

SHOULD I HAVE STANDARDISED TESTING IN MY
SCHOOL?



BACKGROUND

- Most US colleges require results from at least American College Testing (ACT) or Scholastic Aptitude Test (SAT) as part of the admissions process.
- However, groups have argued that such standardised tests are not fair. In the last few years, standardised tests (conducted with a large number of students) have also been challenging to conduct due to Covid-19.*
- In response, numerous US Colleges have made the submission of standardised test scores optional for the next few years. However, students who do submit their results are largely still

*<https://www.economist.com/united-states/2021/02/25/covid-19-has-boosted-the-campaign-against-exams-in-american-schools>

PROBLEM STATEMENT

You are part of the academic staff of a NEW public high school in the state of New York and have been tasked to assess if standardized tests should be adopted in your school.



PROBLEM STATEMENT (GUIDING QUESTIONS)

- 1) Is there a point in taking the standardized tests? (ie. Are schools still using it as part of college entrance?)
- 2) Can I afford not to take it?
- 3) Is it in my favour to take the standardized test?

METHODS

Data Extraction

Aggregate SAT and ACT scores and participation rates were extracted for year 2017, 2018 and 2019. Another dataset with US Colleges and their requirements for standardised test results were also retrieved.



METHODS

Data Cleaning and Merging

- Participation rates and test scores for ACT and SAT datasets were relatively clean with no null values. This data was available for all US states.
- US College admission requirements data was relatively clean as well. Information on 416 US Colleges and their requirements on standardised test scores were well categorised.

METHODS

Dataset	Feature	Type	Description
act_sat	participation	float	Participation rate of the US state for ACT or SAT tests in that year.
act_sat	state	string	US State
act_sat	composite	float	Average ACT test scores of the respective US state in that year.
act_sat	total	integer	Average SAT test scores of the respective US state in that year.
admission	school	string	Name of school
admission	test_optional	string	Yes: Test Optional and Test flexible schools
			No: Schools which require SAT/ACT, and schools which have specific conditions if applicants do not submit SAT/ACT
			TB: Test Blind, tests will not be considered even if submitted

ANALYSIS

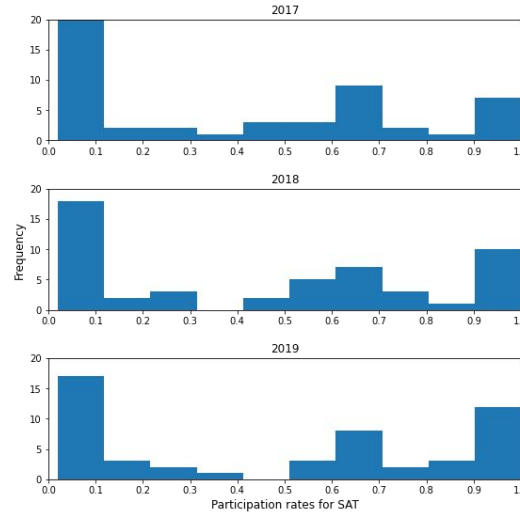
- 1) Distribution plots for test scores and participation rates (boxplots and histograms).
- 2) Relationships between variables were assessed (heatmap and scatterplot)
- 3) Aggregate information on college test policy.
- 4) Performance of New York on standardised tests relative to other US states

DISTRIBUTION PLOTS

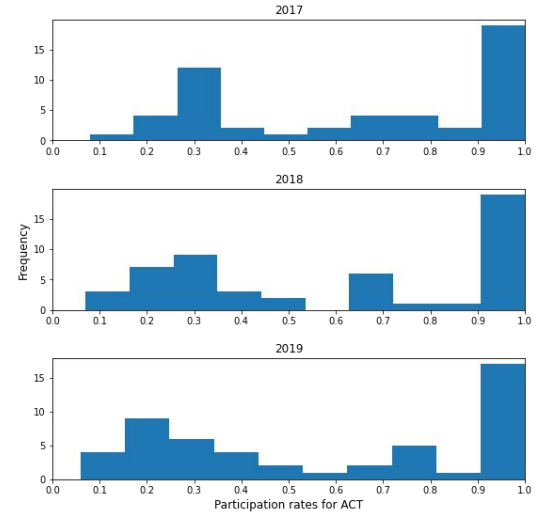
Histogram of test participation rates for ACT and SAT from 2017 to 2019

- Similar for both tests across the years
- Participation rates are heavy at 0% and 100%
- This is expected, as US states have policies governing whether schools in the state take ACT or SAT

