

A low-angle photograph of a large, classical-style university building with many windows. In the foreground, the blue and red sleeves of graduates are visible as they throw their black mortarboards into the air. The mortarboards are captured in mid-air, scattered across the upper half of the frame. The building's facade features a large blue sign with white Cyrillic text. The overall scene is celebratory and academic.

An analysis of ACT 2017 - 2022

By Joanne Chong

State of standardized testing in the US

FORTUNE

American high school kids are getting the worst test scores in over 30 years

BY CHEYANNE MUMPHREY AND THE ASSOCIATED PRESS

October 13, 2022 at 2:09 AM GMT+8



[Link to article](#)

HIGHER ED DIVE

Over 1,700 colleges won't require SAT, ACT for fall 2023, up from same point last year



[Link to article](#)

Bloomberg

Opinion | [Michael R. Bloomberg](#)

Colleges Should Bring Back Testing Requirements

Plummeting student performance shows the consequences of abandoning standards.



[Link to article](#)

1. Dwindling results signaling systemic failure in education
2. Increasing test-optional policies
3. Objective measure for fair college admission vs. higher entry barriers for students from low-income background

What we want to find out:



1. Does the participation rate influence ACT scores?
2. Are there overlaps in the ACT subjects, and are the scores related to each other?
If yes, do we need to review the format of the ACT?

Where we started:



- ACT participation rates from 2017 - 2022
- ACT scores from 2017 - 2022

Source: ACT and US Department of Education, National Center for Statistics

ACT at-a-glance



	2017	2018	2019	2020	2021	2022
Participation Rate	60%	52%	48%	46%	35%	36%
English Scores	20.3	20.2	20.1	20.1	19.6	19.0
Math Scores	20.7	20.5	20.4	20.4	19.9	19.3
Reading Scores	21.4	21.3	21.2	21.2	20.9	20.4
Science Scores	21.0	20.7	20.6	20.6	20.4	19.9
Composite Scores	21.0	20.8	20.7	20.7	20.3	19.8

Table 1: Summary of the US national average ACT participation rate and scores from 2017 to 2022. *Data source: ACT and U.S. Department of Education*

- **All areas are trending downward** – participation and scores were already declining before COVID-19.
- Participation rate and the scores appear to be **potentially related or connected**.

ACT Participation Rates

- **Declining rates** overall, in line with wider test-optional policy across colleges.
- 100% participation rate for 6 consecutive years: **Alabama, Mississippi, Nevada, and Tennessee.**
- Lowest participation rate for 6 consecutive years: **Maine, followed by New Hampshire, Delaware, Rhode Island and Pennsylvania.** These states require students to take the SAT.

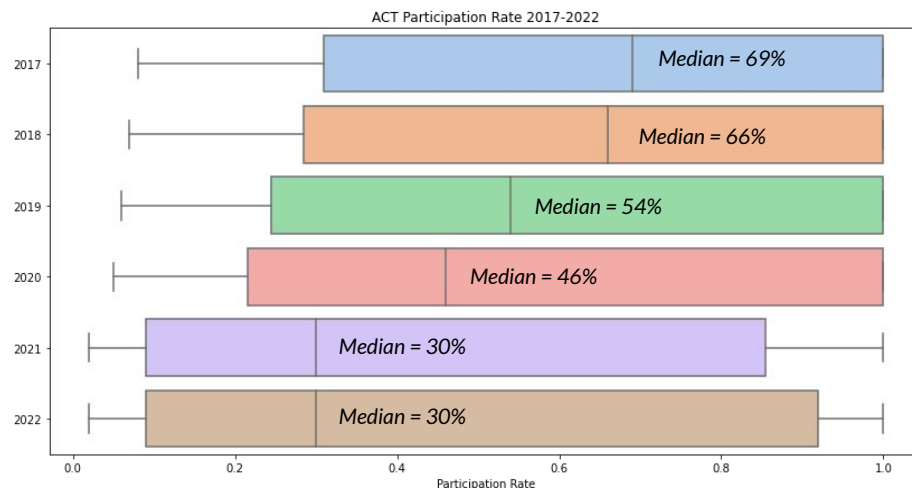


Figure 1: Boxplots of the national average ACT Participation rate from 2017 to 2022.
Data source: ACT and U.S. Department of Education

Participation vs. Scores

- **Negative correlation** – as participation rate increases, the composite scores decrease.
- However, participation has **minimal influence** on overall scores due to myriad of reasons:
 - ACT as a mandatory statewide test, which lowers state average.
 - Students in test-optional states are academically strong.
 - Students are choosing to prioritize SAT and/or other statewide tests.

