

# **SAT & ACT ANALYSIS**

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# **PROBLEM STATEMENT**

Given that one of the Key Performance Indicator (KPI) of the College Board is to improve participation rates of standardized tests, I will be examining recent trends made by the 2018-19 SAT & ACT cohorts to find out which state(s) should the College Board focus their effort and resources on in order to improve SAT participation rates and also taking note that the increase in participation rate should not drastically decrease overall college acceptance rate.

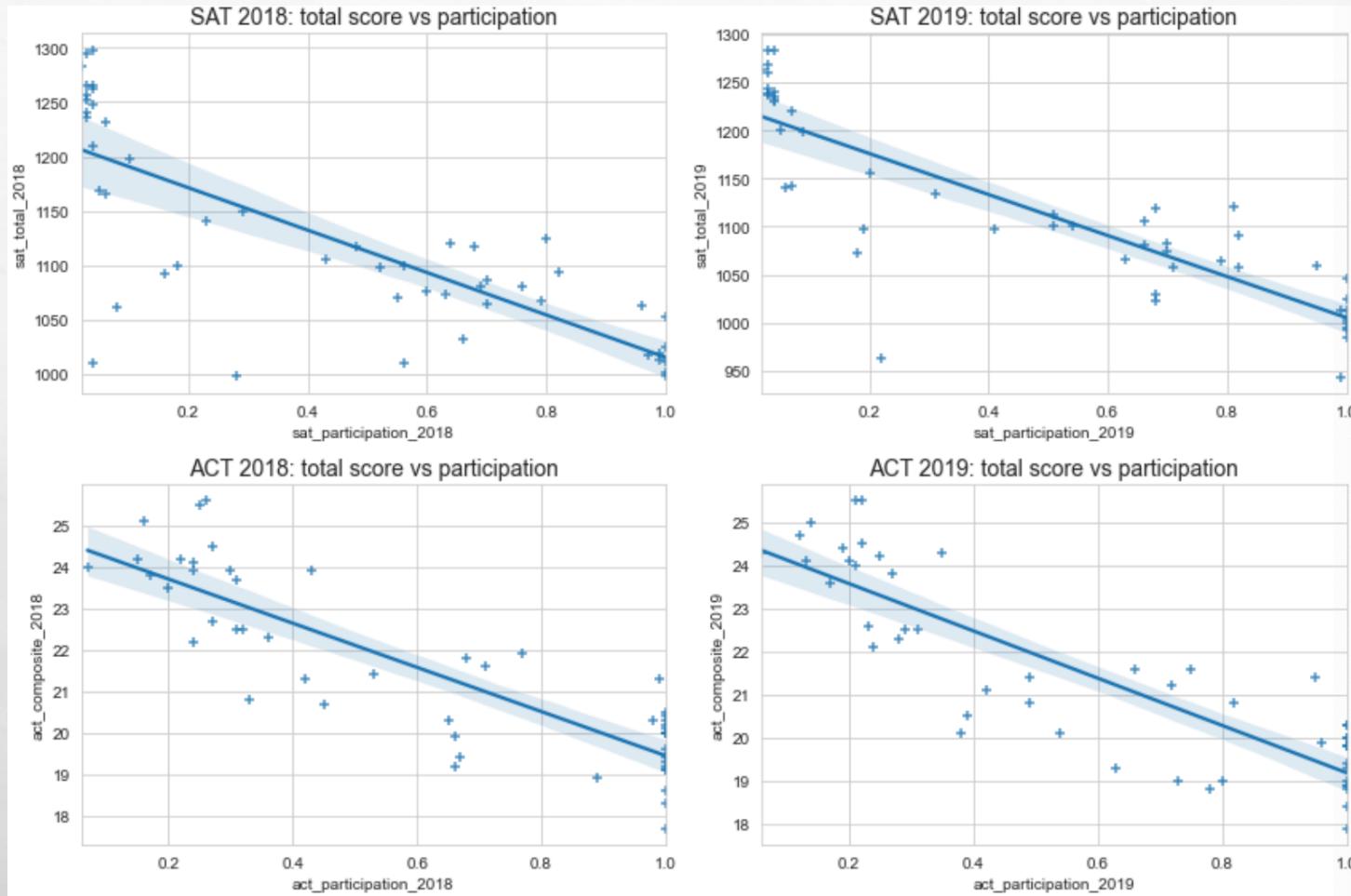
act\_participation\_2018

act_composite_2018	-0.86										
act_participation_2019	0.99	-0.85									
act_composite_2019	-0.86	0.99	-0.87								
sat_participation_2018	-0.87	0.76	-0.89	0.78							
sat_ebrw_2018	0.59	-0.39	0.61	-0.42	-0.75						
sat_math_2018	0.63	-0.39	0.65	-0.43	-0.78	0.95					
sat_total_2018	0.61	-0.39	0.64	-0.43	-0.78	0.99	0.99				
