

### *Quantitative Data Collection Instruments*

So you've decided you want to collect quantitative data. Now we have to determine how to best collect that information (which is referred to as your instrument). Please see the common instruments for quantitative research below.

#### **Surveys**

Surveys are a set of questions sent to participants (think: Google Form, Survey Monkey). If you are collecting quantitative data, these would be [close-ended questions](#). If you are developing your own survey, it is often a good idea to have 2-3 subject matter experts review your design.

- **Be cautious of your language**

##### **Bias**

Do you agree that education should be free?

##### **Prior Knowledge Needed**

Do you like our old logo or new logo better?

- **Survey fatigue**

If your survey is too long, participants will generally hit a place of fatigue. They will either just not take the survey or will not pay close attention when answering (which will skew your data). Ensure you are only asking the questions you **need** answered.

- **Survey flow**

Consider how you order your questions. They should be organized logically and not hop between topics.

- **Test Your Survey**

Test your survey with a couple of peers prior to sending it to your participants. Ensure you have adjusted any inconsistencies and fixed questions where you are not getting the answers you had anticipated or needed.

#### **Validated Assessments**

Validated assessments are survey-like instruments or protocols that have been through a rigorous development process and have been shown to have both reliability and validity in measuring a particular variable. These instruments are generally available in published, peer-reviewed papers, or are available for purchase.

##### ***For Example***

If you are interested in studying emotional intelligence in leaders, you may consider measuring that variable with a published, validated assessment like the IHHP Emotional Intelligence (EQ) Assessment (<https://www.ihhp.com/>). The best way to identify and select a pre-built assessment is to review peer-reviewed journal articles and identify the assessments they reference.



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**Observations**

Observations refer to when a researcher observes a phenomenon. They can be quantitative if your results are measurable, so think about the utilization of rulers, beakers, thermometers, etc.

**Experiments**

In an experiment, you would manipulate your independent variable(s) and determine how that would impact your dependent variable.

For example, if I wanted to test the effectiveness of a new teaching approach, I could have two sample groups of classes. One group would be taught with the traditional approach and one would be taught with the new approach. I could then determine if the approach had an impact on their overall grades.