



# Change in SAT test format in 2016

Did it Benefit College Board?

Anni, Gary, Hamizah

# Brief Summary of the SATs / ACTs

- SATs and ACTs are a statewide test for high-schoolers
- The scores are utilised for university admissions
- Since the inception of SATs in 1926, it has gone through many changes
- In 2016, big changes were made to the format.

## Change in SAT test format

- In 2016, the change in SAT's format saw an increased importance in Math
  - The weightage of Math is now 50%

# Changes in SAT Test format (Old v New)

	Old SAT	New SAT (2016 onwards)
<b>Scoring</b>	600 - 2400	400 - 1600
<b>Sections</b>	<ul style="list-style-type: none"><li>- Critical Reading: 200-800</li><li>- Writing: 200-800</li><li>- Math: 200-800</li><li>- Essay (included in Writing score)</li></ul>	<ul style="list-style-type: none"><li>- Evidence-Based</li><li>- Reading and Writing: 200-800</li><li>- Math: 200-800</li><li>- Optional Essay (separately scored)</li></ul>

# Why the change?

The SAT was accused of being too “class-biased” – the tough vocabulary words on the test, the strange format of the math questions, and many of the stylistic elements of the test seemed to favor those who have the resources to prepare properly.

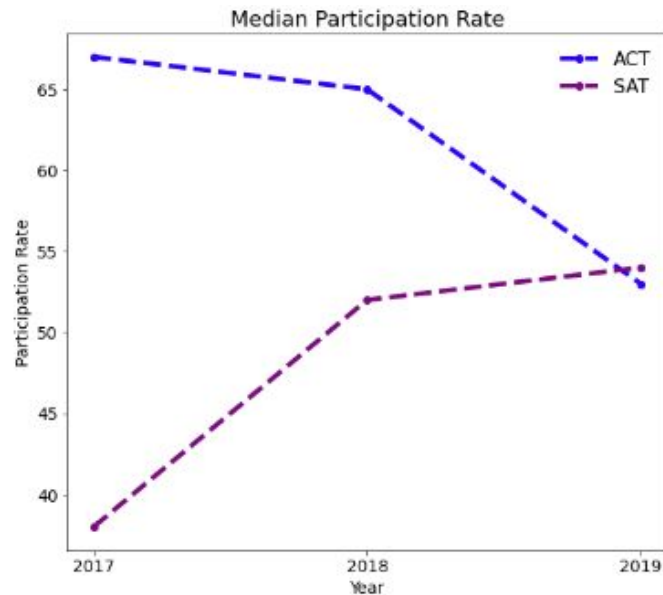
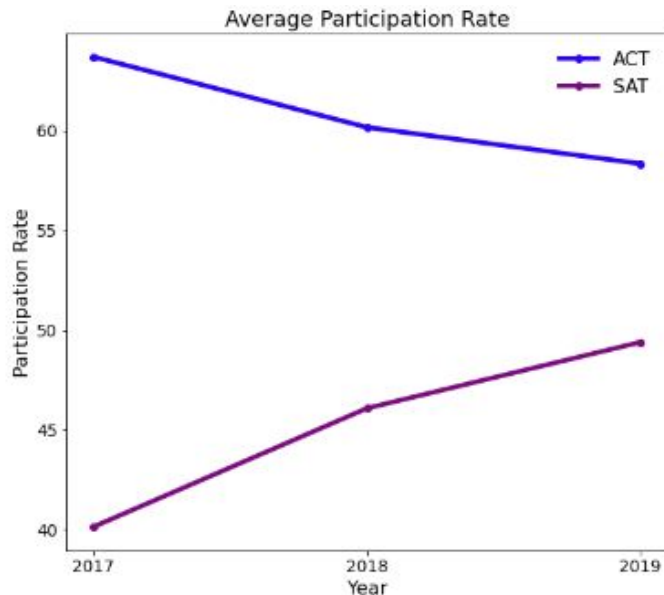
The redesigned SAT test prioritizes content that reflects the kind of reading and math students will encounter in college and their future work lives.

# Problem statement

Was this decision beneficial for **College Board** in its competition against **ACT Inc.** in its fight for market share?

