

Cronbach's Alpha

In this study, we are trying to assess the reliability (internal consistency) of one subscale of a survey instrument. For purposes of this tutorial, only Part 1 of the survey is displayed below. **Research question: What is the reliability of the instructor subscale of the survey instrument?**

Part I – Instructor. Please read each statement and assess the effectiveness of the instructor by rating him or her on a 1-5 Likert scale (1 = *Strongly Disagree*; 5 = *Strongly Agree*). Place an “X” in the appropriate box next to each statement.

Instructor	Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
1. The instructor had the academic knowledge and expertise to teach the course.					
2. The instructor was well prepared for class each day.					
3. The instructor explained things very clearly.					
4. The instructor really cared about me learning the material.					
5. The instructor provided the students with enough time to learn each new skill before moving to the next lesson.					

1. Click on Variable View on the bottom left.

Starting at the top of the far left column (under Name), type in the variable names (Q1, Q2, Q3, Q4, Q5).

Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
Q1	Numeric	8	2		None	None	8	Right	Scale
Q2	Numeric	8	2		None	None	8	Right	Scale
Q3	Numeric	8	2		None	None	8	Right	Scale
Q4	Numeric	8	2		None	None	8	Right	Scale
Q5	Numeric	8	2		None	None	8	Right	Scale

2. Label the variables.

3. Click on the Values box for the variable Q1.

Type 1 for Value and Strongly Disagree for the Value label. Click add.

Type 2 for Disagree. Click add.

Type 3 for Not Sure. Click add.

Type 4 for Agree. Click add.

Type 5 for Strongly Agree. Click add.

Click OK.

4. Repeat Step 3 for Q2, Q3, Q4, and Q5.

Note: In Step 1, Q1 could have been labeled: AcadKnowExpertise

5. Click on Data View on the bottom left.

6. Enter data into SPSS.

Q1	Q2	Q3	Q4	Q5
4.00	4.00	5.00	5.00	4.00
5.00	5.00	5.00	5.00	5.00
3.00	2.00	2.00	3.00	1.00
4.00	4.00	4.00	4.00	4.00
2.00	4.00	1.00	3.00	2.00
5.00	5.00	4.00	3.00	4.00
5.00	5.00	5.00	5.00	5.00
4.00	4.00	5.00	5.00	5.00
1.00	1.00	1.00	1.00	1.00
4.00	4.00	4.00	4.00	5.00

7. Click on Analyze.

Scale.

Reliability Analysis.

8. Click on Q1 in the box on the left. Hit the arrow in the middle.

Do the same for Q2, Q3, Q4, and Q5.

9. Click OK.

SPSS Output:**Reliability****Case Processing Summary**

		N	%
Cases	Valid	10	100.0
	Excluded (a)	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.959	5

Conclusion of Results:

The reliability coefficient for the instructor subscale is .959.

Note: Cronbach's alpha is to be conducted on the entire survey instrument (all subscales combined) and on each individual subscale. Reliability analysis must be conducted on piloted survey instruments prior to official data collection.