

## ASSIGNMENT THREE

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# PHASE 2; INTERPRETING THE LITERARY SURVEY AND MOVING TO THE DESIGN OF EXPERIMENTS



GOALS FOR THIS  
WEEK

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**BUILDING ON THE  
LITERATURE SURVEY**

## WHAT YOU'VE DONE SO FAR

- ▶ Organized into a group
- ▶ Worked with your professor to develop a topic
- ▶ Explored various primary sources
- ▶ Potential he explored a data collection tool, such as a questionnaire

## WHAT IS ON DECK FOR TODAY

- ▶ Summarize the research you have done thus far
- ▶ Establish categories of historical research
- ▶ Draw a venn diagram to represent where various research has been done, and integrates
- ▶ Use your personal experience as a guide to Pilate new categories within the research

## IMPORTANT NOTE

- ▶ Without a literature survey, no research can take place
- ▶ Before I can meet with you, you must have read five academic papers per team member, and
- ▶ Possess a spreadsheet where each paper is summarized in a short summary, exactly as we did in the first paper
- ▶ When you had this, call me over and we can take the next step





DESIGN OF EXPERIMENTS

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**CREATING YOUR DATA  
COLLECTION TOOL**



## CREATING YOUR DATA COLLECTION TOOL

- ▶ Now that you understand the landscape of prior research, you can establish a direction for inquiry
- ▶ The spirit of the design of experiments is:
- ▶ How can we collect enough variables to illustrate a conclusion?
- ▶ What data can we Calac to explore the topic without bias?
- ▶ If the best we can do is simply explore the topic, how much data do we need?



# WHAT KINDS OF DATA DO YOU NEED?

- ▶ Summer search must explore topic without the prior knowledge. These will demand for interview subjects
- ▶ When you interview a person, you should simply ask for them to tell a story related to the topic
- ▶ Collect data from a small number of people, then look for categories, patterns and other ways to group their experiences
- ▶ Look for important contrasts between their stories
- ▶ This is called qualitative data and it exist without statistics, initially.



# QUANTITATIVE VERSUS QUALITATIVE DATA

- ▶ If stories yield qualitative data, what if you do not need stories from interviewees?
- ▶ Some groups will know what data they wish to collect, and will use a questionnaire to gather data
- ▶ This is called quantitative data, and it creates statistics immediately
- ▶ Robust statistics include averages, medians, mean, some, minimum, maximum, and the count of data present.
- ▶ Rub a statistics yield percentages, and make good graphs such as you have been making

# THE STRENGTHS OF QUALITATIVE DATA

- ▶ When you do new research, don't be surprised if no one has written about your topic before
- ▶ This is actually the best opportunity for you
- ▶ If you look at a topic no one has discussed before, you will be applauded! This is why I'm encouraging you to do research on things that have not been discussed before
- ▶ But new topics usually demand for us to interview people who can provide us with information

## ANALYZING QUALITATIVE DATA CONCEPTUALLY

- ▶ Stories from people who know something can be broken apart into categories, themes and big ideas
- ▶ Initially, we can't do statistics on concepts, because statistics needs raw data to serve as facts
- ▶ Conceptual divisions within your topic are extremely viable, however
- ▶ Let's talk about an example

# YOUR GOALS FOR THIS WEEK

- ▶ Produce a design of experiments that is either qualitative or quantitative
- ▶ Design a research tool that will create categories and other summarizations within the data
- ▶ Remember that your audience needs complex data to be digested into simple messages
- ▶ How can you design a data collection tool that will deliver simple, coherent messages?

