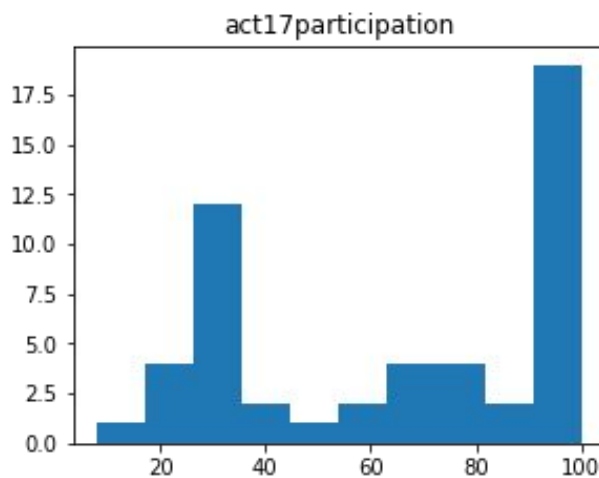
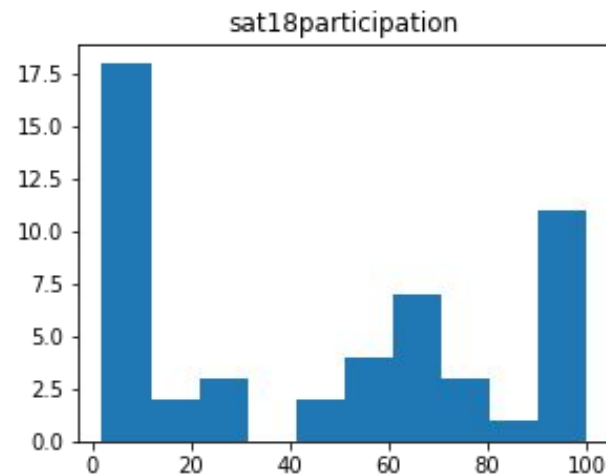
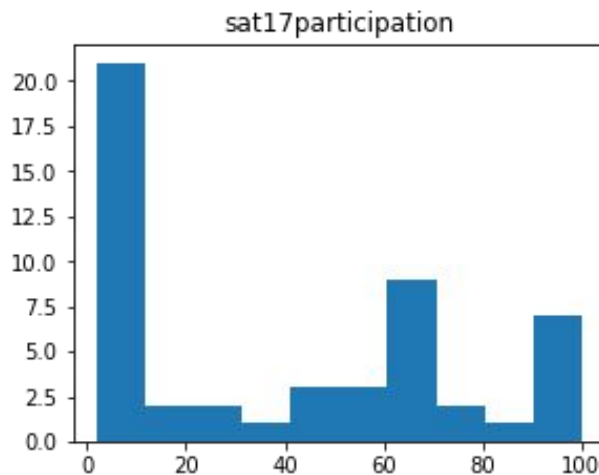
|              | sat17participation | sat18participation | satparticipationchange | act17participation | act18participation | actparticipationchange |
|--------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|
| Alabama      | 5                  | 6                  | 1                      | 100                | 100                | 0                      |
| Arkansas     | 3                  | 5                  | 2                      | 100                | 100                | 0                      |
| Iowa         | 2                  | 3                  | 1                      | 67                 | 68                 | 1                      |
| Kansas       | 4                  | 4                  | 0                      | 73                 | 71                 | -2                     |
| Kentucky     | 4                  | 4                  | 0                      | 100                | 100                | 0                      |
| Louisiana    | 4                  | 4                  | 0                      | 100                | 100                | 0                      |
| Minnesota    | 3                  | 4                  | 1                      | 100                | 99                 | -1                     |
| Mississippi  | 2                  | 3                  | 1                      | 100                | 100                | 0                      |
| Missouri     | 3                  | 4                  | 1                      | 100                | 100                | 0                      |
| Nebraska     | 3                  | 3                  | 0                      | 84                 | 100                | 16                     |
| North Dakota | 2                  | 2                  | 0                      | 98                 | 98                 | 0                      |
| Oklahoma     | 7                  | 8                  | 1                      | 100                | 100                | 0                      |
| South Dakota | 3                  | 3                  | 0                      | 80                 | 77                 | -3                     |
| Tennessee    | 5                  | 6                  | 1                      | 100                | 100                | 0                      |
| Utah         | 3                  | 4                  | 1                      | 100                | 100                | 0                      |
| Wisconsin    | 3                  | 3                  | 0                      | 100                | 100                | 0                      |
| Wyoming      | 3                  | 3                  | 0                      | 100                | 100                | 0                      |