- Did this decision cause any change in SAT participation rate?
- Did this decision encourage students strong in Mathematics to sit for SAT?
  - Did these students switch over to SAT and abandon ACT?  
Or did they take both tests?

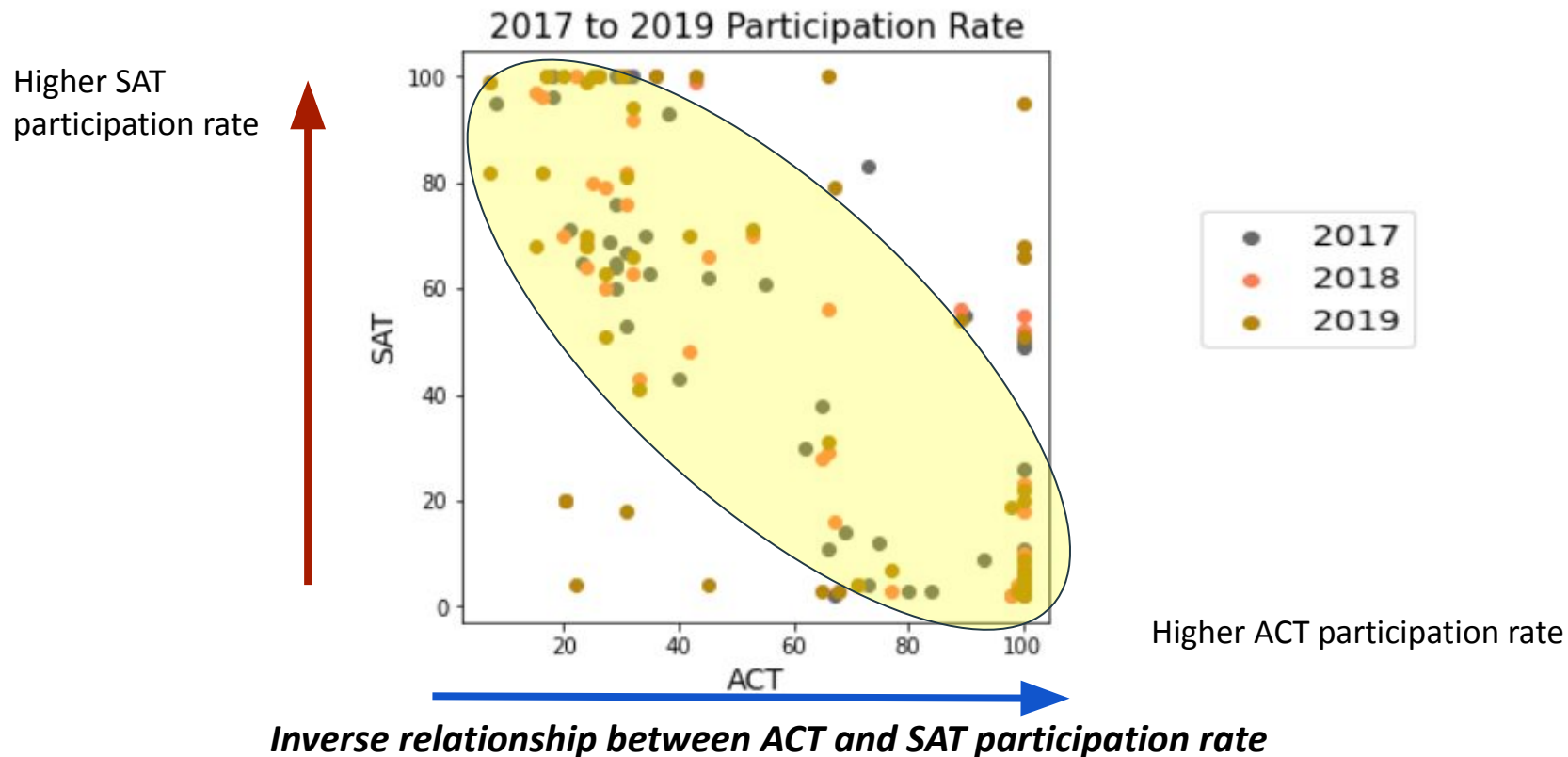
# Nationwide SAT participation rose while ACT dropped



