

SURVEY RESEARCH

- Standard Error of Sample Mean
 - Definition
 - Function of two factors
- Calculate sample size
- Calculate Standard Error of Sample Mean
- Calculate Confidence Interval (95% probability)
 - Normal Curve
 - [Distribution under the Normal Curve](#)
 - [Normal Distributions](#)
- Sample Designs
 - Non-probability
 - Convenience/Accidental
 - Purpose/Judgmental
 - Quota
 - Probability
 - Simple Random Sample
 - Random number table
 - [Slot machines and random number generators](#)
 - Excel: =RAND()
 - [Example](#)
 - [Sampling problems](#)
 - Systematic/Interval (“phone book”)
 - Randomly select the 1st sampling unit (“close your eyes”)
 - Select the remainder of the sampling units at a predetermined interval (every K th sampling unit). The interval (K) depends on the size of the population and the size of the sample ($K=N/n$). The probability of selecting each sampling unit is $1/K$. Much easier than a Simple Random Sample, but less preferred and less common.
 - Example: We want to take a sample of 100 UTA students. We have the UTA Student Phone Directory, with 100 pages. We “randomly” open the directory to a particular page and “randomly” select the 1st sampling unit. Say this 1st sampling unit is the 10th name from the top of the page. We then select the 10th name from the top of the page on each of the 100 pages of the Directory—for a sample of 100.
 - Cluster
 - Multi-stage, based on geographic divisions for all-but the last stage.
 - At each stage, randomly select a predetermined number of units (geographic divisions or individuals for the last stage).
 - Typically, begin by dividing the country into Statistical Areas (SMSAs, MSAs, CSAs, etc.). Randomly select a predetermined number of these units.
 - Divide these selected areas into smaller sub-divisions (Census Tracts, etc.). Randomly select a predetermined number of these units.
 - Finally, randomly select a predetermined number of individuals (the sampling units) from these last sub-divisions.
 - Avoids “one from north-eastern Maine, one from south-eastern Florida, one from south-western California, and one from north-western Washington.”
- [Stages of Survey Research](#)
 - Preparation—topic, hypotheses, methods, costs, etc.
 - Sampling

- Construct the instrument
 - Draft items
 - Design format
 - Pre-test
- Field work & administration
- Data processing and analysis
- Types of information collected: independent and dependent variables
- Questions
 - Open- or closed-ended
 - Wording—average vocabulary
 - Avoid bias—“leading” questions—“loaded” words
- Survey Administration—cost, response rate, control
 - Personal interview: cost (high—disadvantage), response rate (high—advantage), control (high—advantage), bias (high—reactions to an actual person)
 - Mail survey: cost (low—advantage), response rate (low—disadvantage—how to increase), control (low—disadvantage), bias (low—only interaction is with the printed survey)
 - Phone survey—a compromise between the advantages and disadvantages of personal interviews and mail surveys. Most typical. See web site for articles on technological obstacles.
 - [Challenges posed by cell phones](#)