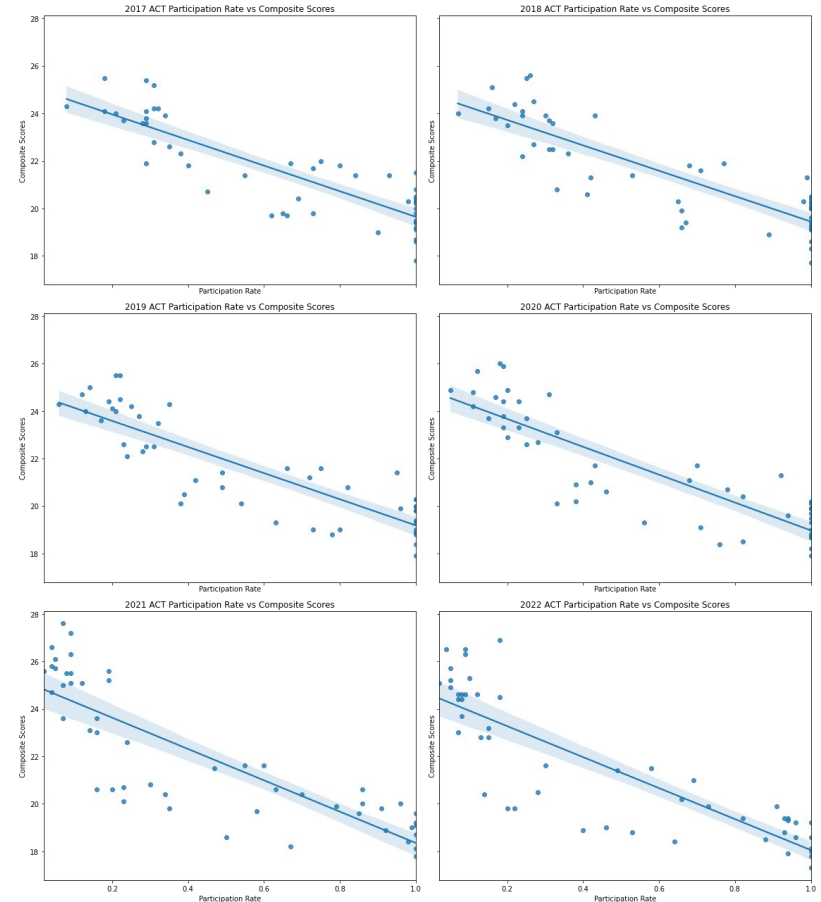


Figure 2: Scatter plots of the national average ACT participation rate against composite scores from 2017 to 2022. Data source: ACT and U.S. Department of Education

English vs. Reading

- States' score performance **does not vary much** year-to-year.
- **Positive correlation** – when English scores increase, Reading scores increase as well.
- Opportunity to **review test formats** to make it more condensed, to:
 - Entice more students to take the ACT.
 - Help students better focus in the preparation process.

