

Weighted Composite Test Reliability

The reliability for a combination of tests, each of which has its own estimate of reliability and a weight assigned to it, may be computed. This composite will typically be greater than any one test by itself due to the likelihood that the subtests are correlated positively among themselves. Since teachers typically assign course grades based on a combination of individual tests administered over the time period of a course, this reliability estimate is built into the Grading System. See the description and examples in that section.

Composite Test Reliability

Variables Available:	Selected Items:	Test Reliability:	Test Weight:
	VAR1	0.9	1.0
	VAR2	0.7	1.0
	VAR3	0.8	2

Directions: First select the Test Scores from the available variables. You will see a default reliability and weight assigned to each score selected in list boxes to the right. If you click on either a reliability or a weight, an input box will appear in which you can enter a new reliability or weight. Note - you can use the KR#21 reliability program to estimate reliability if you know the maximum score.

Options:

- ☒ Print Intercorrelation Matrix
- ☒ Put Composite Score in Grid

Reset Cancel
Compute Return

Figure 1 Composite Test Reliability Dialog

Composite Test Reliability

File Analyzed: C:\Projects\comprel.tex

Correlations Among Tests with 10 cases.

Variables

	VAR1	VAR2	VAR3
VAR1	1.000	0.939	0.152
VAR2	0.939	1.000	0.139
VAR3	0.152	0.139	1.000

Means with 10 valid cases.

Variables	VAR1	VAR2	VAR3
	5.500	5.500	5.500

Variances with 10 valid cases.

Variables	VAR1	VAR2	VAR3
	9.167	9.167	9.167

Standard Deviations with 10 valid cases.

Variables	VAR1	VAR2	VAR3
	3.028	3.028	3.028

Test Weights with 10 valid cases.

Variables	VAR1	VAR2	VAR3
	1.000	1.000	2.000

Test Reliabilities with 10 valid cases.

Variables	VAR1	VAR2	VAR3
	0.900	0.700	0.800

Composite reliability = 0.871