



CPS Analysis of Correlation Between Test Duration, Pauses and Growth

February 2020

What Is the Correlation Coefficient?

The correlation coefficient is a statistical measure that calculates the strength of the relationship between the relative movements of two variables. The values range between -1.0 and 1.0. A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. A correlation of 0.0 shows no relationship between the movement of the two variables.

Data Review

How to Interpret the Correlation Coefficient?*

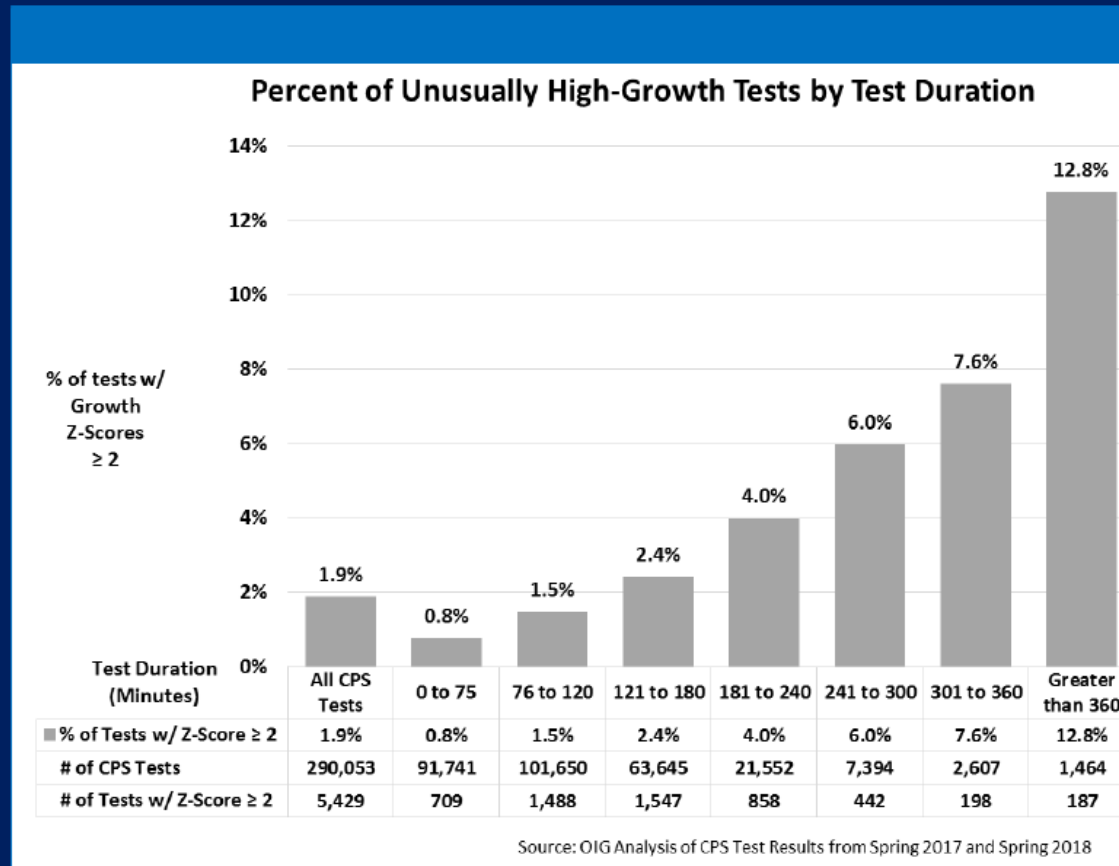
- Correlation coefficients whose magnitude are between 0.9 and 1.0 indicate variables which can be considered **very highly correlated**.
- Correlation coefficients whose magnitude are between 0.7 and 0.9 indicate variables which can be considered **highly correlated**.
- Correlation coefficients whose magnitude are between 0.5 and 0.7 indicate variables which can be considered **moderately correlated**.
- Correlation coefficients whose magnitude are between 0.3 and 0.5 indicate variables which have a **low correlation**.
- Correlation coefficients whose magnitude are less than 0.3 have little if any (linear) correlation.