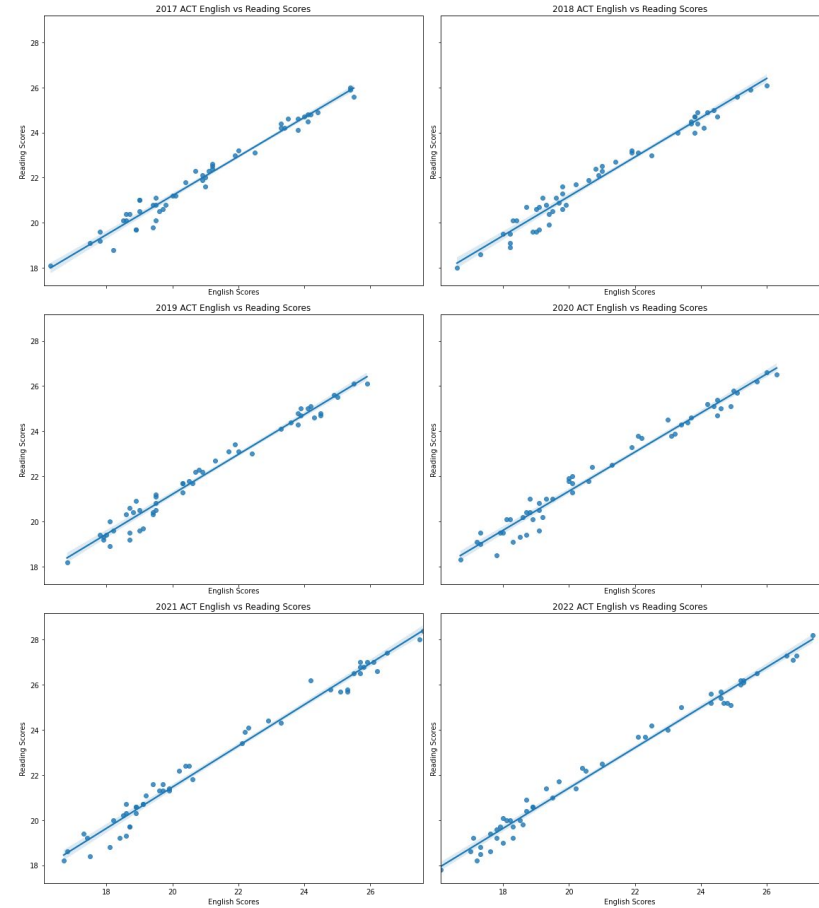


Figure 3: Scatter plots of the national average English scores against the reading scores from 2017 to 2022. *Data source: ACT and U.S. Department of Education*

Math vs. Science

- **Positive correlation** – when Math scores increase, Science scores increase as well.
- **Not viable to condense** the two sections as the subject content are distinct.
- Due to the Science subject, ACT remains **test-of-choice** for students applying for Science-related majors in college and scholarships.

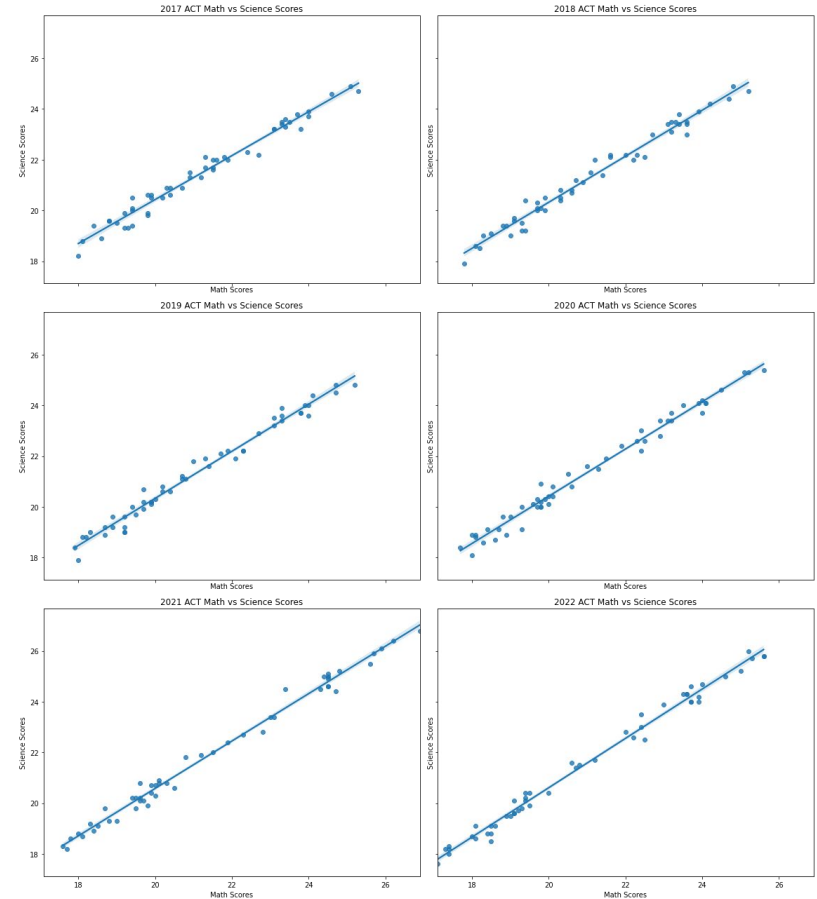


Figure 4: Scatter plots of the national average Math scores against the Science scores from 2017 to 2022. *Data source: ACT and U.S. Department of Education*

Recommendations

1. Review the purpose of standardized tests and focus on instilling a passion to learn.
2. Encourage students to leverage colleges' test-optional policy.
3. Boost academic standards through practical assignments and projects, and even through weighted scoring.
4. Take a holistic approach at evaluating students' readiness for college.

