

Quantitative Data 101: A Refresher

Quantitative methods use numerical data to quantify and understand specific elements of the environment including student attitudes, understanding, and behavior. This data may be used to produce descriptive or inferential statistics. This session will first focus on the former, then shift to briefly describe three basic, but helpful statistics.

Session attendees will learn how to:

- name and identify different types of variables.
- understand the difference and calculate between mean, median, and mode.
- produce simple and accurate graphs of descriptive data.
- identify uses for chi-squared, correlation, and t-test analyses.

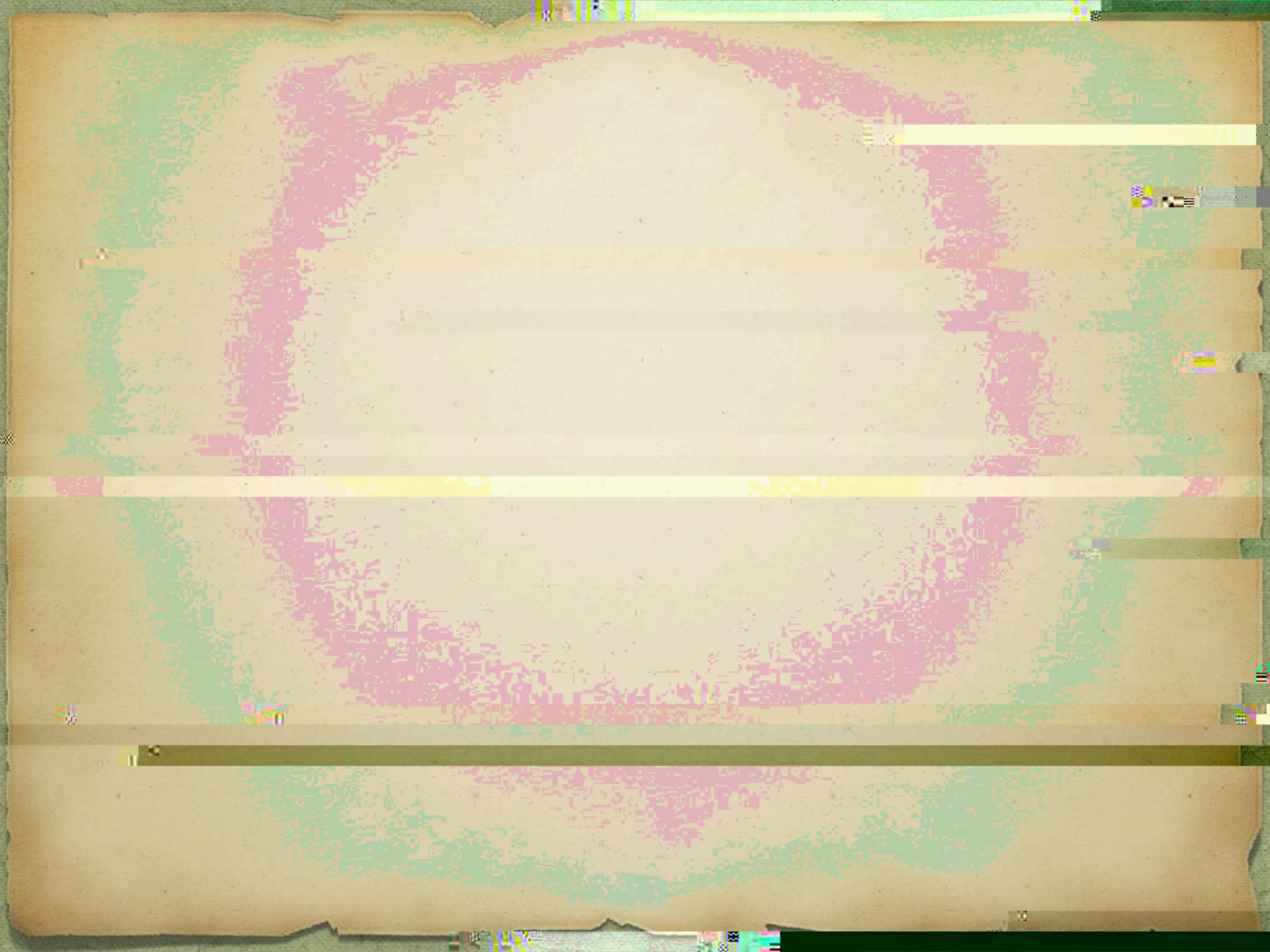
➤ Nominal Variables



Describing Variables

- **Independent Variables:** Also called attribute or descriptor variables, these variables identify characteristics that do not vary within group.
- **Dependent Variable:** Also called the criterion or

Let's Review



Chi-Squared Test

- Assesses the likelihood that differences between what was observed and what was expected are by chance alone or by some other factor.

| Average Floor Program Attendance | Attended | Not Attended | |
|----------------------------------|----------|--------------|----|
| My Hall | 18 | 7 | 25 |
| Other Halls | 42 | 33 | 75 |
| | 60 | 40 | |

The χ^2 -test

2

The TQA

A Three Question Assessment

- What ideas did this presentation generate for you?
- Did you learn something today that might help you perform your job better.? Please describe.
- What could be changed about this presentation to make it more helpful or effective?

References

- Dilman, D., Smyth, J., & Christian, L. (2009). (3rd ed.). Hoboken, NJ: John Wiley & Sons.
- Henning, G. W. & Roberts, D. (2016). *Handbook of self-leadership*. Sterling, VA: Stylus Publishing.
- Spector, P. E. (1992). *Summated rating scale: An introduction*. Series: *Measurement in human resources management*. Sage Publications.