

# Assessment Item Analysis

## Interpreting the Discrimination Factor

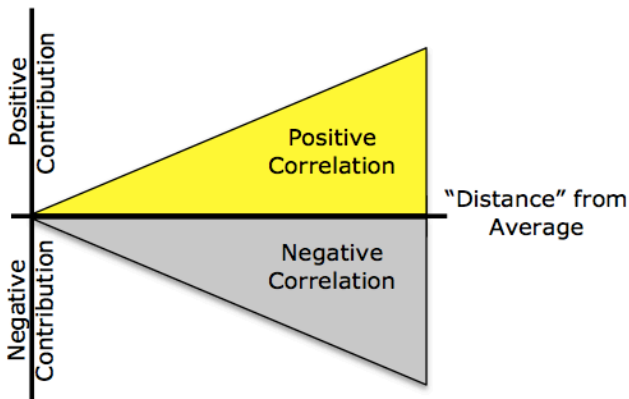
Each student contributes to a question's discrimination factor; however, each student does not contribute equally to the discrimination factor. Students that score near the assessment average contribute less to the DF than students that score near the extremes of the students' performance (highest and lowest marks on the assessment).

First, it must be determined if there is a positive or negative correlation between the student's grade on the assessment and their response to the question. The graphic to the right explains this correlation.

The strength of this correlation determines how much each student contributes to the question's DF. The further ("distance from the average") a student's score is from the average the stronger the correlation and in turn the greater the contribution. A simplistic representation of how a student's performance contributes to a question's DF is shown below.

	The student answered the question with a/an	
	Incorrect Answer	Correct Answer
Student's Score on the assessment is ABOVE the ASSESSMENT AVERAGE	Negative Correlation	Positive Correlation
Student's Score on the assessment is BELOW the ASSESSMENT AVERAGE	Positive Correlation	Negative Correlation

**DF Contribution vs. "Distance" from Assessment Average**



The question's discrimination factor is the sum of each student's contribution. A question's DF is scored between -1 and +1. Questions with a DF above +0.2 are considered acceptable. The question's correlation increases as the DF increases. In other words, students who scored above the assessment average are more likely to answer the question correctly, and students who scored below the assessment average are more likely to answer the question incorrectly. A negative discrimination factor indicates a reverse correlation. Students who scored above the assessment average are more likely to answer the question incorrectly, and student who scored below the assessment average are more likely to answer the question correctly.

### Two things to Remember

1. The further a student's score is from the assessment average the greater the question's contribution to the DF.
2. The closer a student's score is to the assessment average the lesser the question's contribution to the DF.