Participation rates for SAT in US states from 2017 to 2019



Participation rates for ACT in US states from 2017 to 2019

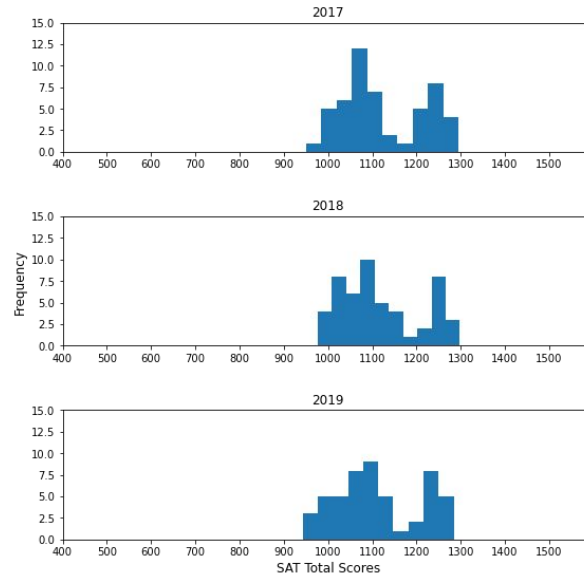


DISTRIBUTION PLOTS

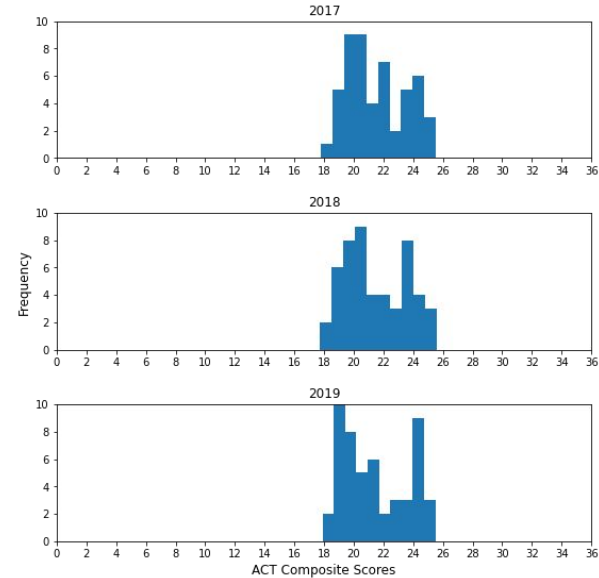
Histogram of test results for ACT and SAT from 2017 to 2019

- Distribution for both tests are similar across the years
- Results are somewhat bimodal with two peaks, and few counts at the mean

