

INTERPRETING FINDINGS

ANALYZING AND UNDERSTANDING DATA
FOR PROGRAM EVALUATION

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Heritage University

Spring 2026
SOWK 460w



Image by Minkoku II - The Blind Men and the Elephant via [Wikimedia](#)

THE BLIND MEN AND THE ELEPHANT

BY JOHN G. SAXE (READ BY TOM O'BEDLAM)

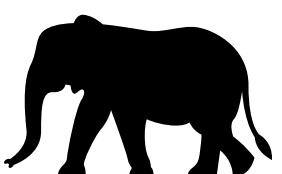
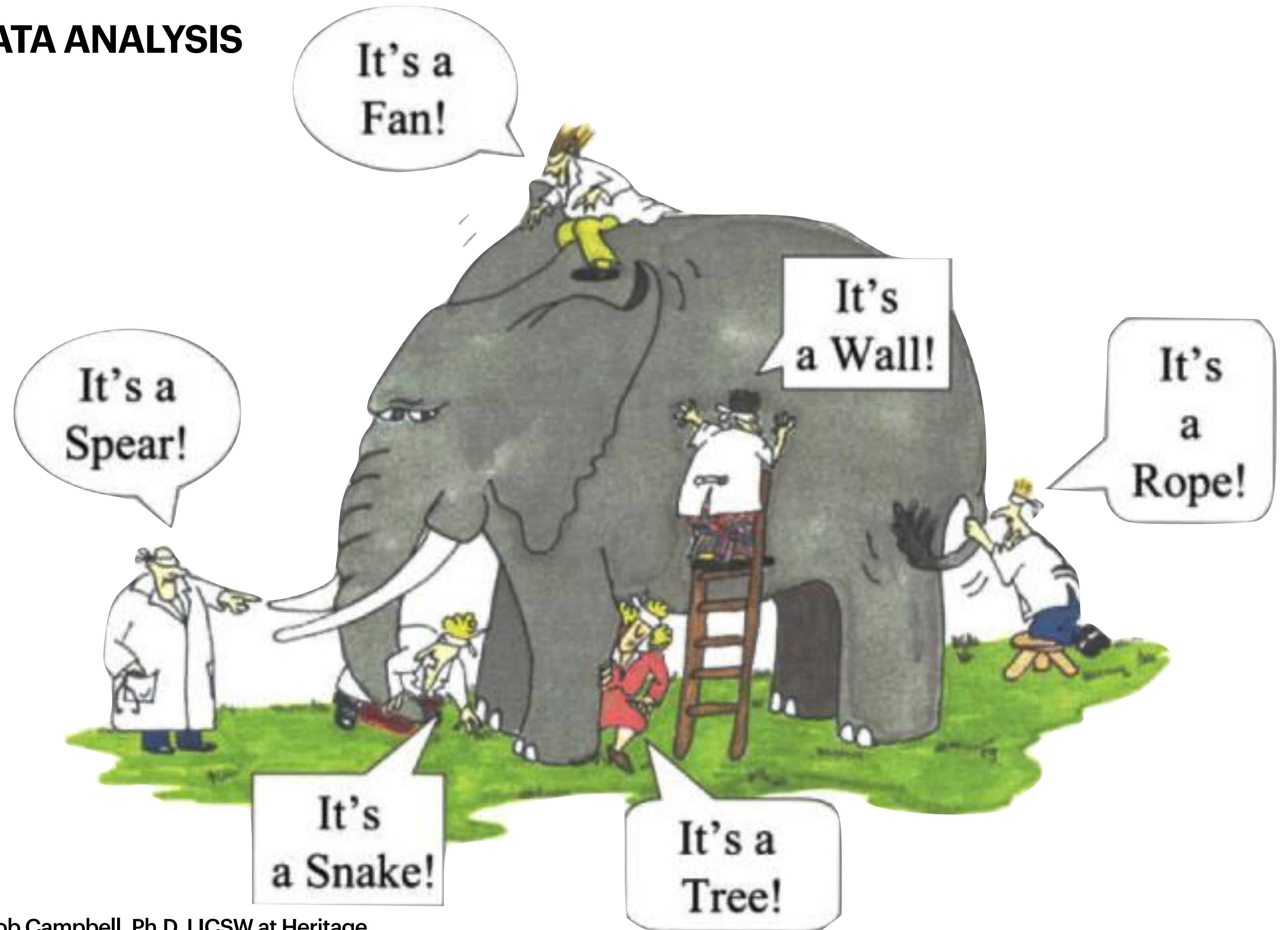
[HTTPS://YOUTU.BE/BJVbQEFNXIW](https://youtu.be/BJVbQEFNXIW)



