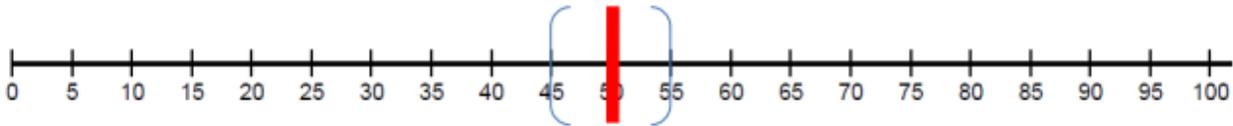


Error Ranges and Confidence Levels

What is an error range?

An “error range” is a range around a specific point within which we can be confident the true score lies. For example, given a score of 50% with a $\pm 5\%$ error range, we can say that if we surveyed the entire population (rather than just our sample) the score will likely be between 45% and 55%.



How is an error range calculated?

The formula for calculating the error range for a proportion at the 95% confidence level is as follows (with “n” = sample size):

$$error = \left(\frac{.5}{\sqrt{n}} \right) * 1.96$$

What is a confidence level?

A confidence level tells us how sure we can be that the “true score” lies within the error range. Relying on information from a sample (rather than measuring the entire population) will always lead to some degree of uncertainty. Confidence levels and error ranges allow us to quantify this uncertainty so that we may determine our level of trust in the results. Error ranges and confidence levels are always used in conjunction with one another.

How do I interpret my results given my error range and confidence level?

Revisiting our example from above, a score of 50% with an error range of $\pm 5\%$ at the 95% confidence level can be interpreted as follows: “We can be 95% certain that the true score lies between 45% and 55%”.