Experimentation
What types of experiments are done

- true experiments
- quasi experiments
- time series
- non-experimental (case studies, etc)
What stimulus materials are used

• actual content - what is currently being used in a course
  – high external validity
• realistic content - factually correct and potentially useful
  – availability, new technologies
• contrived content - fictitious material, little relevance or interest to students
What experimental settings are used

- actual settings
  - most preferred
- realistic settings
  - labs
- contrived
What goes with what

- which materials with which design
- realistic materials and true experiments
- actual materials and quasi-experiments
- classroom settings and quasi-experiments
Contemporary issues

• Balancing internal and external validity
  – tight control, fewer actual settings

• Replication of tests and measures
Typical question

- to what end does the positioning of text captions on the screen affect program comprehensiveness for deaf viewers

Problems
- text capture is not native English for deaf students

Background
- Some experimental support for text captions at the bottom of the screen
More on the problem

- Null Hypothesis
  - There is no statistical differences in X based on bottom or variable placement of text

- Design under case study

- Design under pseudo experiment - one group, pre and post test

- Design under static group comparison

- Design under true experiment, pretest, posttest, control
Validity checks