Visualizing Equity: Exploring User-Friendly Data Displays

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Bitly link for PPT: https://bit.ly/CCCAOEVisualizingEquity
Getting to know the team...

- Brenda Hernandez – Program Coordinator
- Joey Nevarez – Program Associate
- Adriel Garcia – Program Coordinator
- Kathy Booth – Project Director
Objectives

1. Review data visualizations that highlight gaps in equity

2. Engage in discussion revolving around visualization features that provide clarity & communicable information

3. Develop strategies for examining equity data with colleagues that lead to action
Data Visualizations + Equity
Defining Equity

Equity is the attainment of comparably positive outcomes for all groups within, or served by, any complex system through implementation of policies, practices, and procedures that remove systemic barriers and provide the supports needed to ensure everyone’s full and successful participation in the system. Equity exists when race, ethnicity, language, religion, gender identity, sexual orientation, age, national origin, physical or cognitive ability, socioeconomic status, and other such characteristics are not predictors of outcomes for any group or the individuals in it.
• Visualizations help communicate complex relationships that exist within data in an efficient and powerful way.

• Our ability to effortlessly spot significant findings in data depends on the type of visualization

• Consider the following population data:

  - Perth: 47,430
  - Inverness: 47,290
  - Hamilton: 54,080
  - Livingston: 57,030
  - Stirling: 37,610
  - Kirkcaldy: 50,010
Types of Visualizations

- **Bar Graph**
  - Income Gaps and Teacher Qualifications
  - Percent of classes taught by teachers who are not highly qualified
  - Percent of teachers without certification or tenure

- **Table**
  - Example: The Percent of Inexperienced Teachers by District
  - School by School Breakdown

- **Maps**
  - Example: School Poverty Rate by First Year Teacher Population for Rural and Urban Schools

- **Line Chart**
  - U.S. Federal Spending – Fiscal Year 2015 ($ Billion)

- **Pie Chart**
  - U.S. Federal Spending – Fiscal Year 2015 ($ Billion)

- **Scatterplot**
Types of Visualizations - Discuss

• Rank these visualizations based on (top 3):
  • Frequency of use (Daily, monthly, annually)
  • Ease of interpretation
  • Degree of being user friendly
  • Display of equity gaps

• How comfortable do you feel with these types of visualizations? What is your eye drawn to?
**Bar Charts**

**Benefits:**
- Good at displaying equity gaps
- Can provide exact data values

**Disadvantages:**
- Difficult to display a large amount of data

**Line Chart**

**Benefits:**
- Showing changes & trends over different time periods
- Highlight small changes that are difficult to measure

**Disadvantages:**
- Plotting too many lines can lead to confusing graphs

**Table**

**Benefits:**
- Can provide exact data values
- Supplement other visualizations

**Disadvantages:**
- May be large & difficult to read
- Not very good at displaying relationships

**Pie Chart**

**Benefits:**
- Quickly compare data visually

**Disadvantages:**
- Difficult to represent larger data sets

**Maps**

**Benefits:**
- Can help stakeholders identify geographic trends in data

**Disadvantages:**
- Difficult to identify exact values on area maps
- May not be appropriate for certain types of data

**Scatterplot**

**Benefits:**
- Multiple data dimensions can be displayed through color, size, & shape

**Disadvantages:**
- Difficult to display labels for all points
Let's think about Equity Data & Visualizations...

What is a challenge when displaying and discussing data with an equity lens?

• Addressing data bias – How do we explore racial equity visualizations but avoid deficit thinking?
• Visualizing evidence of disparities doesn't always solve pervasive underlying structural challenges
• Data triggers a conversation but does not always inform how to engage in the conversation
Addressing deficit bias

- **Deficit bias**: focuses attention on what low-performing groups are lacking compared with the high-performing groups.

Strategies for Visualizing Equity

Using Small Multiple Charts:

- Focuses analysis on considering each group’s specific assets and needs
- Combats deficit-based perspectives
- Ideal in cases where sufficient context such as historical inequities and discrimination are not provided
Using a Single Chart:

- With a single chart, the reader’s attention will be shifted to comparing the groups against one another.
- Chart highlights large disparities amongst groups, at times not notable in small multiple charts.
Ways to display metrics: raw counts, median earnings, percentages, etc.

- Pairing raw counts/numbers with percentages for smaller group sizes & historically marginalized groups

Consider the following: Is there an intentional effort to focus on smaller populations being visualized?

- How do you fuel those efforts of targeting low-end sizes & not just focusing on high volume groups?
Ways to disaggregate data:

- Race, Gender, Socioeconomic Status, Age Group, LGBT, First Generation

Splitting data into multiple measures that can reflect subpopulations, characteristics, journeys

Disaggregated data should be used as signage
A calculated chart that focuses on closing an equity gap

Beneficial in answering questions:
- How large is the gap?
- Is the Equity Gap Significant?
- How many _____ students needed to close equity gap?
What are some actions that we can make to visualize equity

- Visualizations: including new charts (Small multiple charts, tables & charts, maps)
- Analysis approaches: adding percentages, new metrics to disaggregate data, raw counts (focusing on low end sizes)
- Further findings: engage in a case study (using signage of visualizations to gain more information)

Are there strategies that you currently use that help in creating equitable visualizations that lead to action?
Closing
Connecting adult and postsecondary education, workforce development, and economic strategies

Economic mobility begins with education, but career pathways can be winding, and outcomes vary by discipline, opportunity, and regional economies. WestEd’s Center for Economic Mobility builds partnerships that enable individuals, their families, and communities to thrive.

Visit our website: https://economic-mobility.wested.org/
LaunchBoard Resources

Locate today's PowerPoint & our SWP Pre-Conference PowerPoint on our LaunchBoard resources page
For More information

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Thank you for Joining Us!