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# SHOULD WE OPEN MORE SAT TEST CENTERS IN THE US?

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 CollegeBoard

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**FROM 2017 TO 2019, SAT EXAM  
PARTICIPATION INCREASED FROM  
40% TO 49%**

Sample data from the mean participation rate of 51 states including the District of Columbia 2017-2019.



# **1.8 MILLION SAT TEST-TAKERS IN 2019**

Sample data from 2019.

# IN WHICH STATES SHOULD THE NEXT SAT EXAM CENTERS BE LOCATED IN **2020?**

Sample data collected from year **2017-2019**.

# FACTORS INVESTIGATED IN THIS STUDY

Potential indicators for choosing a state from the sample data to support the launch of a new SAT Test Center?

## Participation Rate (%)

Total participants who took the exam over total enrolled for the SATs by year 2017, 2018, 2019 for each US state.

More participation potentially indicates more interest in SATs.

## Participation Rate (%) Increase

Which states had positive and high percentage increases from 2017 to 2019, potentially indicating growth?

If negative, should the center be closed?

## Total Average SAT Score

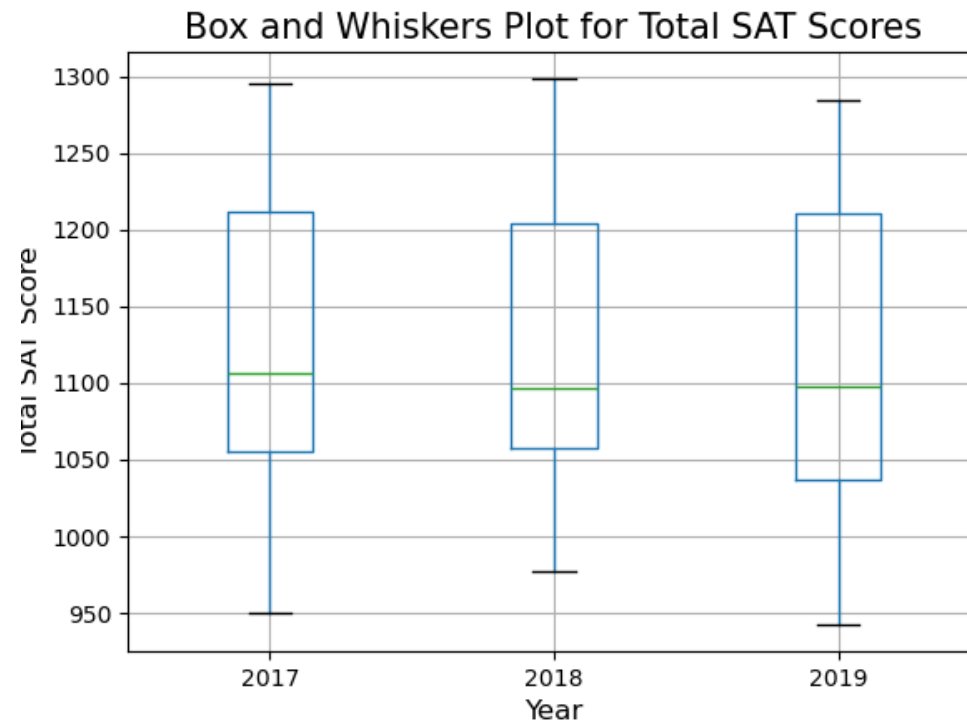
States with highest test scores?

States with lowest scores and lowest participation rates = close the center?

What is the correlation between scores and participation?

# ABOUT THE SAT SCORES 2017-2019

SAT score range from **200-1600** from adding 2 sections, Verbal and Math. 50% of students fall within the range of **1050 - 1200 points (Average Total SAT Score)**. In addition, the mean did not experience any major shifts (green line), slightly decreasing from 2017-2019.



