



Interpreting Data in 5 Steps

Learning from Countries with the Most Vacation Days

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Workshop Outcomes

- Learn basic steps to understanding and interpreting data
- Learn where to find data about ACC students

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Protecting Student Data

- Family Educational Rights and Privacy Act (FERPA)
- Be extremely cautious about releasing data that could lead to the identification of individual students.

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Data Analysis Exercise – Part 1

On holiday: Countries with the most vacation days

- Read the USA Today article
- Discuss the article with your team and complete the worksheet together
- Appoint a team reporter to record your answers

<http://www.usatoday.com/story/money/business/2013/06/08/countries-most-vacation-days/2400193/>

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Reliability and Validity

- Reliability

- Consistency over time, measures, and raters

EXAMPLES:

Measuring shoe size

Measuring unemployment

- <https://www.census.gov/hhes/www/laborfor/laborguidance092209.html>
- <http://www.ebay.com/gds/The-Foolproof-Way-to-Finding-Your-True-Shoe-Size-/1000000177630037/g.html>

- Validity

- Representative of content, ability to predict other phenomena, or correlated with other measures of same thing

EXAMPLES:

Predicting IQ with shoe size; Predicting height with shoe size

- <http://www.quora.com/Is-GDP-a-good-measure-of-economic-growth-Why-or-why-not>

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Interpreting Data Cautiously

- In an example IPEDS report, the graduation rate is for First-Time-in-College, Full-Time, Degree- or Certificate-Seeking students (N=2,034), completing a degree or certificate within 150% of the “normal time to completion” (N=121).
- In an example OIEA TIPS report, the graduation rate is for First-Time-in-College students (N=5,903), completing a degree or certificate within 3 years of enrollment (N=132).

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Conclusions from Team Analysis?

On holiday: Countries with the most vacation days

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What relevant factors were not mentioned in the research article?

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Qualitative vs. Quantitative Methods

- **Qualitative Research**
 - To understanding the nature of human behavior and attitudes
 - To identify and explore issues in depth
- **Quantitative Research**
 - To measure behavior and attitudes
 - To describe issues in numeric terms
- ***Qualitative Research and Quantitative Research ARE different.***
 - However, they complement each other:
 - Qualitative research may provide insights to inform a quantitative study
 - Quantitative research may be used to further investigate findings from a qualitative study

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Qualitative vs. Quantitative Methods

- **Qualitative Research**
 - **METHODS:** Individual interviews; focus group interviews; participant observation; respondent diaries (various media); surveys with open-ended items; historical analysis of records and document reviews; film, video, photo documentation of events
 - **PROS & CONS:** more time consuming, expensive; more opportunities to introduce bias; ability to delve deeper.
- **Quantitative Research**
 - **METHODS:** Numeric measures, counts, statistical analyses, time, distance, amount, ratings, experiments, correlation analyses; comparisons of data across time; measurement of changes in phenomena
 - **PROS & CONS:** more likely to be generalizable to population studied; typically involves more study participants.

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Descriptive and Inferential Statistics

- Descriptive statistics are comprised of measures that describe various characteristics of a population.
 - Examples: movie ratings on sites such as Rotten Tomatoes, number of inches the Lake Travis water level has risen each day, etc.
- Inferential statistics are comprised of measures from a representative sample that are used to make generalizations regarding the population from which the sample was obtained.
 - Examples: polls of thousands of people to determine how the nation feels about the President, survey of a select group of individuals purchasing items to determine trends of all purchasers, etc.

*NOTE: Differences observed on a measure may or may not be **statistically significant** (meaning that the differences are not due to chance alone). However, they may have **practical significance**.*

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What assumptions are being made by authors of the research article?

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Data Analysis Exercise – Part 2

On holiday: Countries with the most vacation days

- With your team, create a graphic representation of the data that is most useful.

<http://www.usatoday.com/story/money/business/2013/06/08/countries-most-vacation-days/2400193/>

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Where to Find Student Data at ACC

TIPS - The Information Portal System (OIEA)

<http://www.austincc.edu/tips/>

- Course Progression Report
- Grade Distribution Report
- Time to Completion Report (FTIC)
- Transfer Report (FTIC)
- Withdrawal Report – General
- Student Listing

Data & Reports (OIEA)

<http://www.austincc.edu/oiepub/pubs/index.htm?>

- ACC Fact Book
- Achieving the Dream Longitudinal Report (FTIC Students)
- Student Success Outcomes Report 2015
- Community College Survey of Student Engagement (CCSSE)

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Summing it up

- Tools to analyze data
 - Five Steps to Interpreting Data
 - Understanding Data Analysis worksheet
 - Key research terms and definitions
- Sources of student data at ACC

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Thank you for participating in this workshop!

- For more information on interpreting or obtaining data, please contact us!



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