sat_participation_2019	-0.82	0.68	-0.86	0.72	0.95	-0.78	-0.83	-0.82			
sat_ebrw_2019	0.65	-0.41	0.68	-0.45	-0.79	0.86	0.94	0.91	-0.87		
sat_math_2019	0.60	-0.34	0.64	-0.37	-0.74	0.82	0.93	0.89	-0.84	0.99	
sat_total_2019	0.62	-0.37	0.66	-0.41	-0.77	0.84	0.94	0.90	-0.86	1.00	1.00
actpart_change_yoy	0.03	-0.02	0.18	-0.12	-0.22	0.25	0.26	0.26	-0.37	0.33	0.34
satpart_change_yoy	0.03	-0.15	-0.04	-0.11	-0.03	-0.19	-0.25	-0.23	0.28	-0.37	-0.41
	act_participation_2018	act_composite_2018	act_participation_2019	act_composite_2019	sat_participation_2018	sat_ebrw_2018	sat_math_2018	sat_total_2018	sat_participation_2019	sat_ebrw_2019	sat_math_2019
	act_composite_2018				sat_participation_2018				sat_participation_2019		
	act_participation_2019				sat_ebrw_2018				sat_ebrw_2019		
	act_composite_2019				sat_math_2018				sat_math_2019		
	sat_participation_2018				sat_total_2018				sat_total_2019		
	sat_ebrw_2018				actpart_change_yoy						
	sat_math_2018				satpart_change_yoy						