*SAT: Average and Median participation rate increased*

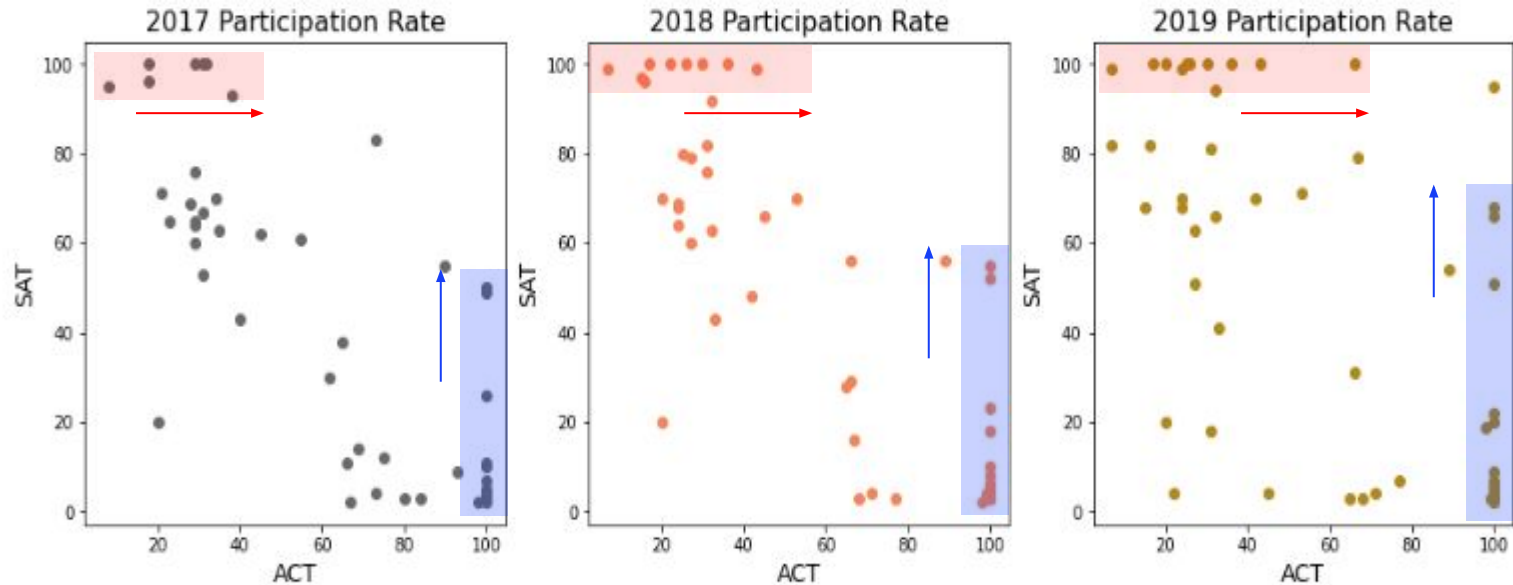
*ACT: Average and Median participation rate dropped*

# States usually participate in either ACT or SAT





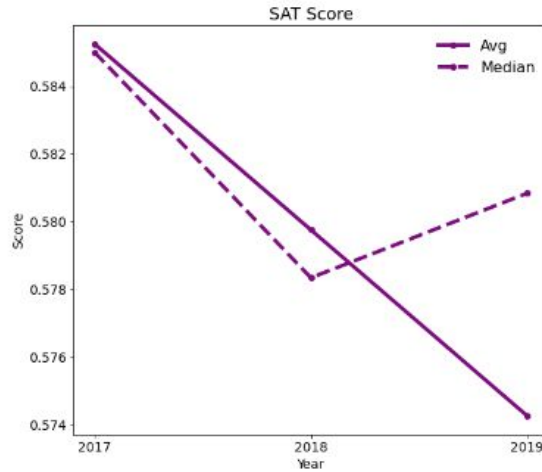
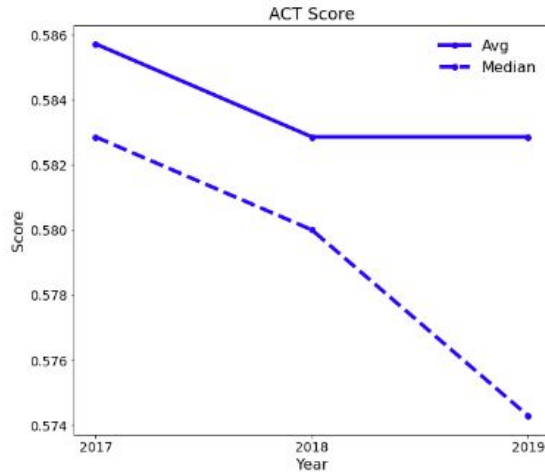
# Increase in States participating in both ACT and SAT