THE BLIND MEN AND THE ELEPHANT

A PARABLE AND CONNECTION WITH DATA ANALYSIS

They all all touched different parts of the elephant and believed that they were



PLAN FOR WEEK 13

AGENDA

What is the purpose of data analysis

Scales of measurement

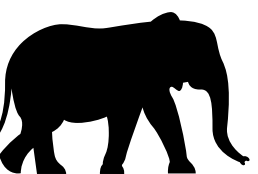
Types of calculation

Practical application of interpreting findings

How we implement it for program evaluation

LEARNING OBJECTIVES

- Describe methods used to understand and interpret data.
- Apply principles of effective data visualization to represent data.
- Create charts using real data to practice presenting information.



PURPOSE OF DATA ANALYSIS

WHY DO WE DO THIS?

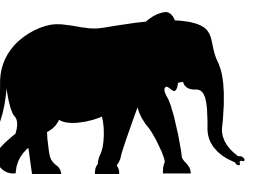
DESCRIBE AND SUMMARIZE THE DATA

IDENTIFY RELATIONSHIPS BETWEEN VARIABLES

COMPARE VARIABLES

IDENTIFY THE DIFFERENCE BETWEEN VARIABLES

FORECAST OUTCOMES



SCALES OF MEASUREMENT

Data can be classified into a non-numerical or named categories, and the order in which these categories can be written or asked is arbitrary.

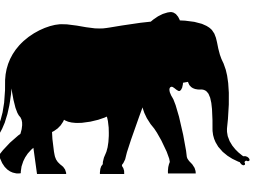
NOMINAL
SCALE

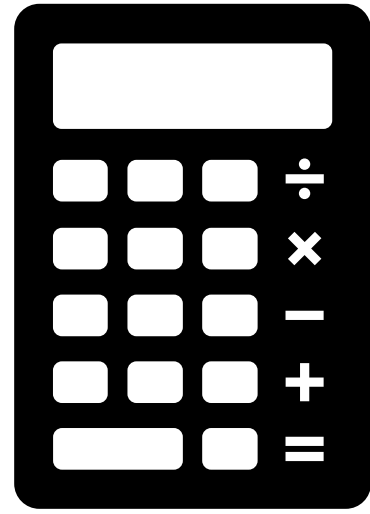
The data can be classified into non-numerical or named categories an inherent order exists among the response categories. Ordinal scales are seen in questions that call for ratings of quality (for example, very good, good, fair, poor, very poor) and agreement (for example, strongly agree, agree, disagree, strongly disagree).

ORDINAL
SCALE

Where numbers represent the possible response categories there is a natural ranking of the categories zero on the scale has meaning there is a quantifiable difference within categories and between consecutive categories.

NUMERICAL
SCALE





TYPES OF CALCULATION

Univariate Statistics

- Count (frequencies, N and n)
- Percentage
- Range
- Mean (average)
- Median (middle number)
- Mode (number of times)
- Standard deviation (amount of change)

Bivariate Analysis

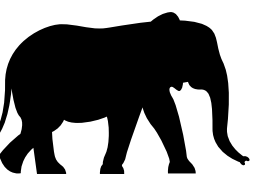
- Coefficient of correlation (strength and direction of relationship)
- Statistical significance (likelihood result is not chance)
- t -test (compare two group means)
- ANOVA (One-way Analysis of Variance - to compare means across groups)
- Effect Size (Magnitude of difference)

