

Data and Chance notes
Chapters 5 and 6

Below are terms from the readings. Write definitions and examples in the spaces provided. Answer the questions where indicated.

Chapter 5: Experiments, good and bad

Variable:

Response variable:

Explanatory variable:

Lurking variable:

Confounded variables:

Give an example of an experiment (make it up). Describe its response variable, explanatory variable, and a possible lurking variable.

A Nova Southeastern study was described in the book. They compared the learning of students in an online course with that of a regular classroom. Since they did not perform an experiment, their results are impaired by lurking (and confounded) variables. Discuss this.

Placebo:

Placebo effect:

A randomized comparative experiment can help deal with confounded variables. There are three main parts to this, randomness, a control group, and plenty of subjects. Discuss this.

Give an example of a randomized comparative experiment.

Statistically significant:

Give an example of a study we have found to be statistically significant. State the result in layman's terms.

Chapter 6: Experiments in the real world

The book has some good examples of how lurking variables can play a part in an experiment's results. Discuss one.

Blind and double blind:

Experiments are also plagued by nonadherers, dropouts, and refusals. Give quick definitions of each.

Overgeneralizing a result is common and often troublesome. Discuss an example from the book or make your own up.