1. Define the elements of effective decision-making

2. How to transform “data” into useful information

3. One rubric for using data in decision-making

4. Considerations for the data systems needed by your teams?
Build “Decision-Systems” not Data Systems

The data will guide you to ask the right questions, but your knowledge about the children, system, faculty, and families is critical for effective academic and social decisions.
Collective Goal:
Improve the effectiveness and efficiency with which school teams use data to make academic and behavior support decisions.

Assumptions:
Every school has teams that meet regularly to improve academic and behavior support
* 100,000 schools in the United States with Teams
* 6,750,000 hours spent per academic year in team meetings.

Decisions will be more effective, efficient, and culturally sensitive if they are based on local, accurate, timely information

The data available to teams is increasing in amount, quality and precision (academic and behavior support)
Challenge: Data Overload
Challenge: The Black Hole of Administrivia
• One Approach: Team Initiated Problem Solving (TIPS)

Critical Features of Team-Initiated Problem Solving (TIPS II)

- Identify Goal for Change
- Identify Problem with Precision
- Make Summative Evaluation Decision
- Monitor Impact of Solution and Compare against Goal
- Implement Solution with High Integrity
- Collect and Use Data
- Identify Solution and Create Implementation Plan with Contextual Fit

Meeting Foundations

Problem Solving

Team Initiated Problem Solving (TIPS) Training Materials www.pbis.org
DORA: Problem Solving Score \( (t_{O2} = 3.03, df = 36, p < .05, ES = .87) \)

DORA: Proportion of Teams Implementing Solutions with Integrity

$$X^2 = 6.21, \ p < .05, \ V = .34$$
DORA: Proportion of solutions benefiting students

\(X^2 = 4.40, p < .05, V = .28\)
• Effective Decision-making

Build Decision Systems not Data Systems

Team

Data

Process

Effective Decision-Making

Implementation

Student Outcomes

Membership, Responsibility, Authority, Opportunity

Information, Decision-Making

Identify “Problems” Select Solutions/Action Plans

Resources, Review, Adaptation
• Decision Making
Identification of a problem
School pattern, classroom pattern, group pattern, student pattern

Develop Solutions / Action Plan
Prevention, teaching, reward, extinction, correction, evaluation

Implement and Adapt Solutions
Fidelity, effect, efficiency, alterations
Effective Problem Solving Using Data

1. First identify if there is a problem
   *Difference between observed and expected behavior.*

2. Define the problem with precision
   *Who, What, Where, When, Why & (How often)*

3. Build solution that is practical, instructional and functional.
   *Based on behavioral function, comprehensive, and fits with team values, skills, resources and administrative support.*
Problem Solving

• **Identify** current status

• **Problem Solving** starts by defining a problem with precision

  - **What**
    - behaviors are a barrier and **how often** are they performed?

  - **Where**
    - are the behaviors most and least likely

  - **When**
    - are the problem behaviors are most and least likely

  - **Who**
    - is engaging in the behaviors

  - **Why**
    - do the behaviors keep occurring?

A “Problem” is any observed difference between what is expected (desired) and what is actual
Defining a Problem with Precision

• A major error is to launch into problem solving BEFORE the problem has been defined with precision.

• Selecting solutions without precise problem statement
  • What we did last year
  • What my cousin did with her son
  • What I can buy (or download) as a package on the internet
  • What I can buy from a training from "an expert"

• These solutions
  • Often do not work
  • Usually are more expensive
  • Typically do not “fit” the context.

Implementing Behavior Support without taking the time to define a problem behavior with precision is as likely to produce plans that make things worse as plans that make things better.
Defining a Problem with Precision

Primary

Indicates a difference between what is happening and what is desired.

Too much aggression in cafeteria

Precise

What, Who, Where, When, Why, and How Often

3-5 ODRs for aggression per day from 5-8 students who yell and hit in the cafeteria after they are done with lunch. Appears related to getting peer attention

Too much aggression in cafeteria from 5-8 students who yell and hit in the cafeteria after they are done with lunch. Appears related to getting peer attention.
Defining a Problem with Precision

**Primary Statements**

- Too many referrals
- September has more suspensions than last year
- Gang behavior is increasing
- The cafeteria is out of control
- Student disrespect for teachers is outrageous

**Precision Statement**

- There are twice as many ODRs for aggression on the playground than last year. These are most likely to occur during first recess, with a large number of students, and the aggression is related to getting access to the new playground equipment.
Defining a Problem with Precision

Who, What, Where, When, Why (How often)

• Darin uses sexually explicit language in the classroom. This is creating a climate of disrespect and incivility.