# Choropleth Map

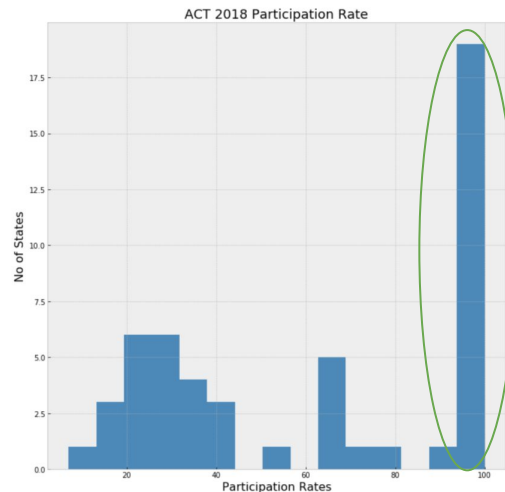
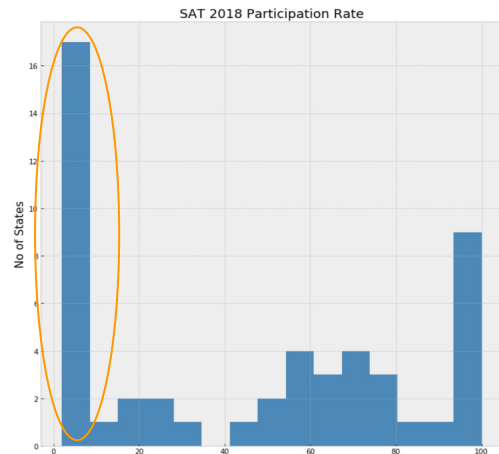
US States SAT 2018 Participation Rates



- Many states have little to no SAT participation
- The SAT has less monopolies on state participation than the ACT
- States where the SAT is mandatory still have a relatively high base level of ACT participation



# Key Finding #1



Consider these 9 States that are in the bottom 10 for participation rates for SAT 2017 and 2018:

- North Dakota
- Wyoming
- South Dakota
- Iowa
- Utah
- Minnesota
- Nebraska
- Wisconsin
- Mississippi

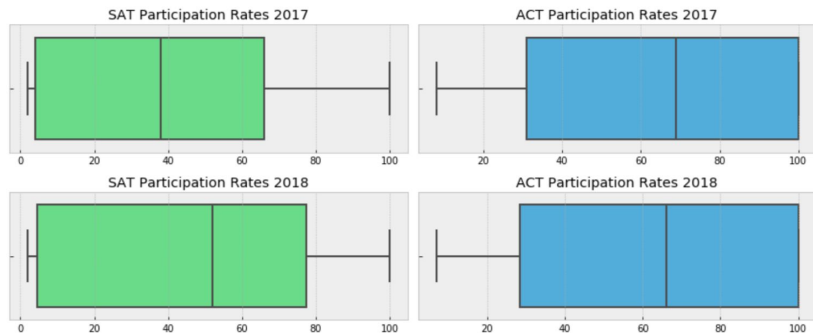
These states have the highest participation rates in the ACT for 2017 and 2018.

Students only need to complete either SAT or ACT Tests for US College Applications.

**These states have very low SAT participation rates because they focus on getting their students to participate in ACT tests instead.**



## Key Finding #2



- SAT Participation Rates have improved from 2017 to 2018.
- ACT Participation Rates have remained constant from 2017 to 2018.

### Key Reasons:

- Increased Participation in SAT School Day Program (27% in 2017 to 36% in 2018).
- Students in poorer states and public schools have higher access to SAT tests for free.