**1600**

Total Score

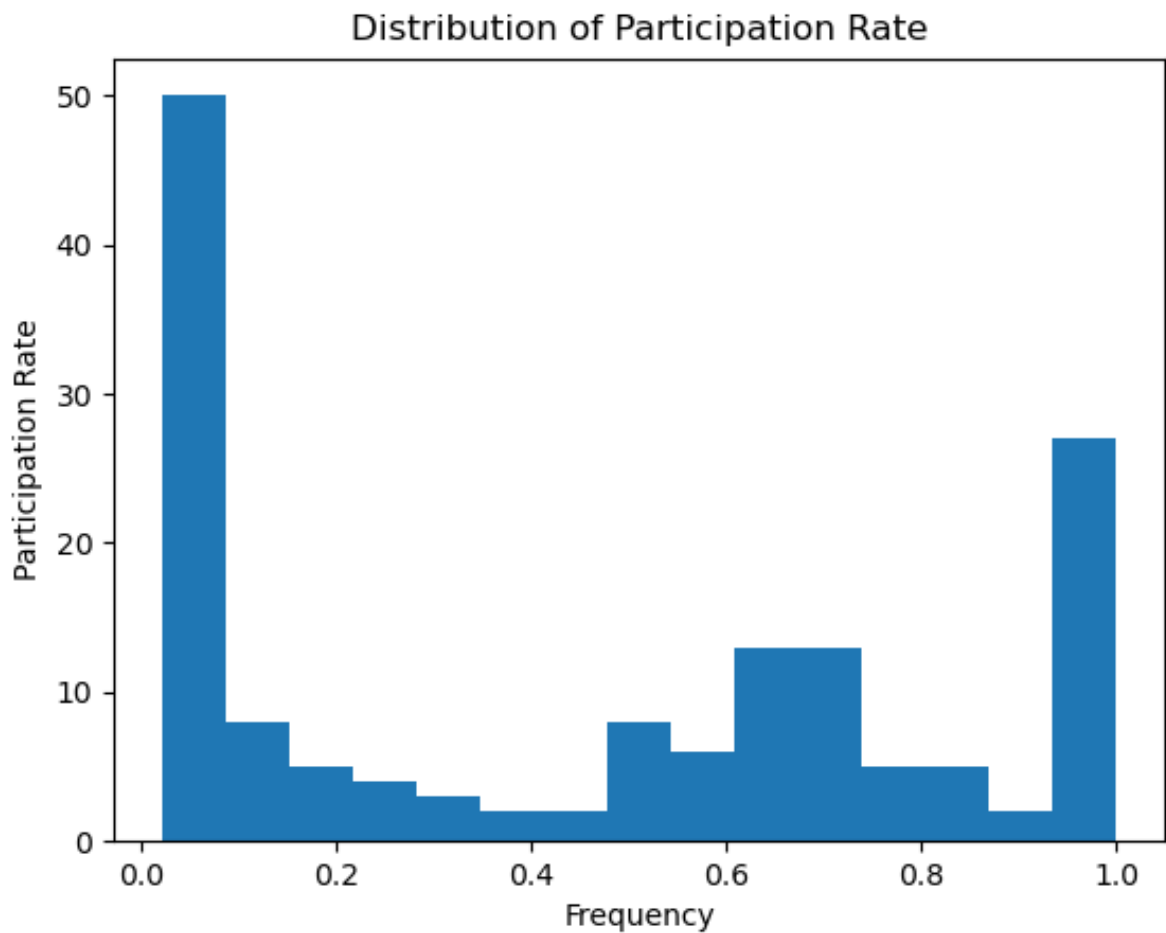
**800**

Evidence-Based  
Reading and Writing

**800**

Math

# PARTICIPATION HISTOGRAM 2017-2019



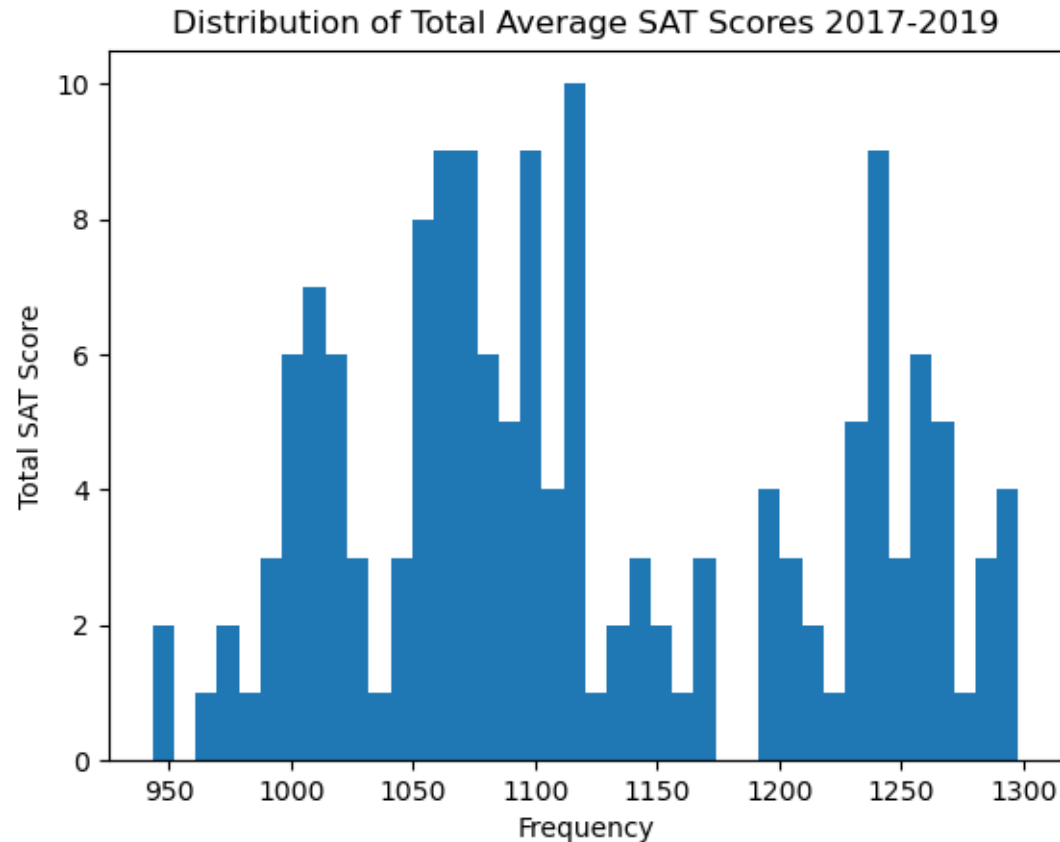
Data from 51 states including the District of Columbia 2017-2019.