*Source: [Andrews University website](#)

There is no statistical correlation in the OIG's data between test duration and high growth.

Data Review

DURATION AND UNUSUALLY HIGH GAINS



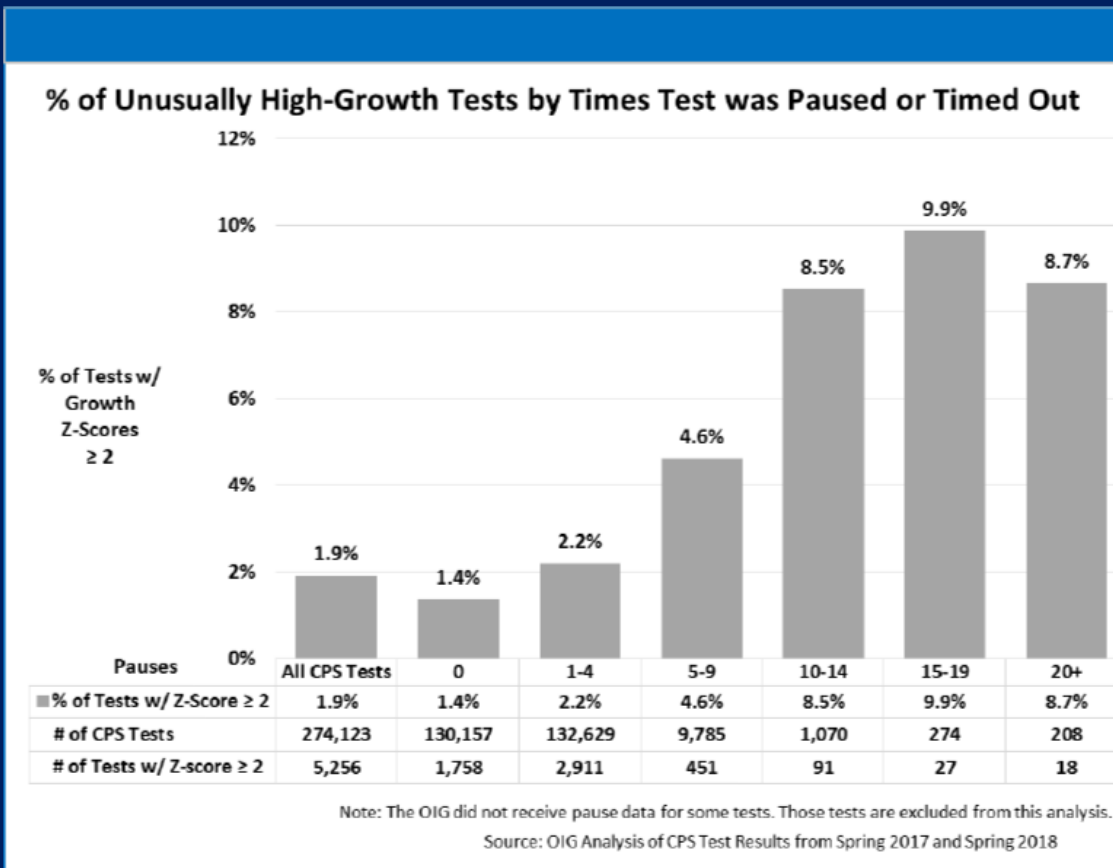
$$R(\text{all students}) = .195 \quad (p \leq .0001)$$

$$R(z \geq 2 \text{ students}) = .041 \quad (p \leq .0001)$$

There is no statistical correlation in the OIG's data between number of pauses and high growth.

Data Review

PAUSES AND UNUSUALLY HIGH GAINS



R (all students) =
.078 ($p \leq .0001$)

R ($z \geq 2$ students) =
.021 ($p = .023$)