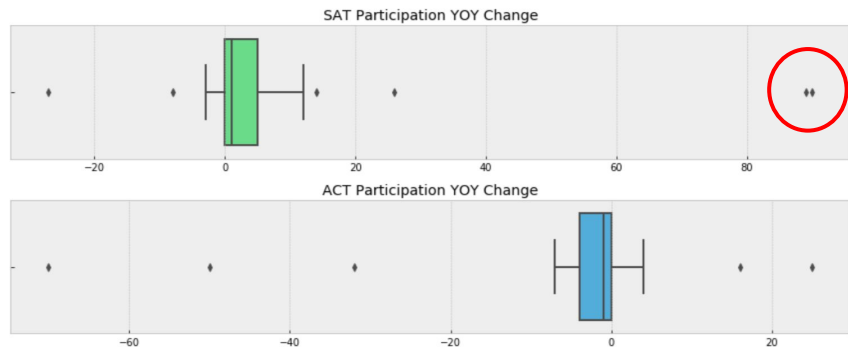
## Research

- The **SAT School Day Program**, which allows students to take the SAT during regular school hours usually at no cost, continues to expand.
- More than 2.1 million students in the class of 2018 took the SAT, an **increase of 25%** over the class of 2017, according to the 2018 SAT Suite of Assessments Program Results.
- In 2014-15, only 4 states (Delaware, Idaho, Maine, District of Columbia) participated in SAT School Day.
- In 2017-18, 10 states (Colorado, Connecticut, Delaware, Idaho, Illinois, Maine, Michigan, New Hampshire, Rhode Island, West Virginia, District of Columbia) administered the SAT to public school students for free.

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Source: College Board Website

## Key Finding #3



|    | state         | sat_yoy_change |
|----|---------------|----------------|
| 13 | Illinois      | 90.0           |
| 5  | Colorado      | 89.0           |
| 39 | Rhode Island  | 26.0           |
| 48 | West Virginia | 14.0           |
| 30 | New Jersey    | 12.0           |
| 32 | New York      | 12.0           |
| 10 | Georgia       | 9.0            |
| 12 | Idaho         | 7.0            |

- Large changes in SAT participation rates YOY are rare.
- Illinois and Colorado are likely outliers.
- On average, most states have very little SAT participation rate changes YOY.

## Case Study

- Colorado and Illinois switched from ACT Testing to mandatory SAT Testing in Spring 2017.
- This was due to statewide high school accountability and every student in those states is now required to participate in SAT Testing.

|    | state    | sat_yoy_change | sat_2017_participation | sat_2018_participation |
|----|----------|----------------|------------------------|------------------------|
| 13 | Illinois | 90.0           | 9.0                    | 99.0                   |
| 5  | Colorado | 89.0           | 11.0                   | 100.0                  |

|    | state    | sat_yoy_change | act_2017_participation | act_2018_participation |
|----|----------|----------------|------------------------|------------------------|
| 13 | Illinois | 90.0           | 93.0                   | 43.0                   |
| 5  | Colorado | 89.0           | 100.0                  | 30.0                   |

- In 2017-18, 10 states (**Colorado**, Connecticut, Delaware, Idaho, **Illinois**, Maine, Michigan, New Hampshire, Rhode Island, and West Virginia, District of Columbia) covered the cost of the SAT for all their public school students.

Source: College Board Website, Education Week News

# Recommendations

## Improve Attractiveness

**Make the SATs more attractive to students to take, and to States to administer**

- Demonstrate the advantages of SAT testing
- Encourage universities to prefer accepting SAT results

## Improve Accessibility

**Improve access for US States to SAT School Day Programs**

**Improve access to free preparation material for students**

- Cost-saving incentives for state boards, public schools, and public students.

