Making Data Accessible, Understandable and Actionable for Families

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What is Data?

Data...
- Is factual information
- Helps groups make decisions
- Must be:
  - Reliable
  - Valid
  - Accessible

Serving on Groups That Make Decisions
Confidentiality

• A set of rules or a promise
• Limit access or put restrictions on certain types of information

• When working with data as a group, it is important to state if certain information should not be shared with others outside of the group.
Forms of Data

Quantitative Data
- Typically numbers
- Answers the questions:
  - How much? How often? When? Where?

Qualitative Data
- Typically descriptions
- Answers the questions:
  - What is it like? What do you observe about it?
Stages of Data Use

1. Planning & Preparing to Use Data
2. Collecting Data
3. Organizing Data
4. Analyzing Data
5. Developing Hypotheses & Making Recommendations
6. Creating an Action Plan
7. Displaying & Sharing Results
8. Continuous Monitoring for Progress & Improvement

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Stage 1: Planning & Preparing to Use Data

What do we want to know?

Tips

- Ask focusing questions
- Use a variety of methods & sources
- Find data already out there - baseline
- Try to find gaps
- Pinpoint possible roadblocks
- Ask others knowledgeable of the data
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Stage 2: Collecting Data

Answer questions to make an informed decision and act.

Data from Schools
- Student Learning Data
- Student Demographic Data
- School Perception Data
- School Process Data

Families as a Data Source
- Surveys
- Focus Groups
- Participants or Attendees
- School Perception Data
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Stage 3: Organizing Data

**Aggregated Data:**
a whole set of data formed by combining several parts

- Youth 20-24 Neither Enrolled in School Nor Working
  - Less than HS: 48%
  - HS diploma: 32%
  - Some college: 10%
  - Bachelor’s degree +: 10%

**Disaggregated Data:**
a whole set of data separated into its categories or subgroups

- Youth 20-24 Neither in School Nor Working with HS Diploma by Race/Ethnicity

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Stage 3: Organizing Data

Triangulated Data:
Use of multiple independent sources of data to establish the truth & accuracy of a claim.

College Admissions

- References
- Essay
- Extracurricular Activities
- Application
- High School Grades
- ACT/SAT Scores
- Interview

Serving on Groups That Make Decisions
Stage 3: Organizing Data

Tips for Interpreting Graphs

Read all labels.

- What is...
  - in each COLUMN?
  - in each ROW?
  - the RANGE OF VALUES?

- Where was...
  - the MOST change or growth?
  - the LEAST change or growth?
Stage 3: Organizing Data

A Snapshot in Time

2012 Post High School Outcomes
(699 Students responded Statewide)

- 34.6% Higher Education
- 29.9% Competitive Employment
- 21.2% Other Postsecondary Education or Training
- 11.0% Other Employment
- 3.3% Indicator 14 Categories Not Met

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Stages 3: Organizing Data

Comparisons

2012-2013 Elementary Enrollment
Total = 603 students

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Number of Students</th>
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<tbody>
<tr>
<td>K 4</td>
<td>96</td>
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<tr>
<td>K</td>
<td>86</td>
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<tr>
<td>4th</td>
<td>83</td>
</tr>
<tr>
<td>5th</td>
<td>95</td>
</tr>
</tbody>
</table>

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Stages 3: Organizing Data

Trends

Percentage of District Students Scoring Proficient or Advanced in Reading

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>State - All Students</td>
<td>35.5%</td>
<td>35.7%</td>
<td>36.0%</td>
<td>36.4%</td>
<td>36.6%</td>
</tr>
<tr>
<td>District - All Students</td>
<td>24.1%</td>
<td>23.8%</td>
<td>23.2%</td>
<td>26.4%</td>
<td>25.6%</td>
</tr>
<tr>
<td>District - Students with Disabilities</td>
<td>8.8%</td>
<td>9.4%</td>
<td>13.3%</td>
<td>10.1%</td>
<td>9.4%</td>
</tr>
<tr>
<td>District - Economically Disadvantaged</td>
<td>13.8%</td>
<td>17.3%</td>
<td>17.4%</td>
<td>19.7%</td>
<td>19.8%</td>
</tr>
</tbody>
</table>

Serving on Groups That Make Decisions
Stage 3: Organizing Data

Tips to Validate the Findings

To make sure the data are sound:

- Use trusted sources
- Follow-up with questions
- Use different ways of gathering data
- Ensure everyone agrees and accepts the findings
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Stage 4: Analyzing Data

Look for Relationships in the Data

- Each view provides unique insight
- Look from many viewpoints
- Understand the parts as well as the whole
- Strengths and challenges
- Don’t draw conclusions too soon
- Record information as it appears in the source
Stage 4: Analyzing Data

Terms when Working with Numbers

- **MEAN** – average of a group of numbers
- **MEDIAN** – middle value
- **MODE** – most frequent value
- **RANGE** – difference between lowest & highest values
- **OUTLIER** – very high or very low number
- **STATISTICALLY SIGNIFICANT** – results true & not because of chance
Stage 4: Analyzing Data

Examples of Working with Numbers

- Mean = 817.3
- Median = 825
- Mode = 880
- Range = 665

Outlier
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Stage 5: Developing Hypotheses & Making Recommendations

Hypotheses & Recommendations

- Understand why we think it is happening
- Look at other data
- Ask additional questions
- Agree upon the conclusions
- Figure out possible solutions

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Stage 6: Creating an Action Plan

1. Bring key people together
2. Figure out:
   · What
   · Who
   · When
   · Where
   · Resources
   · Communication
3. Review completed action plan
4. Follow through
5. Communicate
6. Keep track of progress
7. Celebrate!

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Stage 7: Displaying & Sharing Results

Displaying Results

• Make Sure the Report is:
  ▪ Appealing
  ▪ Accessible
  ▪ Accurate
  ▪ Audience-specific

• Be Fair and Objective

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Stage 7: Displaying & Sharing Results

Sharing Results

• Know the Purpose of your Report
  – Does it need to provide information?
  – Is it to raise awareness?
  – Will it be used to make decisions?

• Know your Audience
  – What do they already know about the topic?
  – Do they need the big picture or lots of details?
Stage 7: Displaying & Sharing Results

Make the Data Come Alive

Social Math

- Relating data numbers to what is familiar and concrete to your audience.

Data Stories

- Compelling narrative
- Audience-Specific
- Be objective
- Don’t censor
- Explain the data
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Stage 8: Continuous Monitoring for Progress & Improvement

Check Your Work
- Regularly revisit the plan
- Identify challenges
- Make changes as needed

Evaluate the Action Plan
- Collect the same TYPE of data from the same data SOURCE
Stage 8: Continuous Monitoring for Progress & Improvement

Process Begins Again

Ask yourself:

- To what extent has the initial question been answered?
- What new concerns or questions have come up?
- Which factors are clearly understood and which ones need more data?
- *Has the situation improved?*
Tool for Using Data

Understanding Data as Information

Understanding Data

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