

There's more than meets the eye when constructing and interpreting scales

by Blog Admin

July 13, 2012

*Spanning emotions from the highly positive to the very negative **James Hartley** and **Lucy Betts** write that researchers should take into account all the questions that arise when utilising a Likert-type scales. If researchers do, they should find that the solution is dead simple.*



Suppose you want to carry out a study using Likert-type scales? These are the ones that typically ask you to rate something on a scale that goes from highly positive at one end to highly negative at the other. Will you think much about the format – or will you simply do what you think best? Actually there is more to deciding on what format to use than you might think. How many scale points should you have – 5, 7, 9, 11 – or more? Do you need to label only the end points, or the ones in between as well? Is it wise to have a neutral point? Does it make a difference if the scales are administered on paper or electronically? Do participants respond in the same way to items presented vertically or horizontally? How about the responses from left-handers? And Arabic readers?

The literature on these matters is scattered across a range of psychology, marketing, research methods and computing journals. The problem here is that few investigators have made systematic studies of these variables, carefully teasing out those factors of importance in a series of enquiries. Most seem content to carry out a single study.

Nonetheless, it is possible to construct some guidelines. It seems sensible, for example, to keep to the same format throughout one's study. Some investigators give their respondents several questionnaires to complete in one go and some of them might be presented differently, which might be confusing, especially for children. It also seems useful, based on our current findings, to use questionnaires where both the positive ends of the scale and the highest values start from the left. Thus one might expect higher scores from scales that go.

This blog is:

Clear 10 9 8 7 6 5 4 3 2 1 0 Confusing

compared with scales that go:

This blog is:

Confusing 0 1 2 3 4 5 6 7 8 9 10 Clear

Furthermore, it is not wise to include both positively and negatively worded items in the same scale. What typically happens here, when this is done, is that the scores on one of these sets of items are 'reverse-scored' compared with the other. But this assumes that the meanings of the items are equivalent. But it is not necessarily so. There are often significant differences between the total scores obtained on the items that are scored negatively compared with the totals of those that are scored positively.

So far the effects of different layouts for Likert-type scales have typically been assessed using quantitative methods. However, following the current emphasis on how people think about and interpret questions, numbers and verbal quantifiers and qualifiers, it can also be of interest to ask participants to indicate what they are thinking about when they are completing items in a questionnaire. Different people frequently interpret the same items quite differently, especially if they come from different backgrounds. And if asked to verbalise their thoughts as they complete different items, people might become aware of some inconsistencies in their thinking. Consider, for instance, the following (unsolicited) comment from one

of the participants in one of our own studies:

“After I read your debrief... I went back and corrected my responses. Originally I had put 9 for every answer but, when I went back, I realised I had assumed “clear” was on the left (at 10) as opposed to “unclear”. I therefore corrected my responses”.

Other respondents in the same study, of course, may not have noticed such things, and thus introduced unwarranted variance into the general findings. There is more than meets the eye when constructing, completing, and interpreting Likert-type scales.

Note: This article gives the views of the author, and not the position of the Impact of Social Sciences blog, nor of the London School of Economics

Authors' note: Copies of papers expanding on these issues are available from James Hartley.

No related posts.