• Tantrums in the van are creating unsafe travel.
Defining a Problem with Precision

Who, What, Where, When, Why (How often)

- James D. is hitting others in the cafeteria during lunch at least five times a week, and his hitting is maintained by peer attention.

- Boys are engaging in sexual harassment.

- Three 5th grade boys are name calling and touching girls inappropriately during recess in an apparent attempt to obtain attention. This is occurring at least 5 times a week.
• Define a **PRIMARY** problem

• Transform that description in to **PRECISE** problem statement.
  • Who
  • What
  • Where
  • When
  • Why
  • How Often

Define a Precise Academic Problem
Gilbert Decision Hierarchy

Problem?

What, Who, Where, Why and How Often

Unique Features of Local Setting: Individual Office Discipline Referrals
Total Office Discipline Referrals as of January 10

Data in the right format for decision-making???
Average Office Discipline Referrals per day per month as of January 10
Questions to Ask of the Data

What is happening?
What is typical?
What is possible?
What is needed?

Use the data to tell a story.

A story gives meaning to data by attaching the data to something we value.
### SWIS Summary 2016-17 (Majors Only)
5586 Schools, 2,500,992 Students

<table>
<thead>
<tr>
<th>Grade Range</th>
<th>Number of Schools</th>
<th>Mean Enrollment per School</th>
<th>Mean ODRs per 100 Students/School Day</th>
<th>Median ODRs per 100 Students/School Day</th>
<th>25th Percentile ODR/100 Students/School Day</th>
<th>75th Percentile ODR/100 Students/School Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-6</td>
<td>3580</td>
<td>468</td>
<td>.34 (.60)</td>
<td>.20</td>
<td>.09</td>
<td>.39</td>
</tr>
<tr>
<td>6-9</td>
<td>1023</td>
<td>643</td>
<td>.48 (.67)</td>
<td>.30</td>
<td>.15</td>
<td>.57</td>
</tr>
<tr>
<td>9-12</td>
<td>526</td>
<td>931</td>
<td>.48 (.71)</td>
<td>.28</td>
<td>.16</td>
<td>.53</td>
</tr>
<tr>
<td>PreK-8</td>
<td>365</td>
<td>427</td>
<td>.55 (1.04)</td>
<td>.27</td>
<td>.12</td>
<td>.51</td>
</tr>
<tr>
<td>PreK-12</td>
<td>92</td>
<td>308</td>
<td>.88 (.211)</td>
<td>.26</td>
<td>.15</td>
<td>.65</td>
</tr>
</tbody>
</table>
Example

Do we have a problem?

- What is pattern
- What is typical
- What is possible
- What is needed
Elementary School  1500 Students  \((1500/100 =105 \times 0.22 = 3.3)\)
Describe the narrative for this school
Describe the narrative for this school
Describe the narrative for this school

Average Referrals Per Day Per Month

- Months: August, September, October, November, December, January, February, March, April, May, June, July
- Average Referrals Per Day Per Month: 0.0 to 1.8

- September, October, November, and December have lower average referrals, with values around 0.4.
- January, February, March, April, May, and June have higher average referrals, with values around 1.4.
- July has the highest average referrals, with a value of 1.8.

- A horizontal line at 1.6 indicates the average referral rate throughout the year.
- A horizontal line at 0.8 provides a reference for comparison.
Describe the narrative for this school

Average Referrals Per Day Per Month

- **2008-09**
- **2009-10**

![Graph showing average referrals per month for 2008-09 and 2009-10.](image-url)
Describe the narrative for this school

Average Referrals Per Day Per Month

- 2008-09
- 2009-10
Effective Problem Solving

1. First identify if there is a problem
   *Difference between observed and expected behavior.*

2. Define the problem with precision
   *Who, What, Where, When, Why & (How often)*

3. Build solution that is practical, instructional and functional.
   *Based on behavioral function, and fits with the values, skills, resources and administrative support.*
What Behavior(s)

1. Are most common behavior problems (a) Student-Student, or (b) Adult-Student related?

2. Are problem behaviors MAJOR or MINOR or BOTH?
What Behavior(s)

Referrals by Problem Behavior
All, Sep 1, 2012 - Aug 21, 2013

Number of Referrals

- M. Disrespect
- M. Disruption
- M. Defiance
- Lying
- Other
- Vandal
- Disruption
- Unknown Behav
- Tech
- Inappr. Lan
- Theft
- Harass
- Defiance
- Phys Aggress

Problem Behavior
Where?