Multiple Regression (predict outcome from variables)

Factor Analysis (identify variable groupings)

Analysis of Categorical (Nominal) Variables

- Chi-Square Analysis (test association between categories)
- Cross tabulation (compare category frequencies)
- Logistical regression (predict binary outcomes)
- Odds ratio (compare likelihoods between groups)



TYPES OF TRIANGULATION

(Thurmond, 2001)

INCREASING CONFIDENCE IN RESEARCH DATA, CREATING INNOVATIVE WAYS OF UNDERSTANDING A PHENOMENON, REVEALING UNIQUE FINDINGS, CHALLENGING OR INTEGRATING THEORIES, AND PROVIDING A CLEARER UNDERSTANDING OF THE PROBLEM. (P 254)

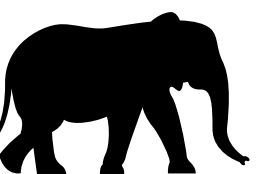
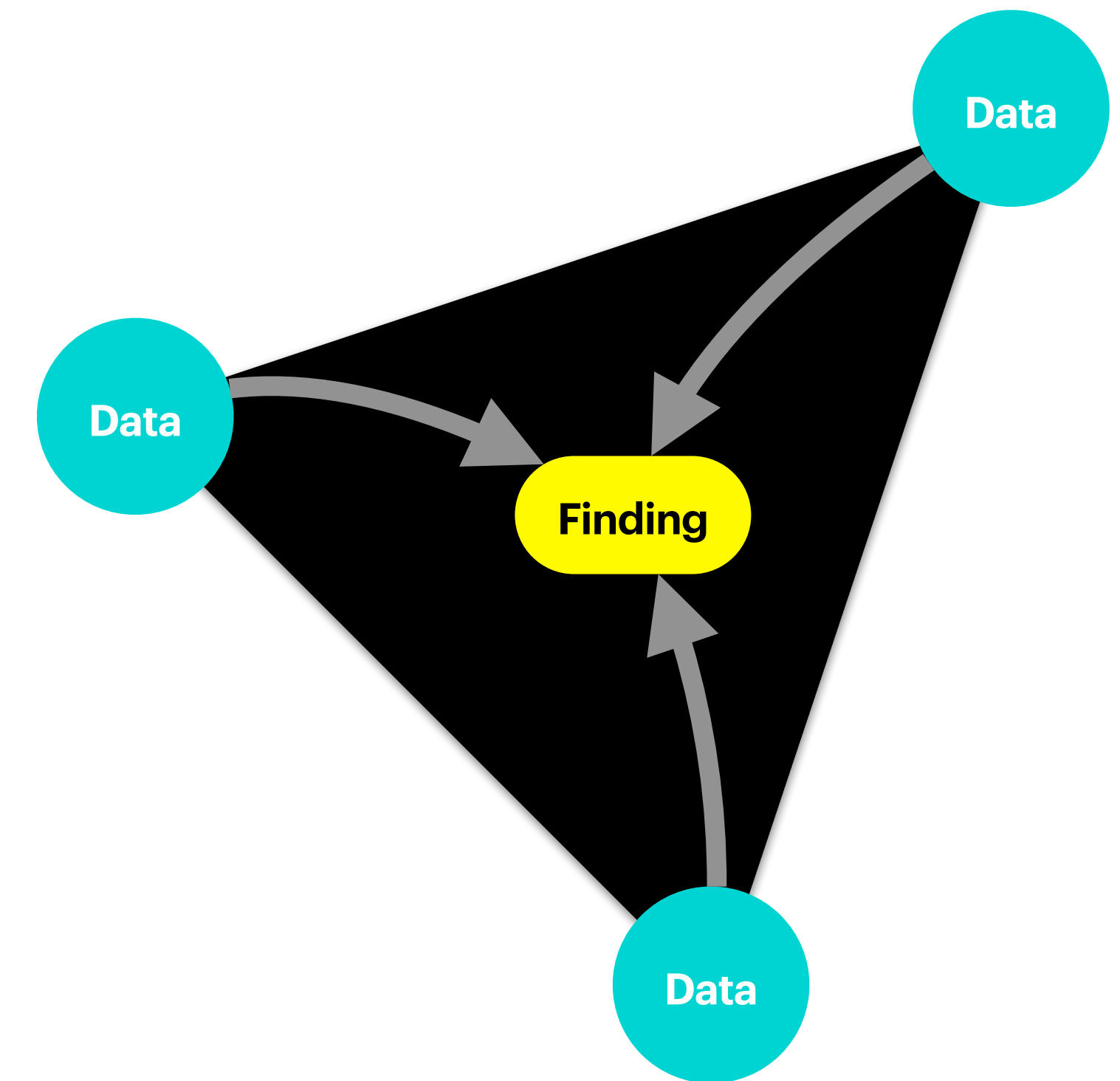
Data Source Time, space, and person