The distribution of the participation rate is not normal. Participation rates are concentrated near the lower and higher end.

Participation rates are not 100% as SATs are optional for certain colleges, some students opt for the ACTs, and school leavers do not always enter to college.

The most occurring rate is close to 50% for those who take the SATs from 2017-2019.

# TOTAL SAT SCORE HISTOGRAM 2017-2019



The distribution of the score is not normal.

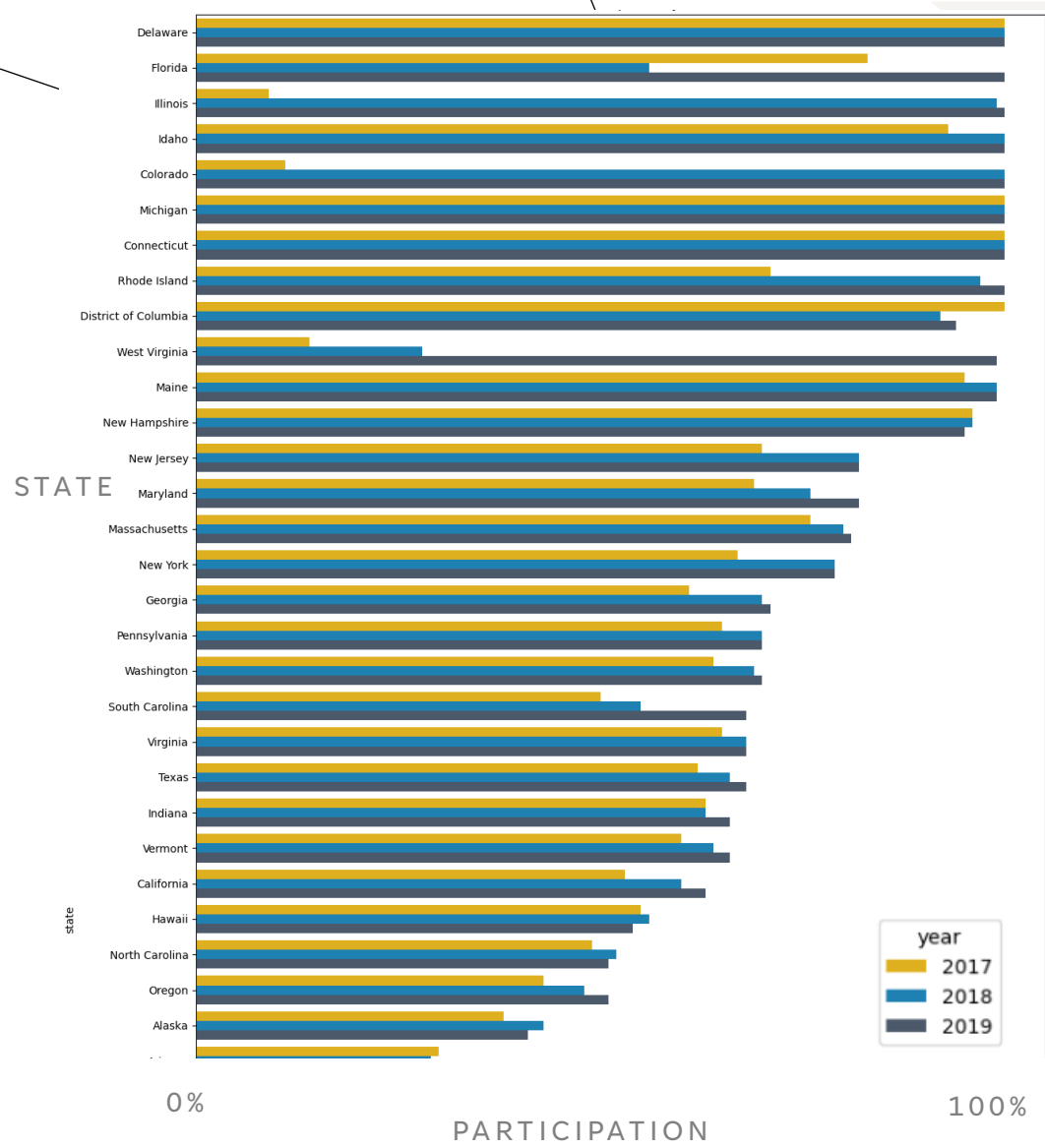
Total SAT scores seem to fall into 2 groups : high-performing students, average and low-performing students.