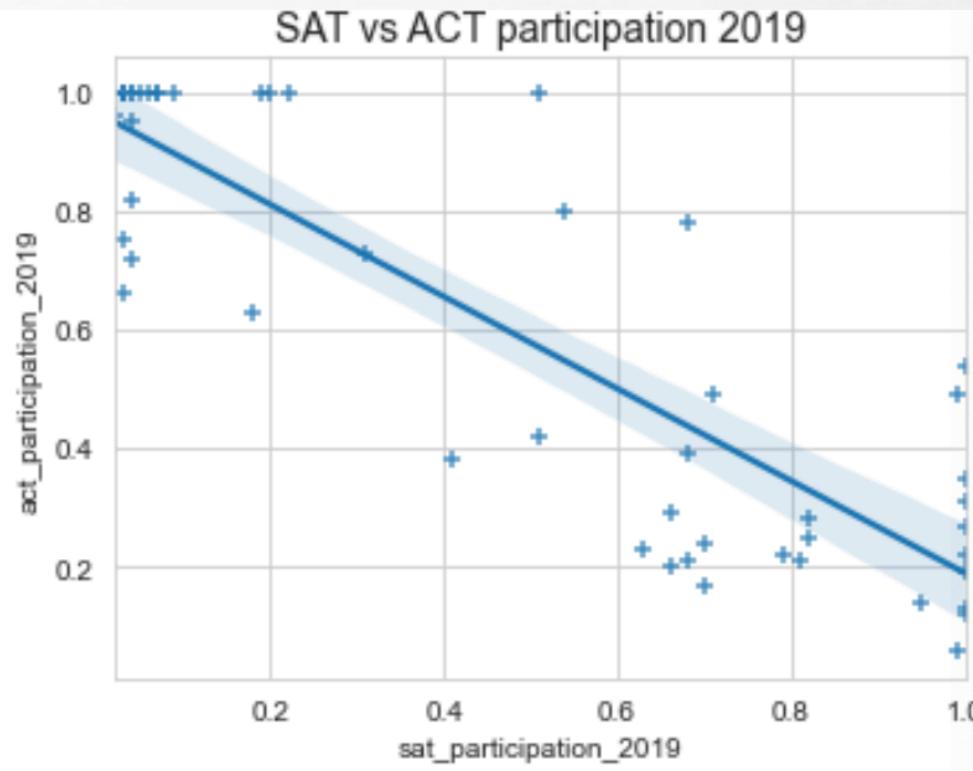
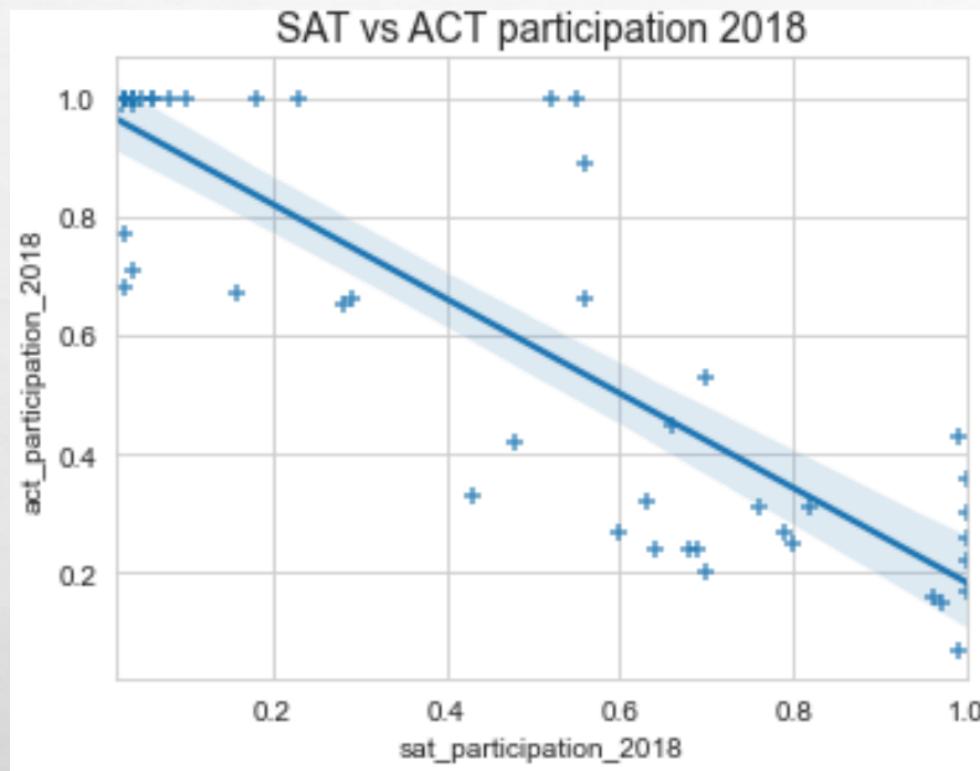
Brief overview of relationships observed between SAT & ACT:

- Participation Rates vs. Total Mean Score
- Participation Rates of SAT vs. ACT
- Scores in 2018 vs. 2019