Investigator Multiple researchers

Methodological Using multi-methods in investigation

Theoretical Using multiple theories or hypotheses

Data-Analysis Two or more methods of analyzing data



PRINCIPLES OF EFFECTIVE DATA VISUALIZATION

(Midway, 2020)

Use the correct geometry;
consider showing the data



Diagram first,
focus on message



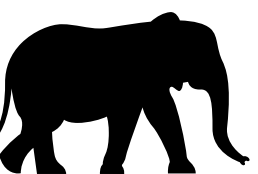
Adopt the best
software for your needs



Figure design

Figure making

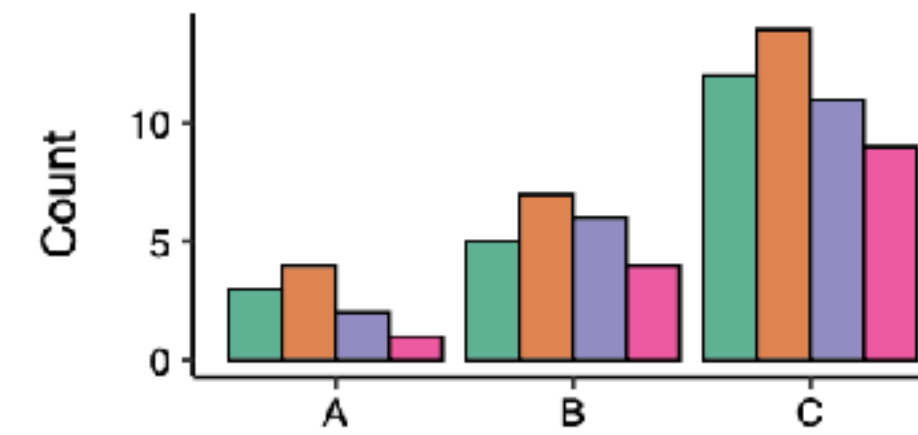
Figure review



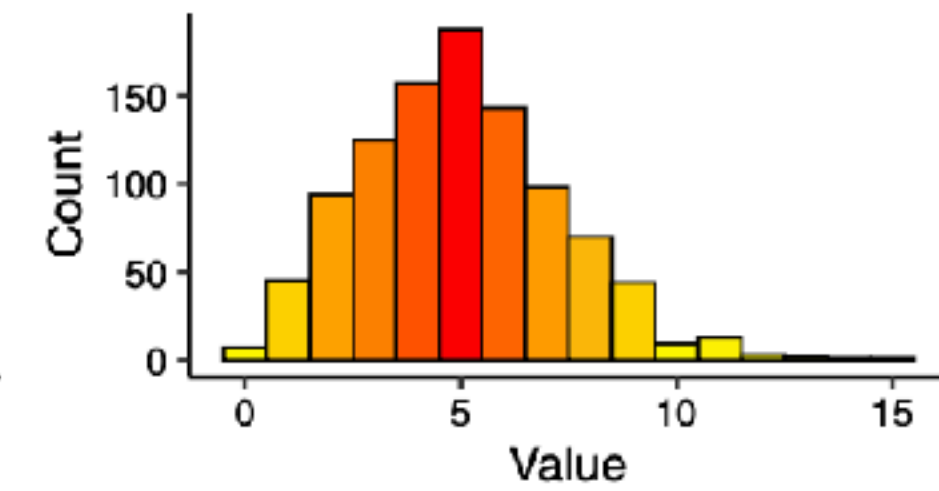
PRINCIPLES OF EFFECTIVE DATA VISUALIZATION