Data from 51 states including the District of Columbia 2017-2019.



# PLACES TO KEEP EXISTING SAT TEST CENTERS

PARTICIPATION RATE BY STATE



STATES WITH > 80 % ATTENDANCE EACH YEAR

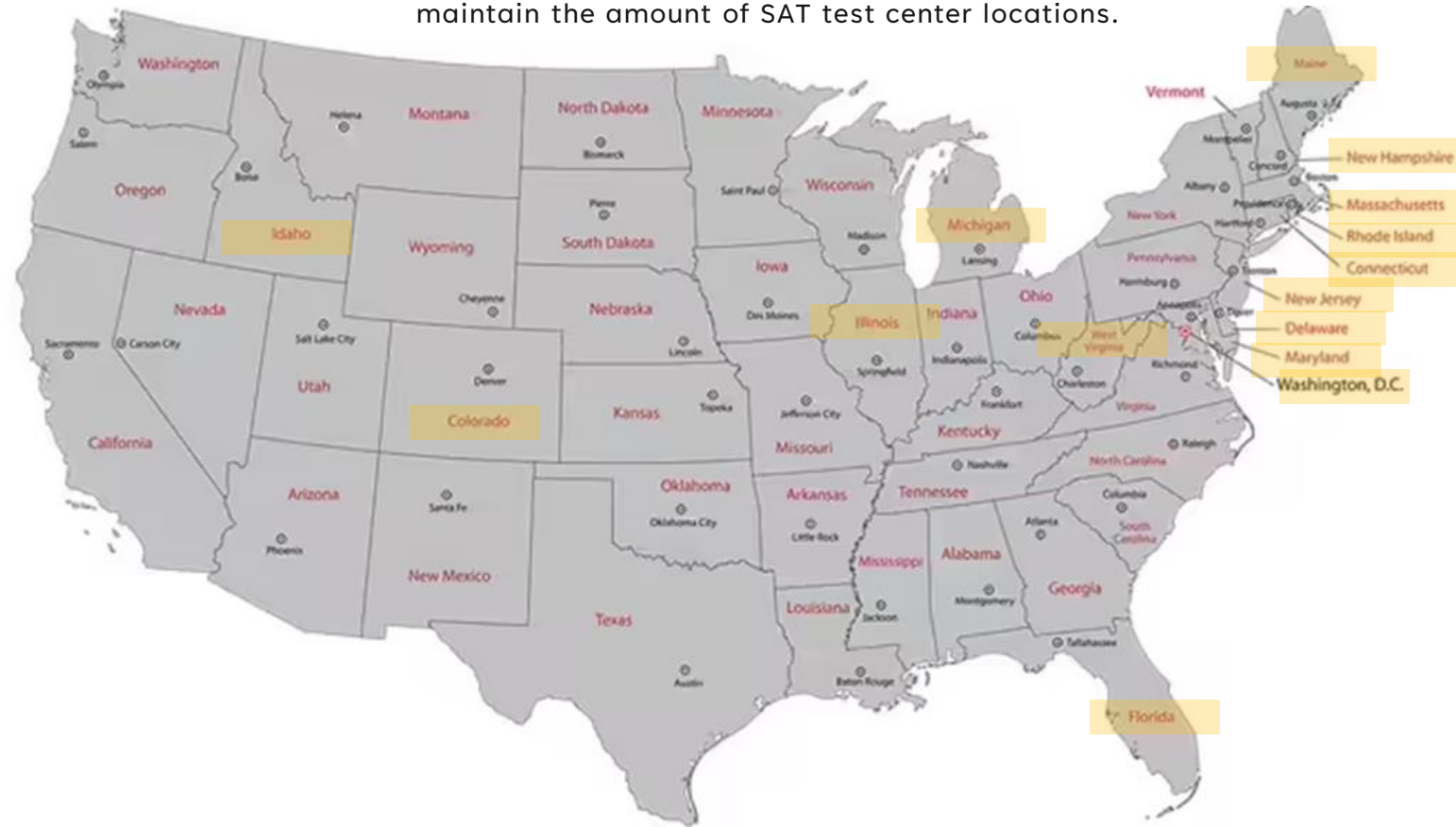
2017	state	participation	2018	state	participation	2019	state	participation
	Connecticut	1.00		Colorado	1.00		Colorado	1.00
	Delaware	1.00		Connecticut	1.00		Connecticut	1.00
	District of Columbia	1.00		Delaware	1.00		Delaware	1.00
	Michigan	1.00		Idaho	1.00		Florida	1.00
	New Hampshire	0.96		Michigan	1.00		Idaho	1.00
	Maine	0.95		Illinois	0.99		Illinois	1.00
	Idaho	0.93		Maine	0.99		Michigan	1.00
	Florida	0.83		Rhode Island	0.97		Rhode Island	1.00
				New Hampshire	0.96		Maine	0.99
				District of Columbia	0.92		West Virginia	0.99
				New Jersey	0.82		New Hampshire	0.95
							District of Columbia	0.94
							Maryland	0.82
							New Jersey	0.82
							Massachusetts	0.81