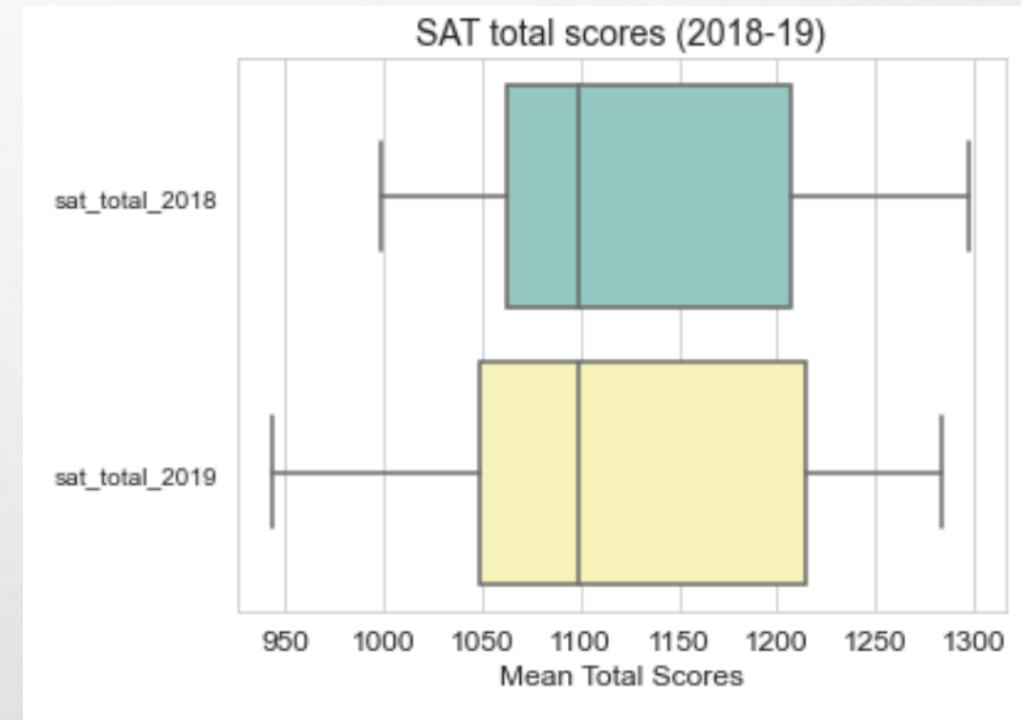
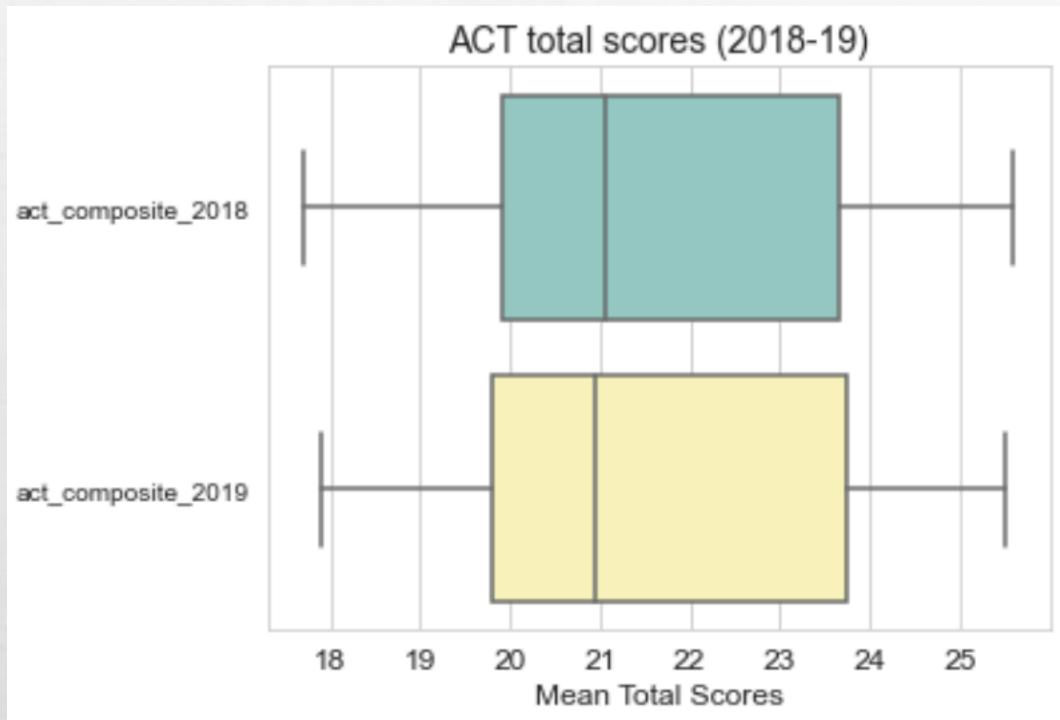
# INVERSE RELATIONSHIP BETWEEN PARTICIPATION RATES & TOTAL MEAN SCORE



