Analysis of SAT Participation Rate for the year 2019

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Problem Statement



Many headlines were made saying that in 2019 there was a decrease in percentage of students who gave SAT compared to ACT which led to people suggesting to stop conducting SAT altogether and focus on ACT which resulted in college board forming a committee to check the same.

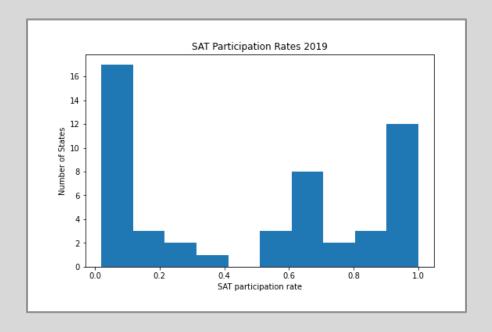


This analysis seeks to explore if the headlines made were true, if so what are those states and possible reasons behind that

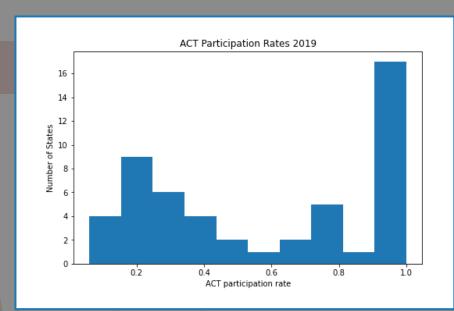


This analysis also aims to make recommendations to the College Board for strategies to improve participation rate

state_name	sat_participation_percentage
Rhode Island	1.0
Illinois	1.0
Michigan	1.0
Colorado	1.0
Connecticut	1.0
Delaware	1.0
Florida	1.0
Idaho	1.0



state_name	sat_participation_percentage
North Dakota	0.02
Wyoming	0.03
South Dakota	0.03
Nebraska	0.03
Wisconsin	0.03



state_name	act_participation_percentage
Maine	0.06
Rhode Island	0.12
Delaware	0.13
New Hampshire	0.14
Pennsylvania	0.17

act_participation_percentage	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	
1.0	

East and West Coast States

State_Name	SAT_Participation_Rate
Florida	1.00
Connecticut	1.00
Rhode Island	1.00
Delaware	1.00
Maine	0.99
New Hampshire	0.95
Maryland	0.82
New Jersey	0.82
Massachusetts	0.81
New York	0.79
Georgia	0.71
South Carolina	0.68
Virginia	0.68
North Carolina	0.51