Data from 51 states including the District of Columbia 2017-2019.

# TOP 15 STATES WITH CONSISTENTLY HIGH PARTICIPATION RATES > 80%

Participation Rate > 80%				
state	2017	2018	2019	
Connecticut	1.0	1.0	1.00	
Delaware	1.0	1.0	1.00	
Michigan	1.0	1.0	1.00	
District of Columbia	1.0	0.92	0.94	
New Hampshire	0.96	0.96	0.95	
Maine	0.95	0.99	0.99	
Idaho	0.93	1.0	1.00	
Florida	0.83	--	1.00	
Colorado	--	1.0	1.00	
Illinois	--	0.99	1.00	
Rhode Island	--	0.97	1.00	
New Jersey	--	0.82	0.82	
West Virginia	--	--	0.99	
Maryland	--	--	0.82	
Massachusetts	--	--	0.81	

Observation : These states remain important to maintain the amount of SAT test center locations.



# PLACES TO KEEP EXISTING SAT TEST CENTERS

The states in the **Northeast** performed the best, with consistent high participation rates greater than 80% in 2017-2019

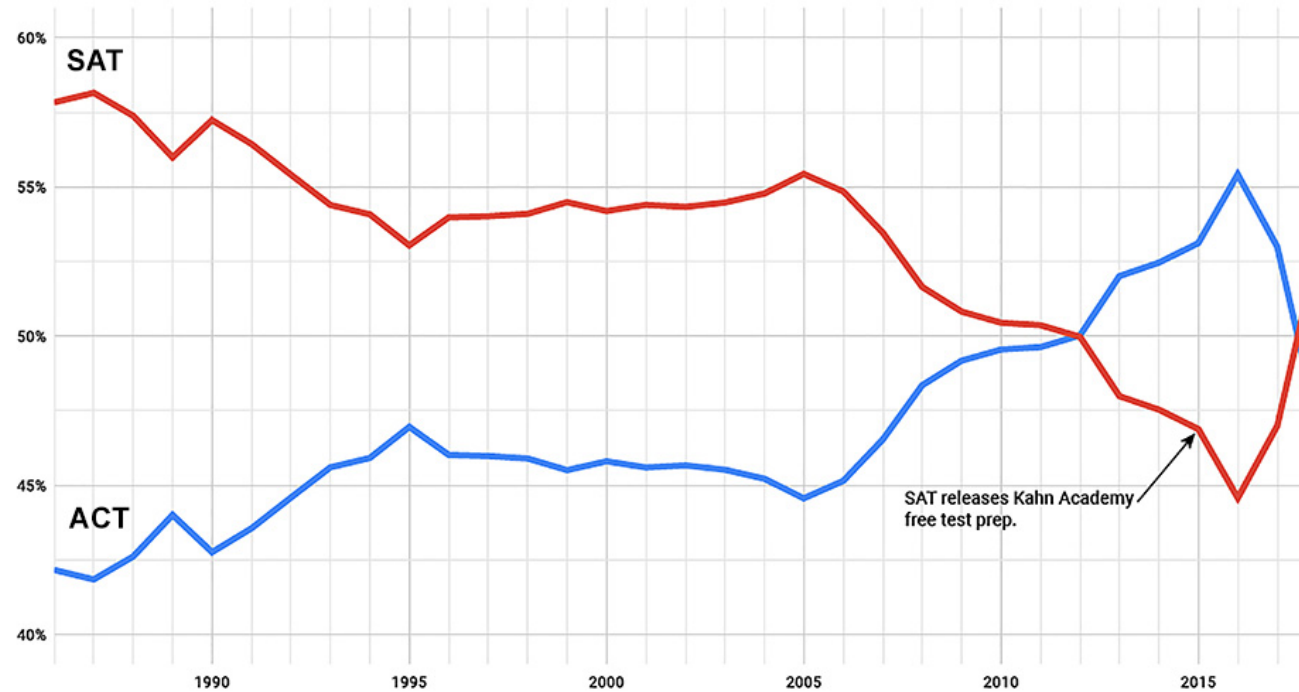
The top three states with 100% attendance since 2017-2019

