

What is Concurrent Validity? (Definition & Examples)

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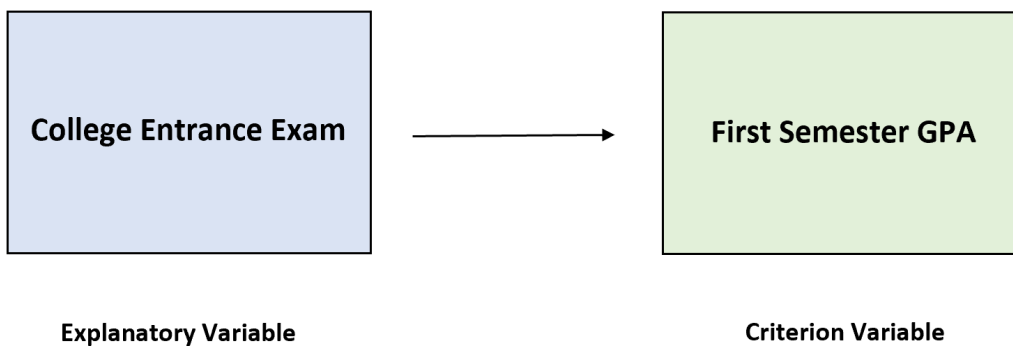
Concurrent validity is a type of validity that measures the extent to which a new test or measure correlates with an already established test or measure that is used to assess the same construct. It is a way to determine if the new test is measuring the same underlying concept as the established test. For example, if a new math test is found to have a high correlation with an already established math test that is known to accurately measure mathematical abilities, then the new test can be said to have concurrent validity. This type of validity is important because it allows researchers and practitioners to have confidence in the accuracy and reliability of the new test. Other examples of concurrent validity include comparing a new personality test to an established one, or a new job performance evaluation to a previously used one. Overall, concurrent validity helps to ensure that tests and measures are accurately assessing the intended construct.

What is Concurrent Validity? (Definition & Examples)

In statistics, we're often interested in understanding if the value of some can predict the value of some response variable. This response variable is sometimes called a .

For example, we might want to know how well some college entrance exam is able to predict the first semester grade point average of students.

The entrance exam would be the explanatory variable and the criterion variable would be the first semester GPA.



We want to know if it's *valid* to use this particular explanatory variable as a way to predict the criterion variable. If it is valid, then we say that exists.

There are two types of criterion validity:

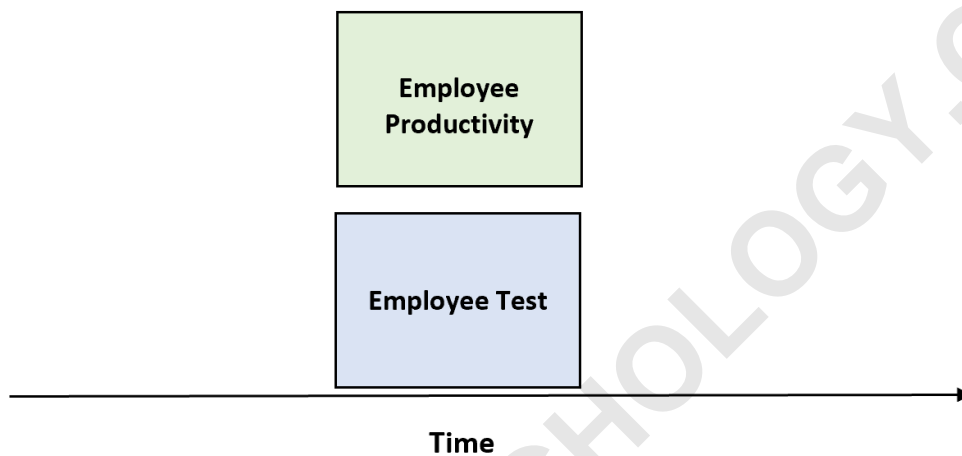
1. **Predictive Validity** - This tells us if it's valid to use the value of one variable to predict the value of some other variable in the future.



2. **Concurrent Validity** - This tells us if it's valid to use the value of one variable to predict the value of some other variable measured *concurrently* (i.e. at the same

time).

For example, a company might administer some type of test to see if the scores on the test are correlated with current employee productivity levels.



The benefit of this approach is that we don't have to wait until some point in the future to take a measurement on the criterion variable we're interested in.

Note that we usually measure both types of validity using the r , which takes on value between -1 and 1 where:

-1 indicates a perfectly negative linear correlation

between two variables 0 indicates no linear correlation between two variables 1 indicates a perfectly positive linear correlation between two variables

The further away the correlation coefficient is from zero, the stronger the association between the two variables.