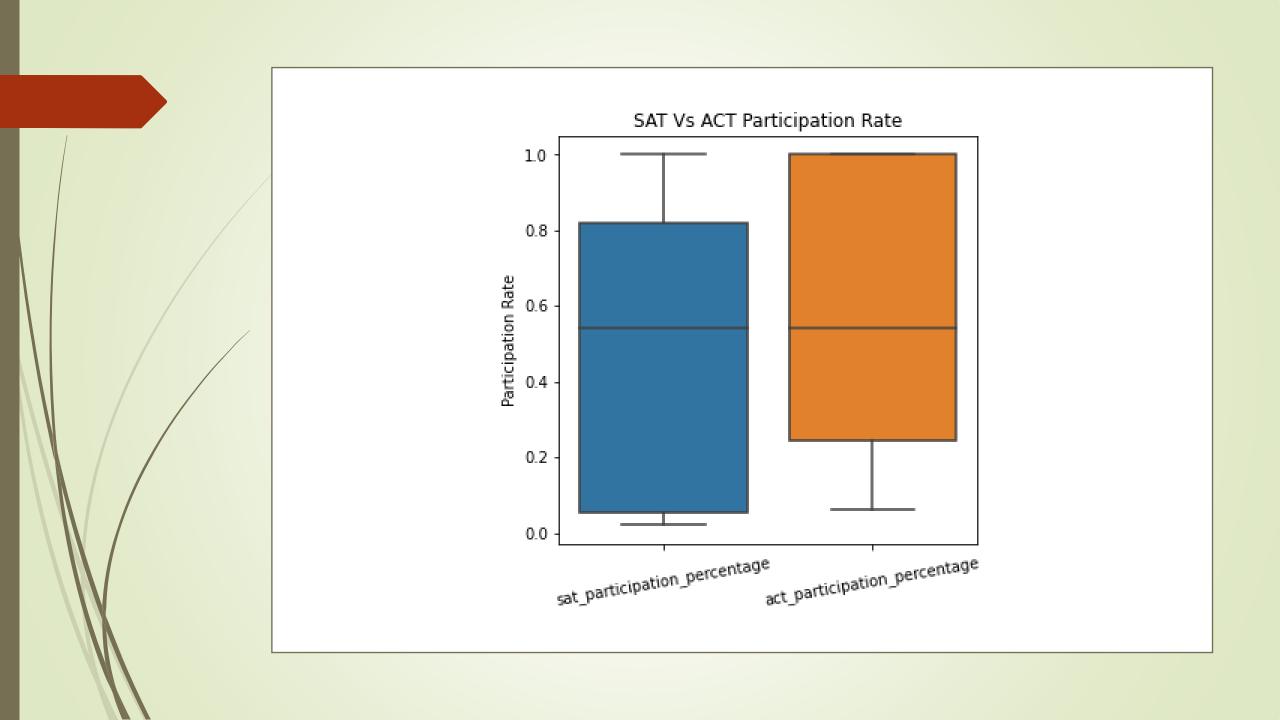
Mid West States

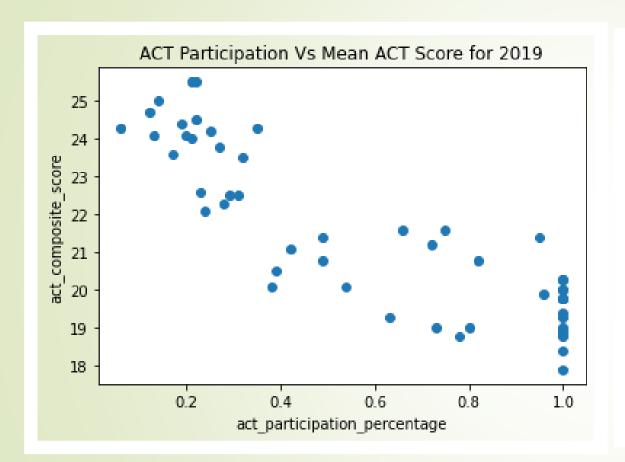
State_Name	ACT_Participation_Rate
Nebraska	1.00
Wisconsin	1.00
Ohio	1.00
North Dakota	0.96
Minnesota	0.95
South Dakota	0.75
Kansas	0.72
Illinois	0.35
Indiana	0.29
Michigan	0.19

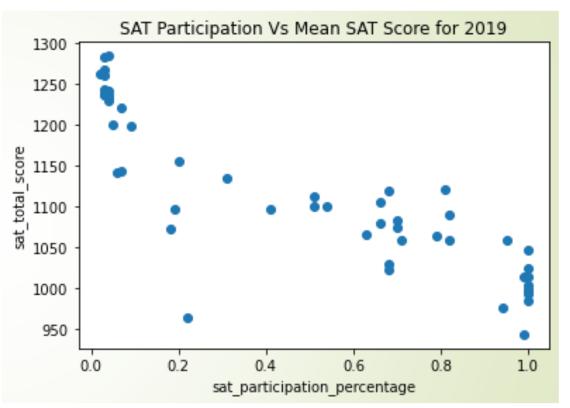
state_name	sat_participation_percentage	act_participation_percentage
Florida	1.00	0.54
Hawaii	0.54	0.80
North Carolina	0.51	1.00
South Carolina	0.68	0.78

States with more than 50% participation Rate in SAT and ACT

State_Name	SAT_Participation_Rate
Colorado	1.00
Connecticut	1.00
Delaware	1.00
Idaho	1.00
Illinois	1.00
Rhode Island	1.00
Michigan	1.00
West Virginia	0.99
Maine	0.99
New Hampshire	0.95
District of Columbia	0.94







States with Lowest and Highest Mean SAT Score

state_name	sat_total_score	sat_participation_percentage
Minnesota	1284	0.04
Wisconsin	1283	0.03
South Dakota	1268	0.03
North Dakota	1263	0.02
Nebraska	1260	0.03

state_name	sat_total_score	sat_participation_percentage
West Virginia	943	0.99
Oklahoma	963	0.22
District of Columbia	975	0.94
Delaware	985	1.00
Idaho	993	1.00

States with Lowest and Highest Mean ACT Score

state_name	act_composite_score	act_participation_percentage
Nevada	17.9	1.00
Mississippi	18.4	1.00
South Carolina	18.8	0.78
Louisiana	18.8	1.00
Alabama	18.9	1.00

act_composite_score	act_participation_percentage
25.5	0.21
25.5	0.22
25.0	0.14
24.7	0.12
24.5	0.22
	25.5 25.5 25.0 24.7

state_name	sat_participation_percentage	sat_total_score	state_name	act_participation_percentage	act_composite_score
Massachusetts	0.81	1120	lowa	0.66	21.6
Oregon	0.51	1112	Kansas	0.72	21.2
Vermont	0.66	1106	Minnesota	0.95	21.4
Virginia	0.68	1119	South Dakota	0.75	21.6

Achieving States

Conclusions

- There are 8 states with SAT participation rate of 100% whereas there are 15 states with ACT participation rate of 100% in 2019
- Least participation rate is 2% with SAT compared to ACT with participation rate of 6% in 2019.
- ACT outperformed SAT in terms of participation rate
- ACT and SAT participation rates are inversely proportional to their respective scores. Wisconsin, for instance, despite 3% participation, ranks 2nd in SAT mean score
- East and West Coast states tend to favor the SAT, while Midwest states tend to favor the ACT.

Recommendations

- Making exam fee free
- Offering scholarship to students who take SAT
- Conducting classes on test taking strategies, practice tests in schools
- Making SAT mandatory in the states with low participation rate
- Collaborating with coaching centers to provide free online practice and instructional videos
- To give an option to take exam either through online or offline

Thank You