**Connecticut, Delaware, Michigan**

# PLACES TO ADD SAT TEST CENTERS

# 2015 EVENT: LAUNCH OF KHAN ACADEMY

**ACT vs. SAT Market Share**



[SAT vs ACT: Which is More Popular? - The Olive Book Blog \(olive-book.com\)](http://olive-book.com)

# STATES WITH HIGHEST POSITIVE GROWTH OF PARTICIPATION RATES

States with the Highest Percentage Changes in participation rate 2017-2019

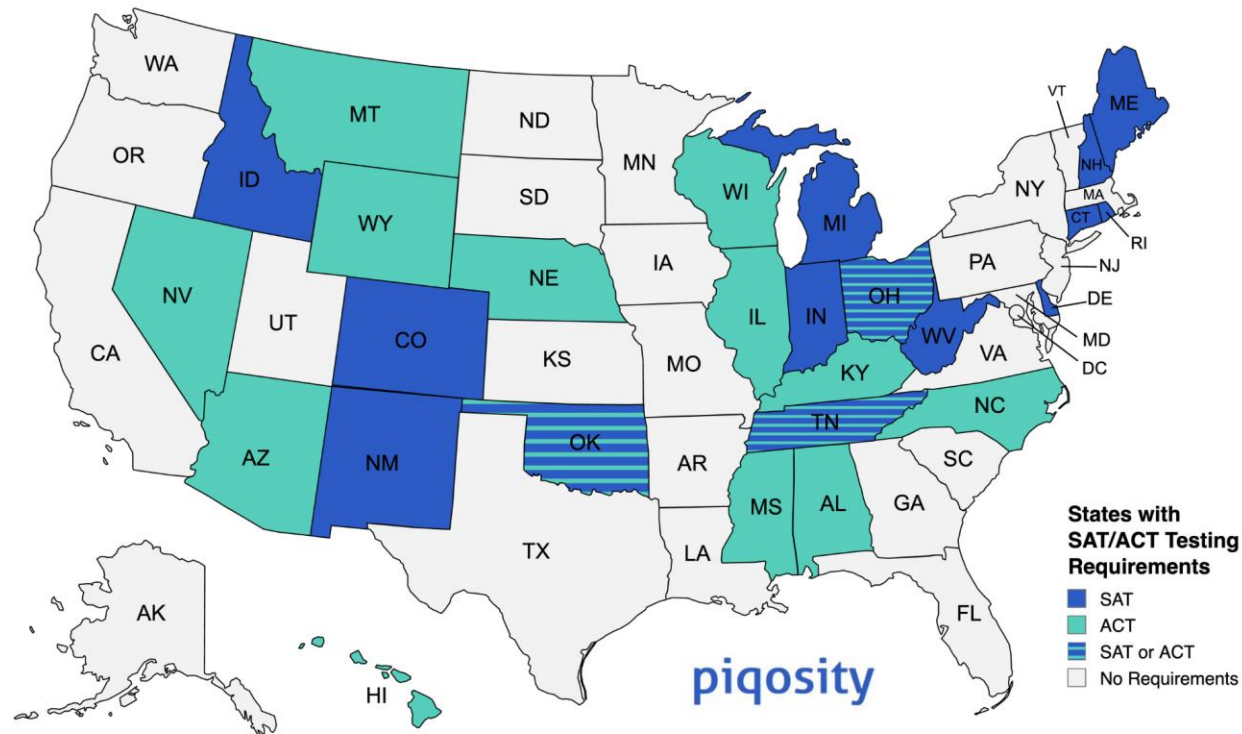
**Illinois** +1011%

**Colorado** +809%

**Ohio** +214%

Participation rates exploded for these states according to the data from 2017-2019.