SAT total scores in US states from 2017 to 2019

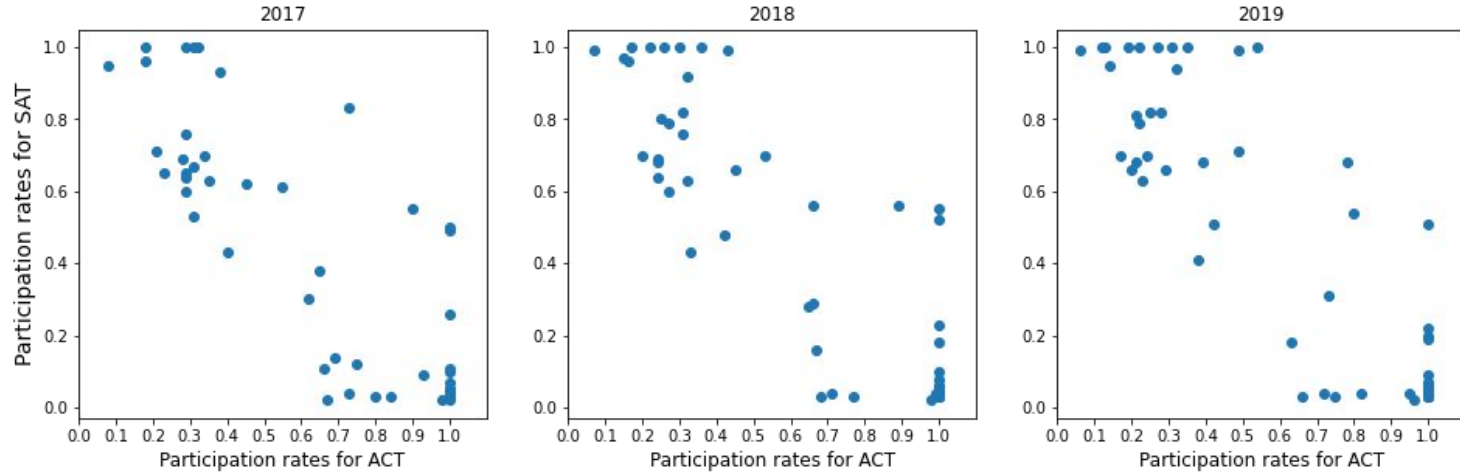


ACT composite scores in US states from 2017 to 2019



RELATIONSHIP BETWEEN VARIABLES

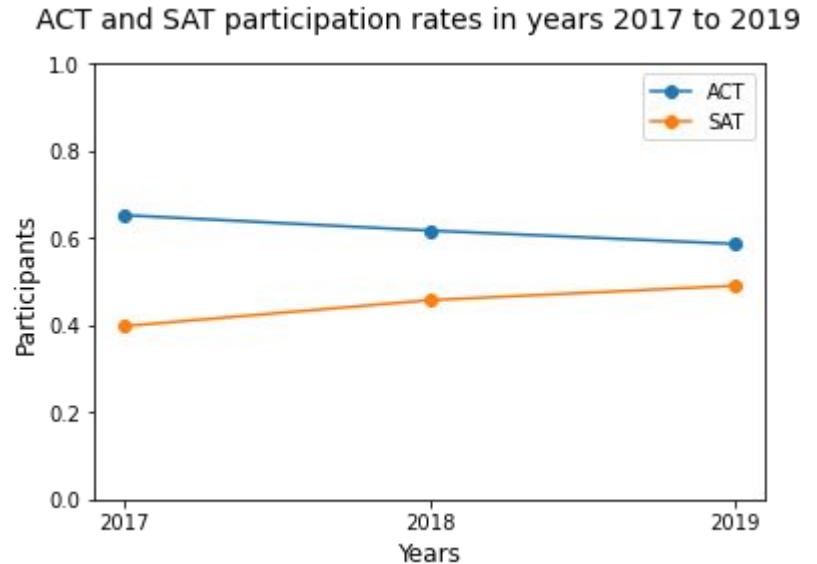
Participation rates for ACT and SAT in US states from 2017 to 2019



- States with high participation rates in one test have low participation rates in the other test.
- This is expected as students of a certain state will likely take either ACT or SAT, and they are not likely to take both tests.

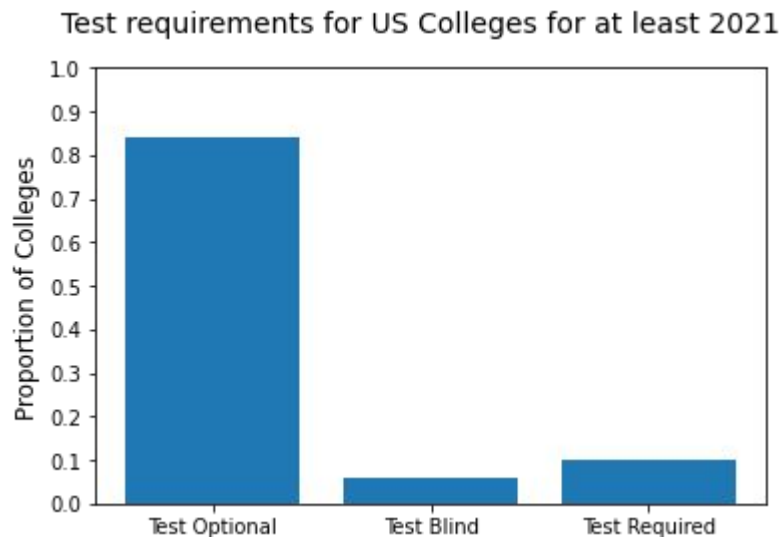
ACT/SAT PARTICIPATION TRENDS

- From 2017 to 2019 participation rates of ACT and SAT has been largely stable.
- At least for this period, high schools are still incorporating standardised tests in their curriculum.



AGGREGATE INFORMATION ON COLLEGE TEST POLICY

- For at least 2021, almost 90% of US colleges have a test optional or test blind policy.
- Students who have no ACT/SAT scores can still apply.
- However, students who submit their ACT/SAT results will still have their results considered in test optional schools.



ADDITIONAL INFORMATION

Performance of New York in standardised tests:

In general, New York performs well in the ACT. From 2017 to 2019, New York performed better than at least 90% of the US states in ACT.

CONCLUSION

- 1) Standardized tests are largely still used as part of the admission process to US colleges.
- 2) As of 2021, about 90% of colleges have made it optional to submit standardised test scores for the next few years.* However in most colleges, those who submit their results will have them considered.
- 3) New York generally performs well for standardised tests (ACT), with better aggregate ACT Composite score than 90% other US states from 2017 to 2019.

*As a temporary policy to be reviewed.

RECOMMENDATIONS

Since the test scores are relevant and New York generally performs well in ACT, I recommend to incorporate ACT preparations in the school curriculum.