(Midway, 2020)

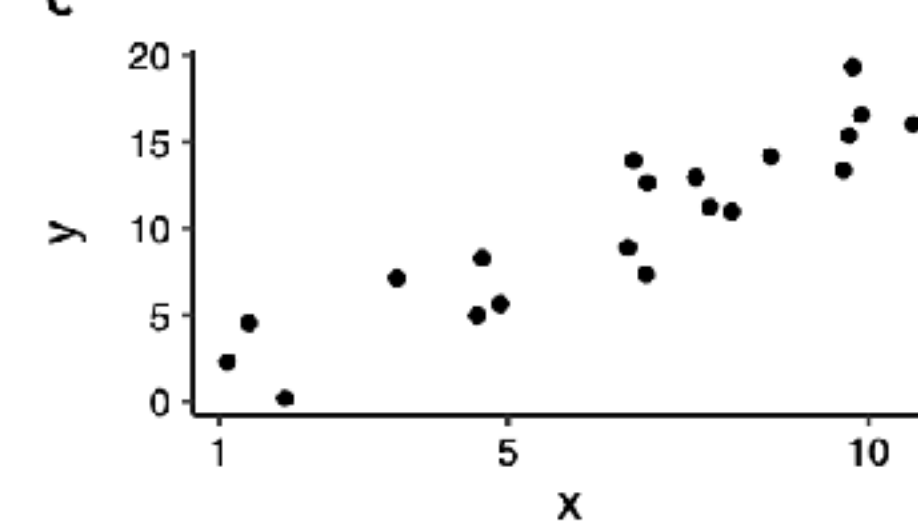
A Bar Chart



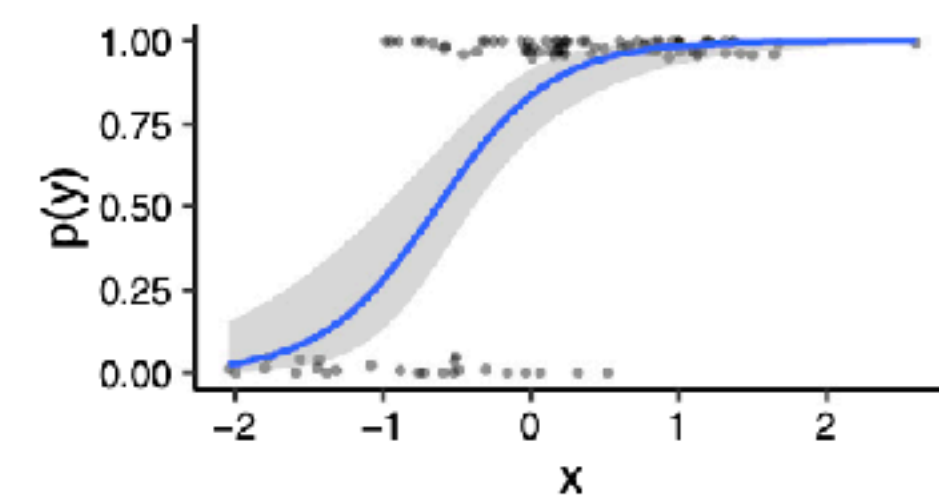
B Histogram



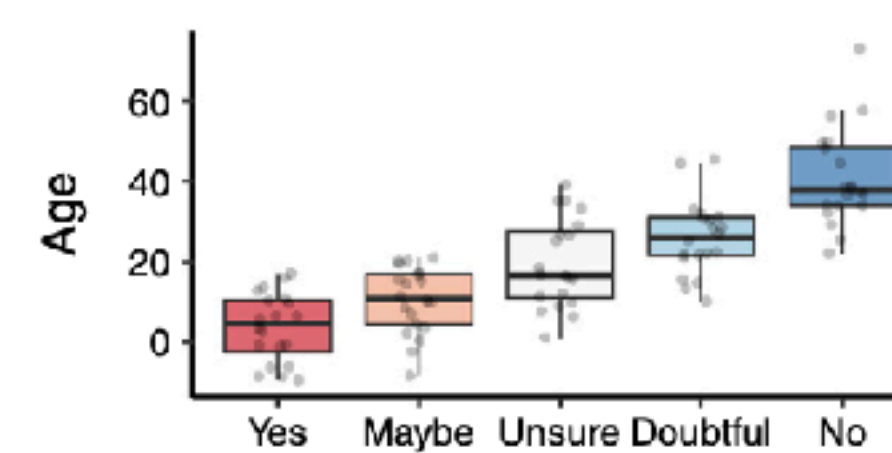
C Scatter Plot



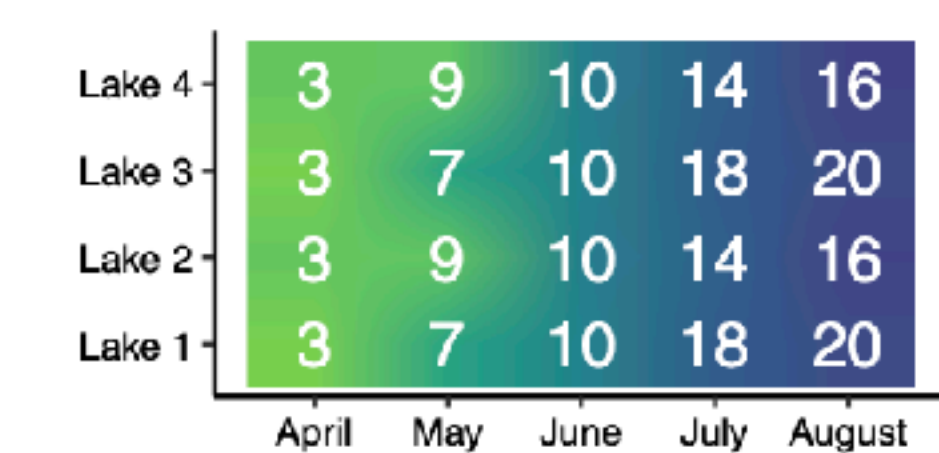
D logistic regression curve



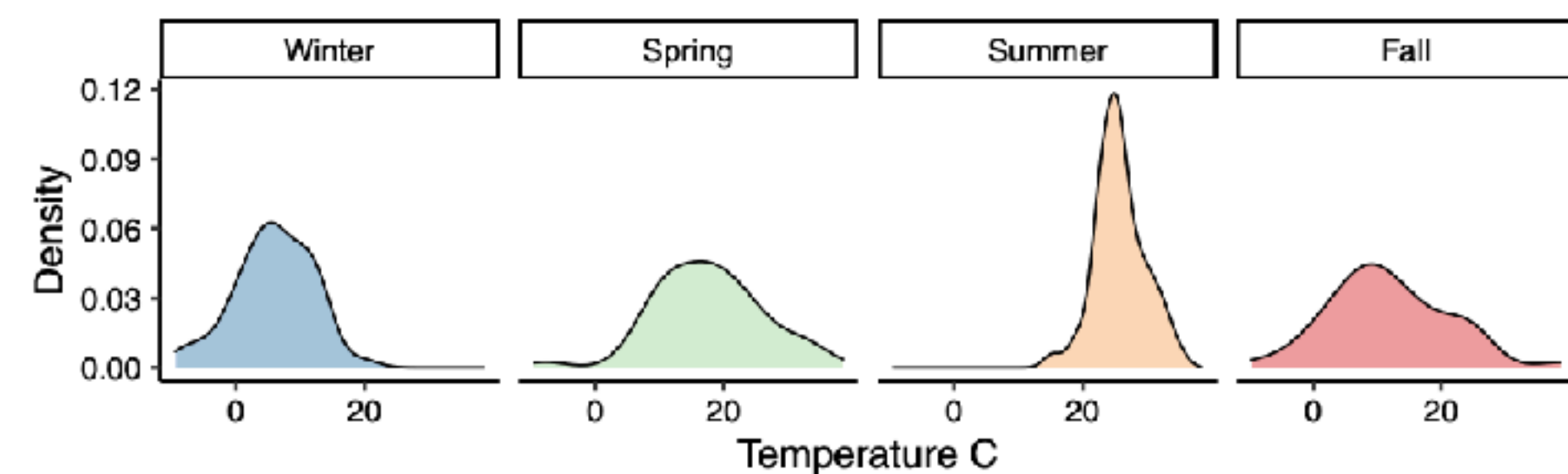
E Boxplot



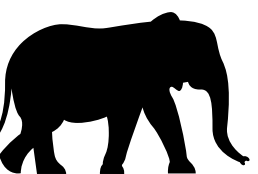
F Heatmap



G Violin Plot



Use the correct geometry; consider showing the data



PRINCIPLES OF EFFECTIVE DATA VISUALIZATION

(Midway, 2020)

Consider an infographic



Distinguish models from data



Include any relevant metric of uncertainty



Use the correct geometry; consider showing the data



Diagram first, focus on message



Figure design

Figure making

Figure review



Get an independent figure review



Include a detailed, standalone caption



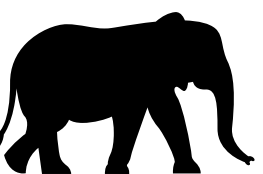
Use small multiples (if appropriate)



Use an effective color scheme



Adopt the best software for your needs



PRESENTATION PLANNING