# STATES WHERE SATS ARE MANDATORY, CHANGES YEAR-BY-YEAR



[Examples of States with Sudden Change in Mandatory SATs](#)

[Illinois](#)

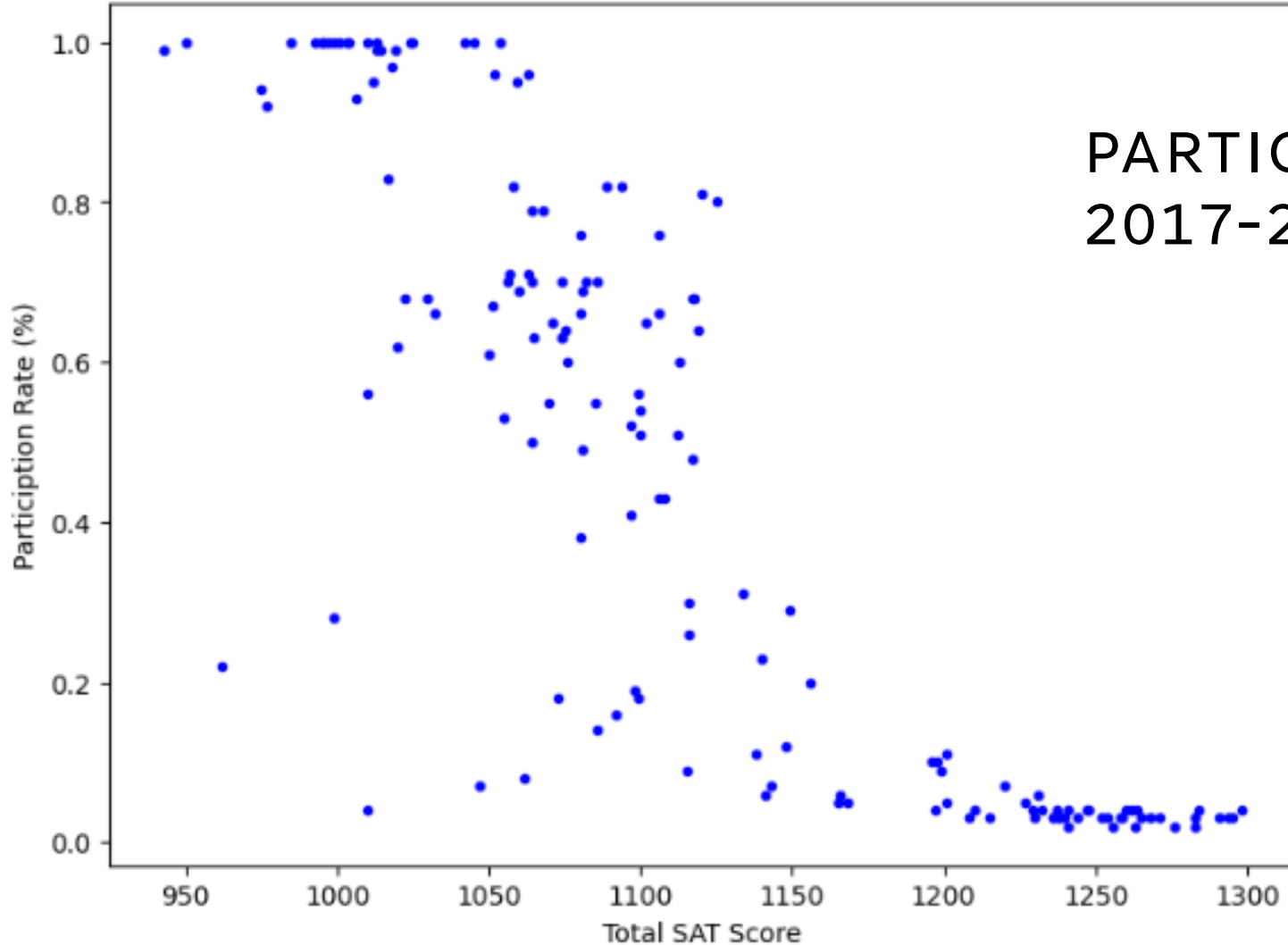
[Colorado](#)

[Ohio](#)

[ACT & SAT Graduation Requirements by State | Piqosity](#)



