Context in Assessment Literacy

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Reidy Interactive Lecture Series

Strand 1, Assessment Literacy Framework – Round 1

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Introduction

- PhD student in Measurement & Statistics

- 10 years of research experience

- Dissertation Topic: Understanding math and science motivation in relation to STEM outcomes using both frequentist and Bayesian analysis methods in an SEM framework.

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Overview

- Context plays a critical role in determining the specific testing, measurement, and data use knowledge and skills various stakeholders need to be assessment literate.

- Key stakeholders such as teachers, administrators, and policy makers face different questions which require different sets of knowledge and skills

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Objectives

- Provide examples to distinguish between the fundamental knowledge and skills classified in our three dimensions of assessment literacy

  – Testing Literacy

  – Measurement Literacy

  – Data Literacy

- Discuss a scenario in which teachers, administrators, and policy makers need to apply assessment knowledge and skills to answer a critical question.

- Generate additional examples of questions faced and skills needed by those and other stakeholders.

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Testing Literacy

- Selecting the right type of test for the intended purpose

- Knowing what information you get from different types of test questions

- Item writing principles

- Determining appropriate test administration procedures

- Scoring and evaluating responses

- Interpreting test scores – understanding what a score means or where it came from

- Understanding test content - Producing or evaluating a test blueprint

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Solve for x and y

$$3x + 6y = 1{,}200$$
$$x + y = 300$$

Solve for x and y
$$3x + 6y = 1{,}200$$
$$x + y = 300$$

A. $x = 75, y = 175$
B. $x = 100, y = 200$
C. $x = 150, y = 150$
D. $x = 200, y = 100$

The fall play at Marion Middle School was *A Tisket, A Tasket, A Basket of Deplorables*, by playright Al Webber. Tickets cost $6 for adults and $3 for students. The school sold 300 tickets and raised $1,200. How many adult tickets and how many student tickets were sold?
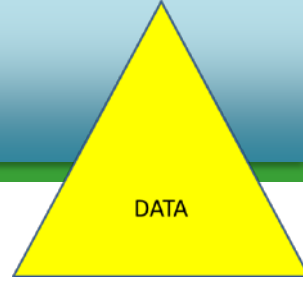
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MEASUREMENT

Appreciating Uncertainty
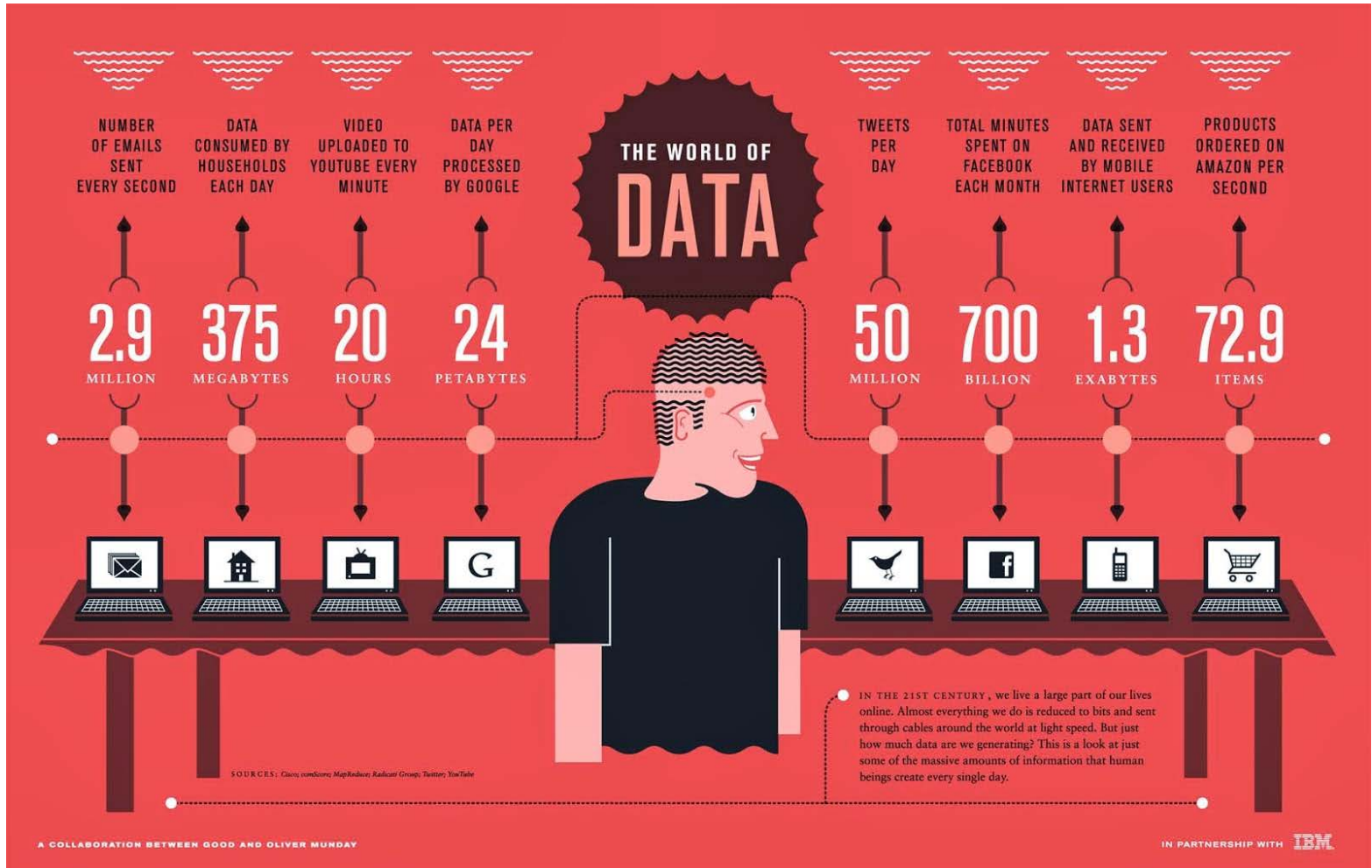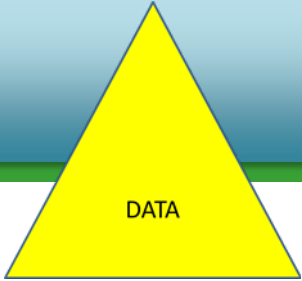
Measurement Literacy

- Reliability

- Standard Error of Measurement

- Sampling and sample size

- Generalizability

- Multiple Measures

- Correlation and Causation

Data Literacy

- Organizing and manipulating data

- Combining data from multiple sources

- Dealing with incomplete and missing data

- Understanding that there are different types of data

- Understanding the properties of different types of data

- Understanding how data were collected

- Communicating data accurately and effectively

- Protecting data appropriately

DATA

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Data Literacy

Example – What skills are needed?

Keeping students on track for college and career readiness

Policy Makers: How do we set achievement standards to ensure elementary and grade school students are on track for college and career readiness after high school?

District Administrators: How do we evaluate a remedial program designed to catch up students who are not on track?

Teachers: How do we interpret student growth scores to evaluate and improve instruction?

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Other examples?

- What are some additional examples in which stakeholders use information from assessment to inform decisions?

- What knowledge and skills are needed?

For more information:

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