# INVERSE RELATIONSHIP BETWEEN PARTICIPATION RATES OF SAT & ACT

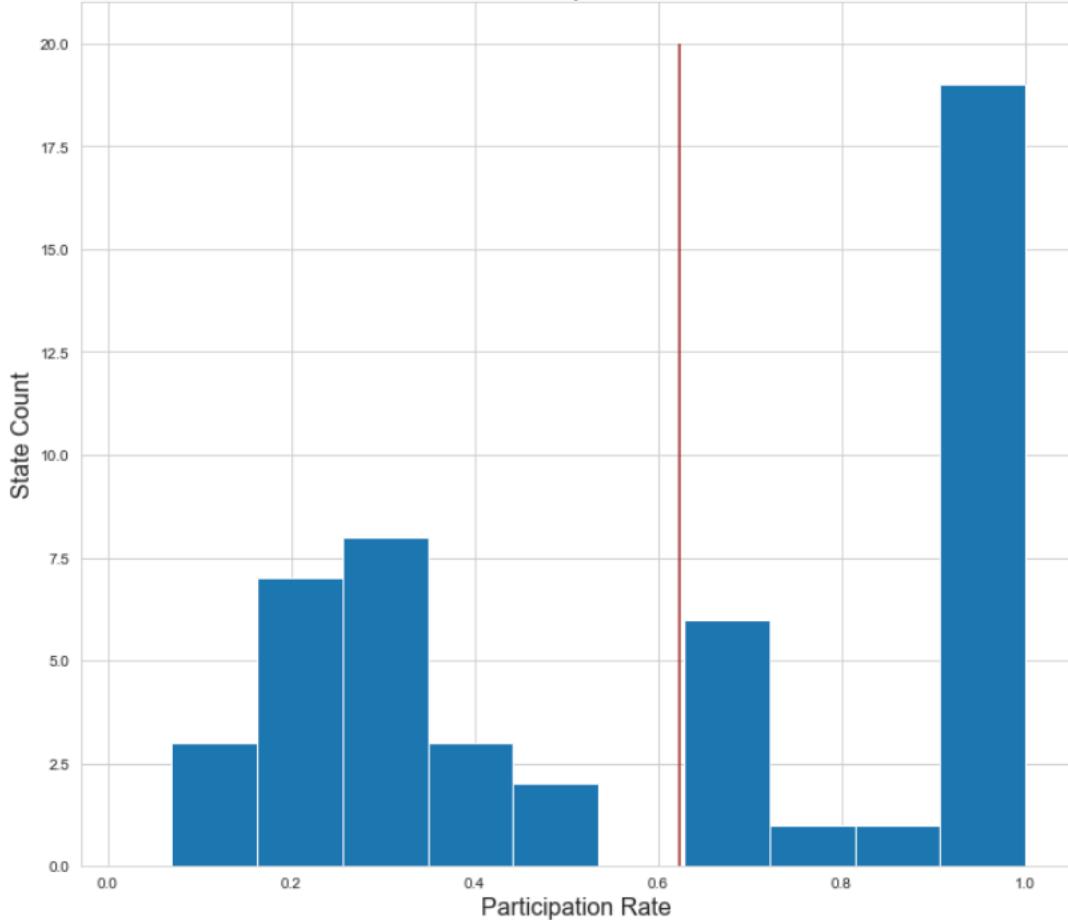


# SAT SCORES & ACT SCORES REMAINED LARGELY SIMILAR WHEN COMPARING 2018 WITH 2019

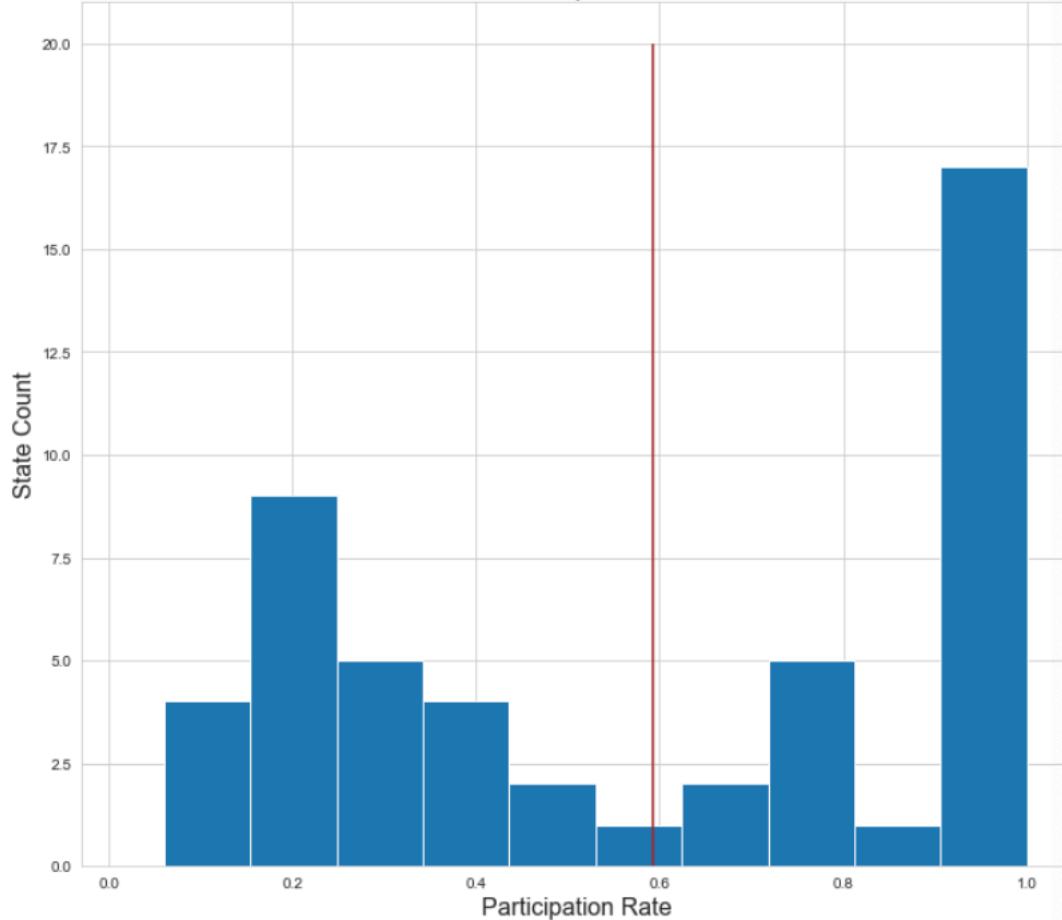


# DISTRIBUTION OF ACT PARTICIPATION IN 2018 AND 2019

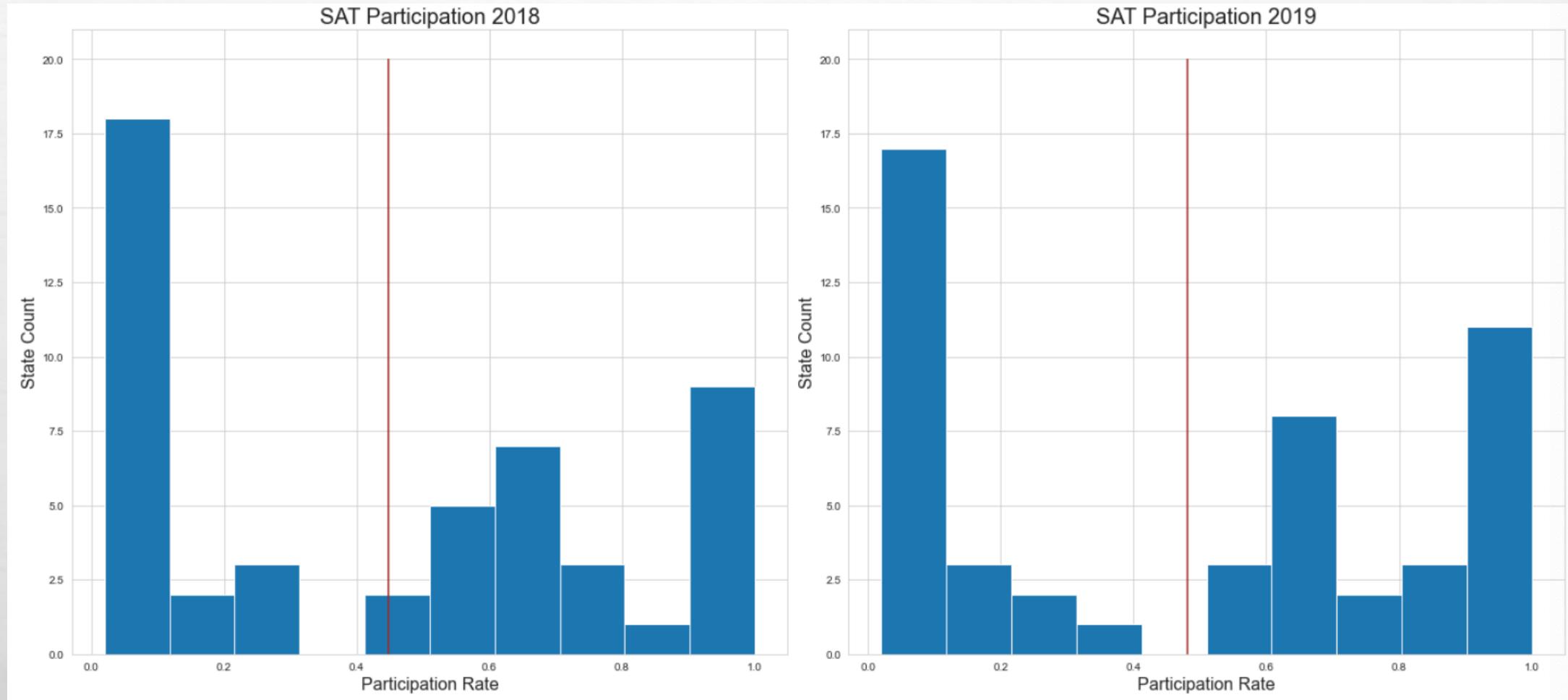
ACT Participation 2018



ACT Participation 2019



# DISTRIBUTION OF SAT PARTICIPATION IN 2018 AND 2019



## STATE WITH THE BIGGEST CHANGE IN PARTICIPATION RATE

	state	act_participation_2018	act_participation_2019	actpart_change_yoy
39	South Carolina	1.00	0.78	-0.22
24	Missouri	1.00	0.82	-0.18
47	West Virginia	0.65	0.49	-0.16
8	Florida	0.66	0.54	-0.12
10	Hawaii	0.89	0.80	-0.09

	state	sat_participation_2018	sat_participation_2019	satpart_change_yoy
47	West Virginia	0.28	0.99	0.71
8	Florida	0.56	1.00	0.44
35	Oklahoma	0.08	0.22	0.14
39	South Carolina	0.55	0.68	0.13
19	Maryland	0.76	0.82	0.06