Participation Rate vs SAT Total Score

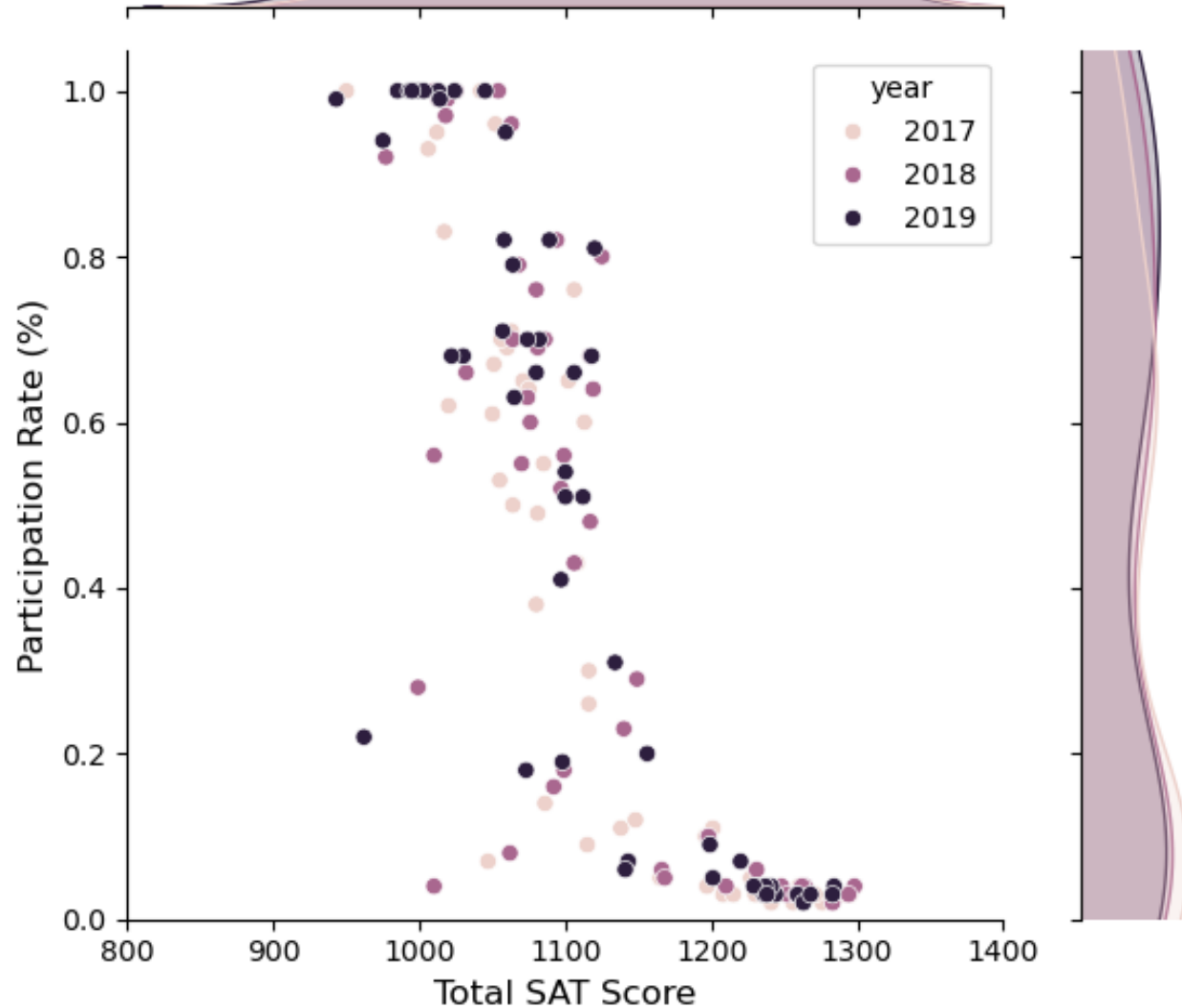


## PARTICIPATION VS. SCORE 2017-2019

Overall, participation rates for the data from 2017-2019 and total scores are inversely related.

Lower participation rates correspond with higher scores, whereas the higher participation rates corresponds with a lower score.

## Participation and SAT Scores by Year



## PARTICIPATION BY YEAR VS. SCORE

Participation rates for the data according to each year 2017, 2018, 2019 and total scores follow the same trend.

Participation with high proportion of students enrolled but with low scores, so why are the scores are low? What are the challenges faced by these students? Or are there just more data points, thus the range of scores are more spread out from low to high scores?

Participation rates are measured in terms of percentage, thus, not indicative of the number of students.

So, investing and creating more centers for states with a small group of motivated students on limited data **is not advisable**.

Thus, instead of opening new test centers, it could be more **lucrative to install tutor centers** instead of test centers to raise the larger population of participants who are interested in the SATs (high participation rate) with low scores towards higher scores.

## CONCLUSION

# PLACES TO ADD SAT TEST CENTERS

It is concluded that **no new SAT test centers should be built**, despite the overall growth in participation rate from 40% to 49% due lack of data. Although explosive positive increase in participation rates occurred in some state, reasons are explained by policy changes. **Incremental increase should be closely scrutinized for their true reason for increase, such as the launch of a new service.**

However, from the data, there is a potential idea to explore that SATs should opt to open tutor centers instead of test centers due to high participation and interest from low scorers.