



Exploring Regional Comparison of Participation rate and Performance in SAT and ACT: 2017–2019

By Arkira Wongsim

Problem Statement:

Regional Comparision

Hypothesis 1

There are **difference patterns of participation rate** between SAT and ACT accross regional over three years.

Hypothesis 2

There are **Positive Relationships** between the ACT and SAT score in the same field of subjects

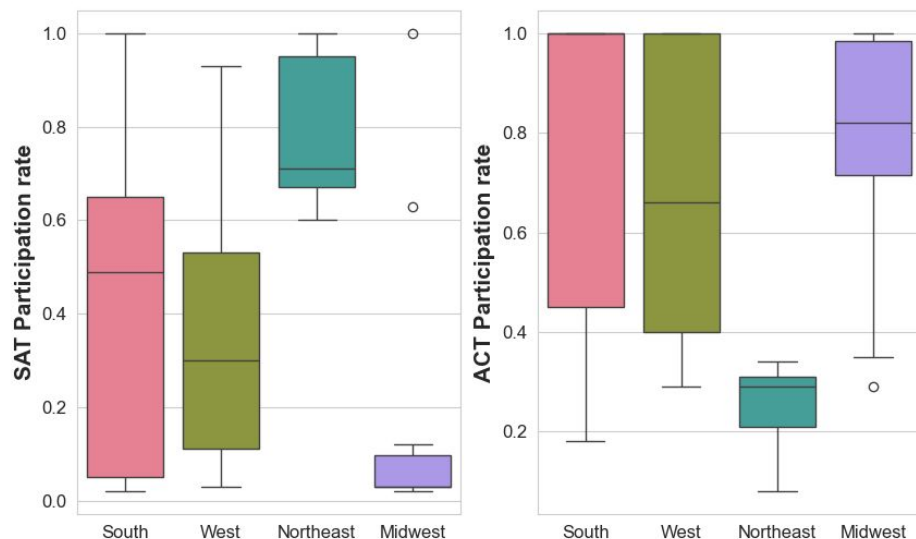
Importance of SAT and ACT:

Headmaster perspective

- ❑ **College Admission:** High scores can enhance our student's college applications and open doors to prestigious institutions.
- ❑ **Benchmarking Academic Performance:** Benchmark for evaluating the academic performance of your students across schools, districts, and states.
- ❑ **Scholarship Opportunities:** High scores can significantly increase students' chances of receiving financial aid.

Regional Comparison of ACT/SAT participation (2017)

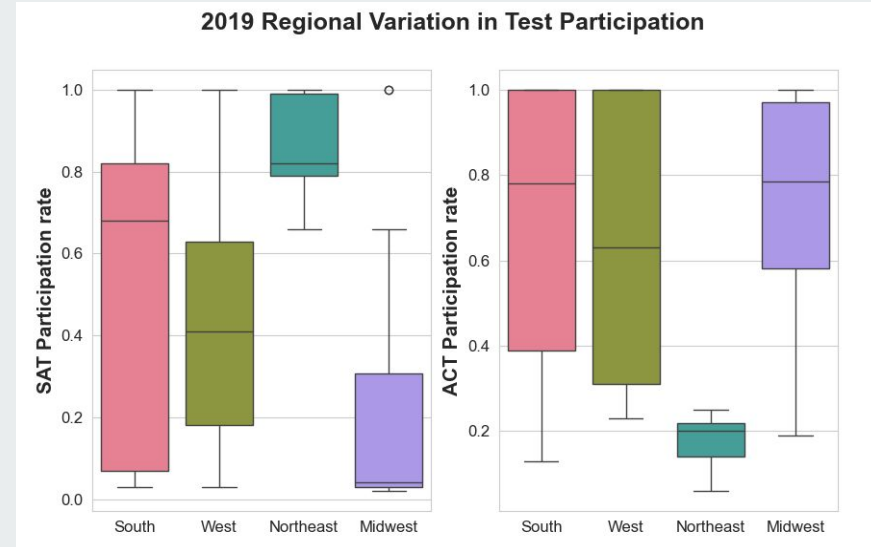
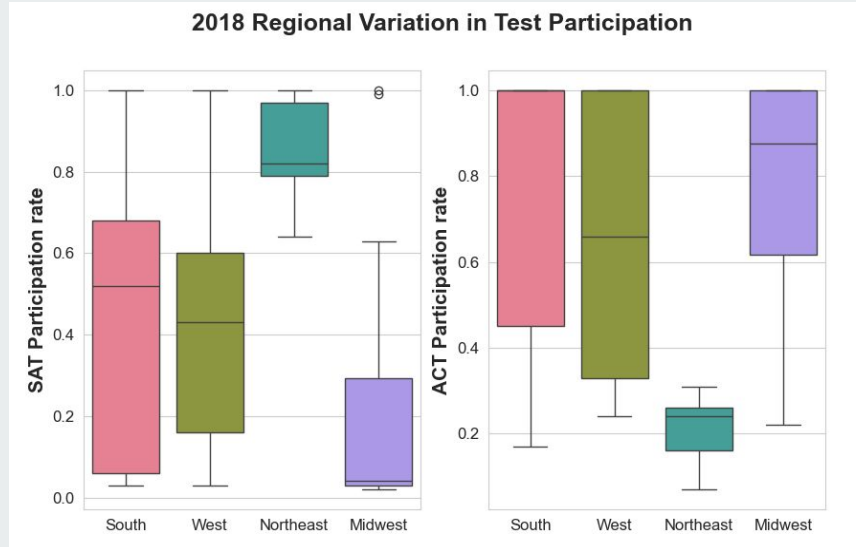
2017 Regional Variation in Test Participation



Opposite regional preferences

- The **Northeast and Midwest** appear to participating almost exclusively in one exam.
 - **Northeast** showed over 0.7 (median) participating the **SAT**.
 - While the **Midwest** student tend to take the **ACT** with 0.82 median
- **South and West** shows **less participation gap** between two test types

Regional Comparison of ACT/SAT participation (2018-2019)



- Each states still maintain similar regional preferences across three years.
- Shows closing of the regional participation gap between the two tests, particularly in the Midwest.

Relationship between subject scores in 2017

Find Correlation Between

4 Sections of Act Test : English, Mathematics, Reading, and Science

2 Sections of SAT Test : Reading and Writing, and Mathematics

Result of each region

South

Correlation between the score of each subjects:
Low **Negative correlation**

Participation gap between two tests : Small

West

Correlation between the score of each subjects:
Low **Negative correlation**

Participation gap between two tests : Small

Northeast

Correlation between the score of each subjects:
Low **Negative correlation**

Participation gap between two tests: Large

Midwest

Correlation between the score of each subjects:
High Negative correlation

Participation gap between two tests: Large

Conclusion

Limitation:

Completeness of Data

ACT English, Math, Reading and Science score in 2018 and 2019

Answers to the Problem Statement :

- ❑ There are **difference pattern of participation rate** between SAT and ACT accross each regional over three years.
- ❑ There are **Negative Relationship** between the score in the same field of subjects

Conclusion

Recommendation:

- ❑ **Focusing on students' fundamental knowledge rather than relying heavily on SAT or ACT scores:**

Standardized tests like the SAT and ACT measure certain skills on a specific style of questions, but they don't fully capture a student's comprehensive understanding of the subjects.

- ❑ **Collect the ACT and SAT scores of your students**
- ❑ **Collect the frequency of ACT and SAT test attempts by students**

**THANK YOU
FOR LISTENING**