## STATES WITH SAT PARTICIPATION RATE BETWEEN 90% & 99% FOR TWO YEARS

	state	sat_participation_2018	sat_participation_2019
18	Maine	0.99	0.99
28	New Hampshire	0.96	0.95

## STATES WITH SAT PARTICIPATION RATE DECREASED FROM 100% IN 2018 TO <100%

	state	act_participation_2018	act_participation_2019	actpart_change_yoy
39	South Carolina	1.00	0.78	-0.22
24	Missouri	1.00	0.82	-0.18

# CONCLUSION

- As it is ultimately the decision of the state to make it a requirement for all its students to take either the SAT or ACT, the College Board could only do so much in encouraging students to opt for taking the SAT rather than ACT or local state tests. The College Board has been successful thus far in raising its SAT participation rates and in raising the number of states requiring student to take the SAT (from only 3 states in 2014-15 to 10 states in 2017-18) through efforts such as the 'SAT School Day' in 2010 and redesigned SAT in 2016. It is only a matter of time until the SAT gains popularity and more states recognises the value making SAT a state-wide test requirement.
- Hence, I would recommend focusing efforts on states that have already made SAT a requirement for all its students, especially these states: **West Virginia, Maine & New Hampshire.**
- In addition, if there are extra resources, the College Board should also focus on South Carolina.

# RECOMMENDATIONS

- Visits to schools to educate students on the importance of taking a standardized test (*Maine & New Hampshire*)
- Hold conferences and road shows for parents to share success stories of children graduating from colleges (*Maine & New Hampshire*)
- Hold talks and provide brochures on comparisons between a globally recognised test and a local state test (*West Virginia*)
- Expand the SAT School Day partnership to South Carolina or to reduce the SAT fees further to encourage the state to adopt state-wide SAT testing and encourage students to choose the SAT over other tests (*South Carolina*)