Introduction to Research Design
The University of Texas at San Antonio

Most graduate students are required to conduct research to fulfill degree or coursework requirements. This workshop will address the basic concepts in designing research. You can use this information as a foundation for the specialized research paradigms of your discipline.

Research Design
A research design is a plan of action that details:
- The type of study being conducted.
- The setting the study will take place in.
- Relevant variables and parameters to be studied.
- Whether the variables are controlled or manipulated.

Elements of Scientific Study
- Observable Phenomena
- Hypothesis Generation and Testing
- Measurement of Phenomena
- Interpretation and Generalization
- Causation

Types of Research Designs
There are two basic types of research designs: qualitative and quantitative. Qualitative research compiles rich descriptive data that is not necessarily tested and subjected to statistical or mathematical standards. Quantitative research analyzes data by using statistical and mathematical means.

Types of Research Methods
**Qualitative:** The main objective of this method is to observe. This method includes:
- Descriptive Designs (Case Study, Naturalistic Observation, Ethnographies, Survey)

**Quantitative:** The two main objectives of this method are to compare and predict or establish causation. This method includes:
- Semi-Experimental
- Correlational Designs
- Experimental Designs

**Reviewing Other’s Research:** This method can be either Qualitative (literature review) or Quantitative (meta-analysis). The main objective of this method is to explain.

**Questions to Guide your Design**
As you begin your research journey, use these questions to guide the design of your research:
- What theory guides your research in your field? What drives your questions about this topic?
- Is your question answerable?
- How much are you familiar with the literature in this area/field?
- What are the key questions in this field?
- Are there gaps in research? Are there possible variables left unexamined?
- Would addressing this topic have relevant implications? How is this research important?
- Is your questions measurable? What methods have previous researchers used to address similar research questions?
- Do these designs fit your objective? How can your design be changed to better address your question?
- What are your long-term goals for research in your area or field? How can these goals be broken down into manageable, researchable chunks?
- What resources will you need to test your research design?

**Resources and Services at UTSA**
The following services are available for you to use as you engage in the research process:
- Advisors and professors.
- TRC: [http://utsa.edu/trcss/](http://utsa.edu/trcss/)
- Writing Center: [http://utsa.edu/twc/](http://utsa.edu/twc/)
- Q-Lab: [http://www.utsa.edu/trcss/tutoring/schedule1604.html](http://www.utsa.edu/trcss/tutoring/schedule1604.html)
- Library: [http://lib.utsa.edu/](http://lib.utsa.edu/)
- Research Computer Lab-COEHD-RGDO at MB 0.330