

Questions?

Being fair with participants

- Testing is a distressing experience
 - Pressure to perform
 - Feeling of inadequacy
 - Looking like a fool in front of your peers, your boss,...
- Seek approval from the Institutional Review Board
<http://www.umresearch.umd.edu/IRB/>
- Follow human participant protocols
 - Individual test results will be kept confidential
 - Users can stop the test at any time
 - Participants are aware (and understand) the monitoring technique
 - Their performance will have not direct implication on their life
 - Records will be made anonymous

Conducting the experiment

- Before the experiment
 - Have participants read and sign the consent form
 - Explain the goal of the experiment
 - *In a way accessible to users*
 - *Be careful about the demand characteristic*
 - *Answer questions*
- During the experiment
 - Stay neutral
 - *Never indicate displeasure with participants performance*
- After the experiment
 - Debrief participants
 - *Inform participants about the goal of the experiment*
 - Answer any questions they have

Managing subjects

- Don't waste participants time
 - Use pilot tests to debug experiments, questionnaires, etc...
 - Have everything ready before participants show up
- Make participants comfortable
 - Keep a relaxed atmosphere
 - Allow for breaks
 - Pace tasks correctly
 - Stop the test if it becomes too unpleasant

Being fair with Science

- Dirty tricks
 - Fabricating
 - Falsifying
- Questionable tricks
 - Poor experimental design
 - Poor data collection
 - Poor data analysis
 - Misleading data presentation
- Neat tricks
 - Focusing on what conveys the most information
 - *But be sure to do your homework!*
 - Reorganizing
 - Reformulating

Between or Within subject design?

- Possible problems
 - Different participant backgrounds
 - Irreversible effects
 - Non-linear confounding variable
 - Symmetric skill transfer
 - Asymmetric skill transfer
 - Range effect
- What to do about them?
 - Change design
 - Counterbalancing
 - Matched-group design

Experimental designs

- Single Variable
 - 2-levels
 - Multiple levels
- Multi-variables
 - Factorial design
 - Converging-series designs
- Other approaches
 - Non-experimental designs
 - Quasi-experimental designs
 - Interrupted time-series designs
 - Baseline design
 - Surveys