***High SAT participation rate: increasing participation rate in ACT too***

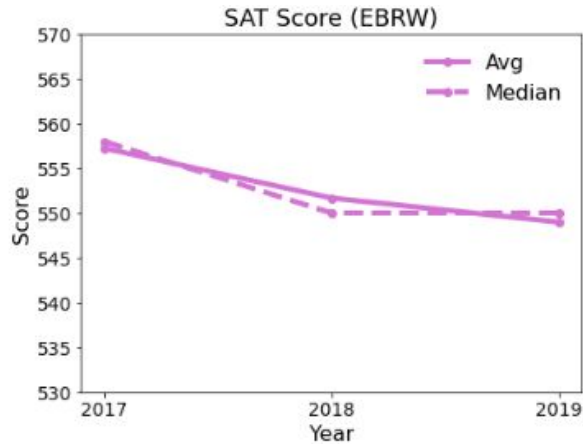
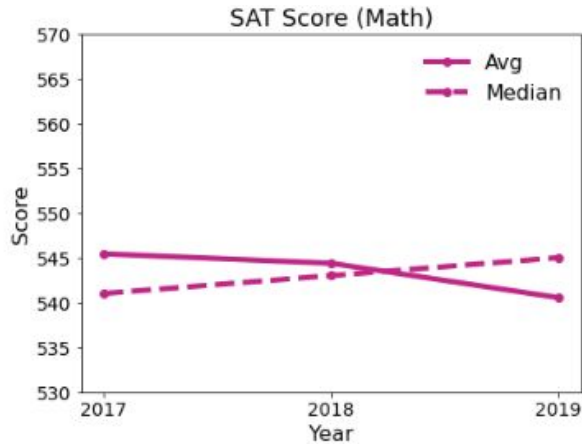
***High ACT participation rate: increasing participation rate in SAT too***

# Decreasing scores in ACT and SAT



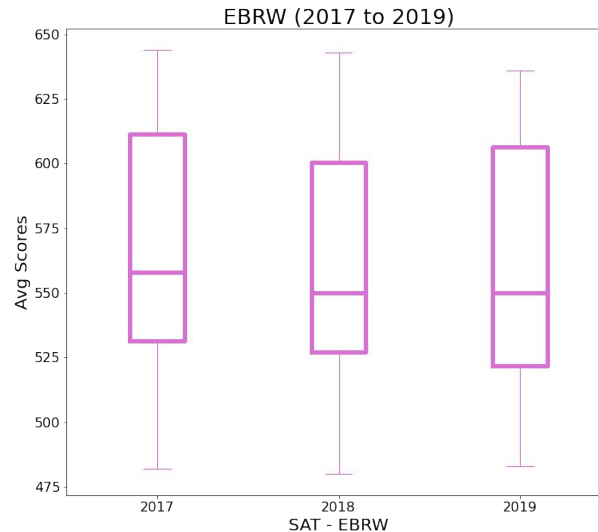
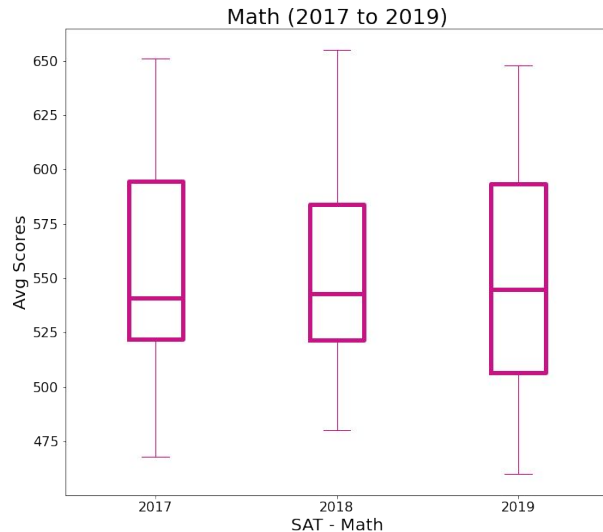
- ACT/SAT scores both decreased.
- ACT - likely because of better students abandoning ACT for SAT
- SAT - likely due to bigger pool of students causing score to move towards average

# SAT Score Breakdown - Math/EBRW



- Linguistic better than Mathematics.
- Math average is down, but median is up.
- This agrees with theory that there is a new pool of average students dragging the scores down.