## Encourage Reforms

**Promote Statewide SAT Testing to US States that predominantly administer the ACT Test**

- Convince States about the potential benefits of SAT Testing over ACT Testing.
- Change State policy through bidding processes

# Short to medium term options - Improving Attractiveness

College Board can improve the attractiveness of taking the SAT test and seek out marginal gains in SAT participation

Push factors: Cost of taking the test, inaccessibility of test facilities, negative perceptions of Standardised testing <sup>[1]</sup>

Pull factors: Accessibility of prep material, cost and availability of guidance, university validity of results

|                      | sat17participation | sat18participation | satparticipationchange | act17participation | act18participation | actparticipationchange |
|----------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|
| <b>Illinois</b>      | 9                  | 99                 | 90                     | 93                 | 43                 | -50                    |
| <b>Colorado</b>      | 11                 | 100                | 89                     | 100                | 30                 | -70                    |
| <b>Rhode Island</b>  | 71                 | 97                 | 26                     | 21                 | 15                 | -6                     |
| <b>Florida</b>       | 83                 | 98                 | 15                     | 73                 | 66                 | -7                     |
| <b>West Virginia</b> | 14                 | 28                 | 14                     | 69                 | 65                 | -4                     |

[1] "More Students Are Taking the SAT Than Ever Before." [www.usnews.com/news/education-news/articles/2019-09-24/more-students-are-taking-the-sat-than-ever-before](https://www.usnews.com/news/education-news/articles/2019-09-24/more-students-are-taking-the-sat-than-ever-before).

# Improving Accessibility

- Test preparation material should be made available online for free to encourage students to see SATs as a reasonable option.
- Reducing prices of taking or providing bundles to schools / students attracts more takers
- Make tests easy to attend, especially in sparsely populated states.
- Improve access to **SAT School Day Programs**.



# College Board can lead the way in inclusiveness by pushing ahead with attaching socioeconomic data of test takers to test results

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Students should not feel disadvantaged or discouraged in any way by standardised testing

Providing additional information gives universities context to make fair decisions



# Long term option - Improve education policy reforms

Work together with education boards to ensure that SATs are the statewide mandatory test

Pros:

- Large scale, instantaneous change

Cons:

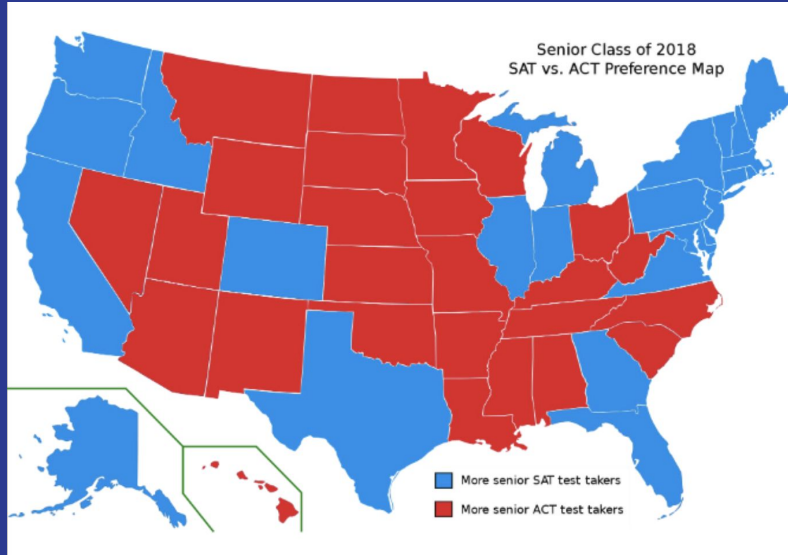
- May take a long time to institute depending on the state
- Dependent on bidding procedure to state education boards

|                           | Colorado | Illinois |
|---------------------------|----------|----------|
| <b>sat17participation</b> | 11       | 9        |
| <b>sat18participation</b> | 100      | 99       |
| <b>act17participation</b> | 100      | 93       |
| <b>act18participation</b> | 30       | 43       |

In spring 2017 Colorado and Illinois switched from the ACT to the SAT.



# Concluding Remarks



Source: Wikipedia

- There are strong regional (and possibly political) affiliations associated with ACT versus SAT participation rates. Coastal progressive states tend to favor the SAT, while Midwestern and Mountain conservative states tend to favor the ACT.
- The Red Colored States are the main areas for College Board to focus its financial resources on in order to increase SAT Participation Rates in these States.



# References

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