**FLYER AGREEMENT
LIGHT REFRESHMENTS**



**Heritage University
BASW Presentations
for SOWK 460w**

May 4, 2026
5:30 to 8:00 PM

**Heritage University in Kennewick
Room 4204**
333 W. Canal Dr.
Kennewick WA 99336

We extend a special invitation to you to join our Tri-Cities campus social work seniors as they unveil the results of their community-based program evaluations. Light refreshments will be provided.

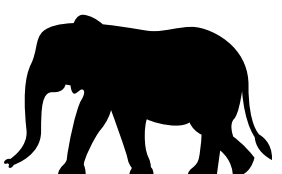
Engaging in practice-informed research is a key competency for social workers. For our BASW students, the first semester of their senior year includes a research methods class, and the spring semester includes a class focused on learning to engage in program evaluation.

The class is structured so student groups can administer a program evaluation at their practicum

placements. They are engaging in real-world application of this evaluative skill at some of the following agencies:

- Comprehensive Health Care Jail Services
- Kadlec Integrative Behavioral Health Program
- My Friends Place, Homeless Teen Shelter
- Sparkle Initiative

Topics include staff sentiment, employee burnout, and program implementation. We are looking for members of the Heritage University community and agency stakeholders to join us.



CLASS ACTIVITY

Use the survey created
week six and have each
individual take the survey.

MAKING INTERPRETING FINDINGS PRACTICAL

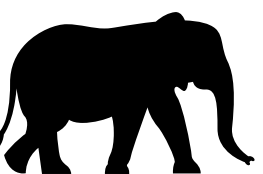
BASW QUALITY

ASSURANCE SURVEY

2025 SPRING SOWK 460W



<https://forms.office.com/r/VTmJUMY4iE>



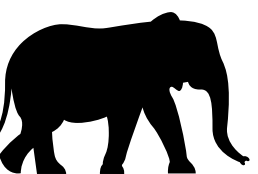
SMALL GROUP ACTIVITY

As small groups, come up with how you would want to present some of the data collected to your peers. What are some of the insights you found?

MAKING INTERPRETING FINDINGS PRACTICAL

2026 SPRING SOWK 460W

BASW QUALITY ASSURANCE SURVEY



SO WHERE DO WE GO FROM HERE?

What kind of data have you collected

How are you analyzing it

Technical support

Time to work in your groups