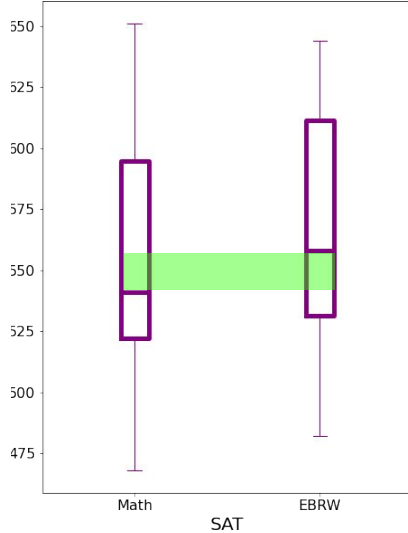
# SAT Score Breakdown - Math/EBRW



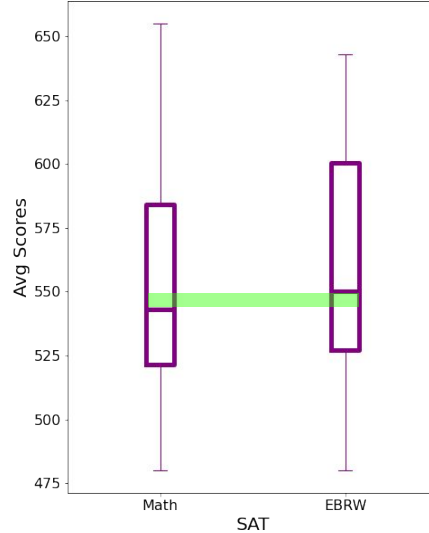
- Spread for Math widen. Signifies a wider spectrum of students in SAT.
- Also a gradual increase in median of Math.
- Linguistic gradual downtrend. Inconclusive why at the moment.

# SAT Score Breakdown - Math/EBRW

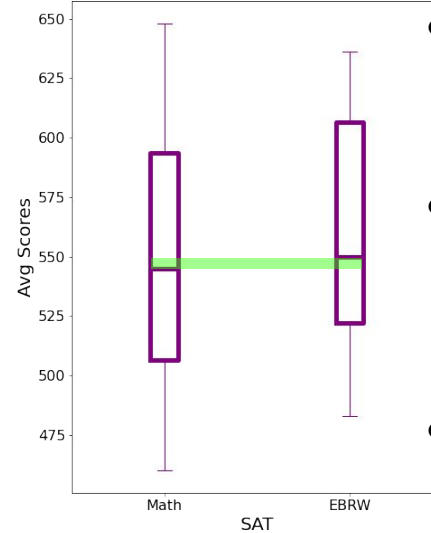
2017 SAT Avg Scores (Math vs EBRW)



2018 SAT Avg Scores (Math vs EBRW)



2019 SAT Avg Scores (Math vs EBRW)



- Narrowing of gap between Math and EBRW medians.

- Suggests that indeed mathematically inclined students are taking up the SAT.

- Whether EBRW continue to falls or will it stabilise remains to be seen.

# Conclusion & Recommendations

The **new SAT format** has attracted more students and **has increased** the **participation rate**. On the other hand, participation rate for **ACT has dropped**.

Also, **the average score of SAT** has **dropped** and the **median score of SAT** has **decreased slightly**.

Looking at the details of the scores, the **median score** for **maths went up** but then **mean score went down**. This could signal that **more mathematically strong students** are **attracted by the change in format**, and have decided to **try SAT (instead of ACT)**.

To gain further insights, we should also look into which states has the biggest change in SATs participation rate. Analyzing this group of data might help to find stronger signals on the impact of the change in SAT format, and focus resource deployment geographically.

