Difference between research question and hypothesis:

* Research question is an interrogative statement.
* Hypothesis is a declarative statement.

Project Team

* Jakob Elkenberry
* Daniel Ferris
* Nickolas Solakis
* Malcolm Townes

Survey populations that are likely to trigger full IRB review:

* Children
* Incarcerated individuals

Developing Research Designs

* Accessible population is the portion of the target population that can be reached using given methods within a given timeframe.
* Sample size determined by power analysis, as a proportion of the population, or the standards of the discipline (e.g., samples at low as n=30 are often acceptable in psychology but in sociology often requires samples no less than n=200).
* Significance level is dependent on sample size.

Survey Instrument Preparation

* Needs assessment 🡪 policy evaluation or program evaluation
* Dr. Matsuo does NOT recommend using Amazon Mechanical Turk.
  + Respondents have become accustomed to the measurement scales typically used in survey questionnaires.
  + Some journals will not publish papers based on survey data collected using Amazon Mechanical Turk.

Class Project

* First assignment excluding survey questionnaire due by next week.
  + Additional group work time will be provided during class on Tuesday.
  + Assignment due Thursday, Sep. 19, 2019 by 5:00 PM
  + Email assignment to Dr. Matsuo.
* Pretest survey questionnaire.
  + Will be done within the class.
* Assignments
  + Dan and Nikolas to do additional.
  + Jakob to take the lead on writing.
  + Malcolm to support Jakob on writing.
    - Articulate the research question.
  + Dan to prepare Google Sheet to track literature.

Surveys

* Nonresponse still tells you something about the respondent and the issue addressed by the question.
* Contact SLU mailroom for services to distribute mail surveys.
  + SLU has a contract with a company for bulk mail of surveys.
  + SLU mailroom can prepare (design) business reply envelope.
* Handling missing cases (i.e., non-responses to survey)
  + Make the case for the representativeness of the sample.
  + Compare demographic characteristics of respondents and non-respondents.
  + Acknowledge the bias in the sample data.
  + Discuss non-response error.
* Handling missing data (i.e., non-responses to specific questions)
  + Impute the mean of the sample for the specific question.
  + Impute a value based upon statistical estimation.
  + Discuss patterns of missing data.
* Question should be written at the comprehension level of an eighth-grade student.

Sample sizes required for publication:

* Sociology typically requires a sample size of at least 100 respondents.
* Psychology typically allows sample sizes as small as 30 respondents.

Construct versus Concept

* Construct is measurable (per Dr. Matsuo)
* Concept is abstract idea (per Dr. Matsuo)
* NOTE: Other definitions are just the opposite
  + Volchok, E. (20015). Concepts and Constructs. Retrieved September 10, 2019 from <http://media.acc.qcc.cuny.edu/faculty/volchok/Measurement_Volchok/Measurement_Volchok3.html>
  + Constructs are notions that abstract ideas one cannot observe or measure.
  + Concepts are notions that one can observe (directly or indirectly) and measure.

Validity

* Measurements reflect the real meaning of the concept.
* Types
  + Face validity is when researchers agree on the meaning captured by a measurement.
  + Content validity is when range and degree of meaning is capture in the measurement.
  + Criterion validity (also called predictive validity) is when the measurement predicts performance or behavior of the concept being measured.
  + Construct validity is when the relationships among the constructs in a theory are reflected in the relationships among the variables used to operationalize the concept.
* Triangulation
  + Convergent validity is when different measurement instruments of the same concept produce similar results.
  + Discriminant validity is when different instruments meant to measure different concepts produce different results (i.e., don’t converge on the same thing).