

How you can design an effective rating scale

Introduction

It's an old adage 'Rubbish in rubbish out' but it's true. Survey data is only as good as the question and the way it's asked. Many survey questions have rating scales such as Likert scales. If you are designing a questionnaire with rating scales you should then ask yourself three questions, which are:

1. How many scale points should the scale have?
2. Should I include a middle response option?
3. How should I label the response options?

First however, you need to remember:

1. It needs to be easy to understand what each scale point means
2. There should be a sufficient number of scale points to differentiate respondents from one another
3. The scale need to be reliable, that is respondents should give the same answer if asked again
4. The available responses should clearly link to what the scale is asking

How many scale points should the scale have?

The number of scale points to use depends on whether you want to rate something from positive to negative (bi-polar scale) or zero to positive (unipolar). For a bi-polar scale then you should go for a 7-pont scale which includes a middle or neutral point which should as an example be like this:

Extremely
satisfied

Moderately
satisfied

Slightly
satisfied

Neutral

Slightly
dissatisfied

Moderately
dissatisfied

Extremely
dissatisfied

For a unipolar scale go for a 5-point scale which as an example would look like this:

Extremely effective	Very effective	Moderately effective	Slightly effective	Not at all effective
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The point to remember is to enable the respondent to differentiate their answer as easily as possible. Providing too many points for example, 0-10, makes it more difficult for the respondent to place themselves on the scale. This is because 7 isn't so very different from 8 or 9 from 10.

Should I include a middle response option?

There is a tendency for researchers to believe that offering a middle alternative enables respondents to avoid taking a position. Research however, does show that when respondents are forced to make a choice they don't necessarily answer the question the same way as respondent opting to choose a side. It's therefore recommended that respondents should be given a middle alternative as forcing respondents to make a choice can create unwanted variance or bias in the data.(1)

How should I label the response options?

Some researchers prefer to provide their rating scale with only end-point labelled, others will label the midpoint, some will label using words and others numbers.

The point to remember is our aim is to make it as easy as possible for respondent to interpret the meaning of each scale. With this in mind, partially labelled scales are less likely to perform as well as fully labelled scales and that numbers should only be used for numeric scales. Research shows that fully labelled scales produce more reliable and valid data.(2)

References

1. Bishop GF. Experiments with the middle response alternative in survey questions. *Public Opinion Quarterly*, Volume 51, Issue 2, Summer 1987, Pages 220-232.
2. Krosnick JA et al. Comparison of Party Identification and Policy Preferences: The Impact of Survey Question Format. *American Journal of Political Science*, Vol 37, No 3, August 1993, Pages 941-964

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