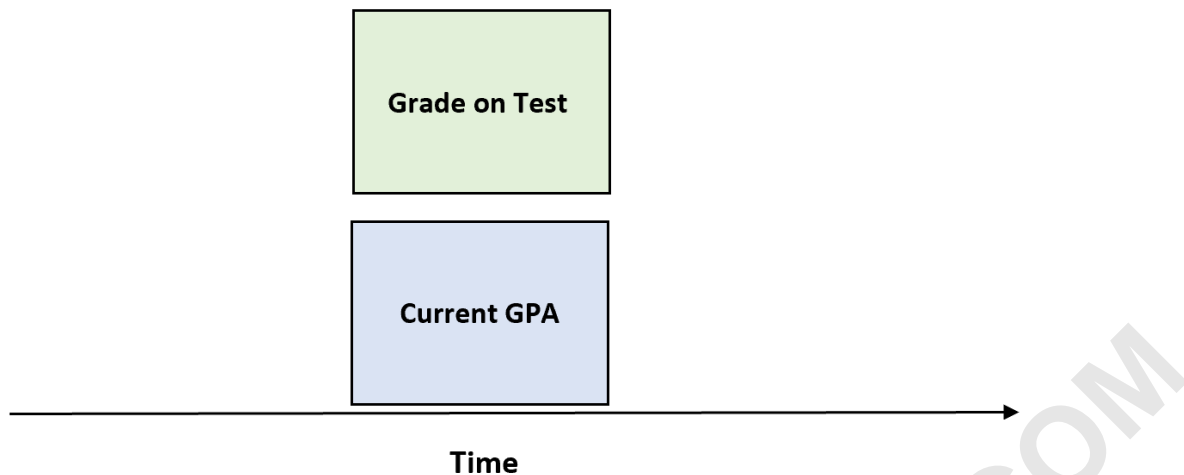
Examples of Concurrent Validity

The following examples illustrate more scenarios in which we can use concurrent validity to determine whether or not some explanatory variable can be used to predict the value of some criterion variable.

A researcher creates a new test that is designed to assess the knowledge of college students in the subject of biology.

The researcher gives out the test to all biology majors at a certain university and compares the scores of his test with their current GPA.

If there is a high correlation between the grades on his test and the current GPA of the students, we can say that concurrent validity exists.

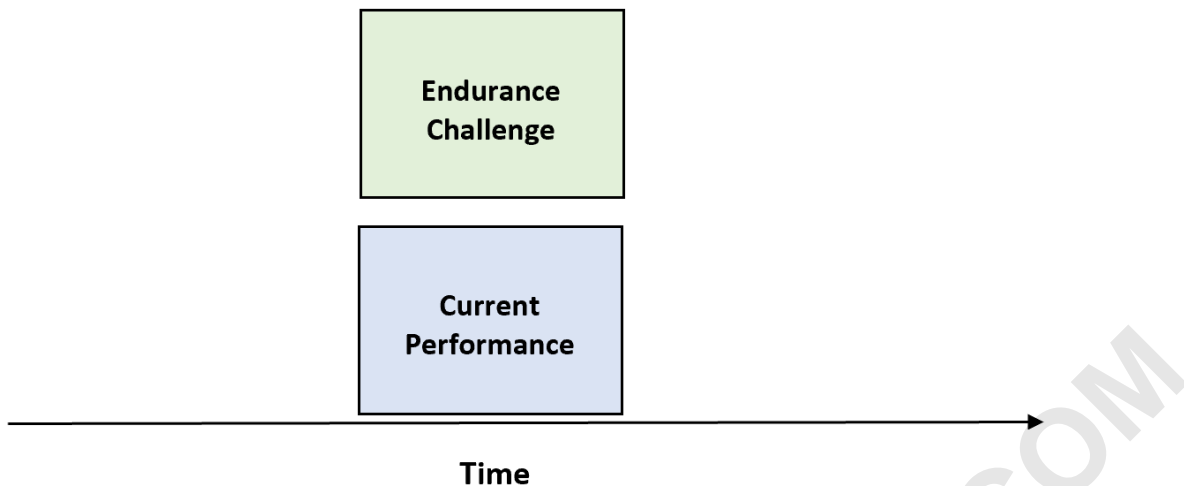


Example 2: A Test of Endurance

A track coach creates a new endurance challenge that is designed to assess the endurance levels of his athletes. He lets each of his athletes perform the challenge and compares their scores to their current performance levels.

If there is a high correlation between the endurance challenge and the current performance levels, then he can say that concurrent validity exists.

In other words, it would be valid to use the endurance challenge to assess the performance levels of the athletes.

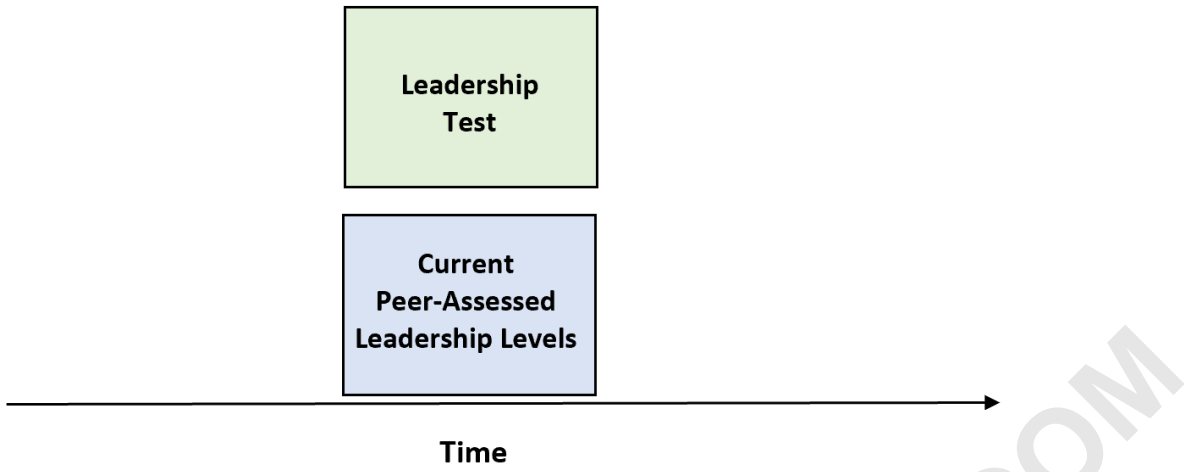


Example 3: A Test of Leadership

A business executive creates a new test to assess the leadership ability of employees at a company. She gives out the test to each employee at a company and compares their scores to current peer-assessed levels of leadership.

If there is a high correlation between the test and current peer-assessed levels of leadership, then she can say that concurrent validity exists.

In other words, it would be valid to use the test to assess leadership levels of the various employees at the company.



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