Questions:
1. What location(s) are associated with the most ODRs?
2. Sort by “structured” settings and “non-structured” settings
   (Classroom & Gym vs. Commons, Cafeteria, Hall, Playground)
Where

Referrals by Location
All, Sep 1, 2012 - Aug 21, 2013
Who

Question:
1. Are there many, a few, or one student associated with the problem?
Who

Referrals by Student
All, Sep 1, 2011 - Oct 31, 2011, At Least 1 Referrals

Number of Referrals

Students

PBISApps
When?

Questions:
1. Are problem behaviors more likely at some times of the day?
2. What is happening during periods when problems are most likely?
When

Referrals by Time
All, Sep 1, 2008 - Aug 21, 2009

Number of Referrals

Time

7:00 AM  8:00 AM  9:00 AM  10:00 AM  11:00 AM  12:00 PM  1:00 PM  2:00 PM  3:00 PM  4:00 PM  5:00 PM
When

Referrals by Time
All, Sep 1, 2007 - Aug 21, 2008

Number of Referrals

Time
7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM
Why?

ODR from Classroom ONLY

**Referrals by Perceived Motivation**

*Drill Down*

![Graph showing referrals by perceived motivation.
- Unknown
- Avoid a
- Avoid wrk
- DK
- Avoid p
- Ob itn
- Ob a attn
- Ob p attn
- Avoid task
]
Why?

ODR from Playground ONLY

Referrals by Perceived Motivation
Drill Down

Motivation

Referrals
• Decision Making

Are we Implementing with Fidelity?  Are Students Engaging in Problem Behavior?

Are Students Meeting Reading Expectations?  Are Students Meeting Math Expectations?
Building Solutions
Solutions

• Key Features
  • **Technically Sound**
    • Solution is based on “precise” problem statement
    • Solution involves building competence, not just removing problem
    • Solution is logically associated with *removing* rewards for problem
    • Uses “evidence-based” practices
  
  • **Contextual Fit**
    • Practical, doable, efficient
    • Consistent with values of those who must perform the solution
    • Administrative support
## Solution Development

### Elements of an Effective Solution

<table>
<thead>
<tr>
<th>Solution Component</th>
<th>Action Step(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td></td>
</tr>
<tr>
<td>Recognition</td>
<td></td>
</tr>
<tr>
<td>Extinction</td>
<td></td>
</tr>
<tr>
<td>Corrective Consequence (only if needed)</td>
<td></td>
</tr>
<tr>
<td>Data collection</td>
<td></td>
</tr>
</tbody>
</table>

- **Prevention**: What can we do to make this problem situation unlikely.
  - Make the problem behavior irrelevant.

- **Teaching**: What can we teach to make the problem behavior inefficient.

- **Recognition**: Exaggerate reward for appropriate behavior.

- **Extinction**: Remove rewards for problem behavior. Make problem behavior ineffective.

- **Corrective Consequence (only if needed)**: If needed, exaggerate “cost” of problem behavior.

- **Data collection**: Measure if plan is implemented.

**Safety**
Problem Solving

- Move from solution elements to Action Plan

### Precise Problem Statement:

**Goal:**

<table>
<thead>
<tr>
<th>Solution Components</th>
<th>What are the action steps?</th>
<th>Who is Responsible?</th>
<th>By When?</th>
<th>How will fidelity be measured?</th>
<th>Notes/Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Data Collection

<table>
<thead>
<tr>
<th>What data will we look at?</th>
<th>Who is responsible for gathering the data?</th>
<th>When/How often will data be gathered?</th>
<th>Where will data be shared?</th>
<th>Who will see the data?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Collection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Self Assess

- Effective Decision-making

1. Do we have **teams** with:
   - The right people, clear responsibility, adequate authority, regular meeting schedule and time to perform?

2. Do we have the **data** we need to make effective decisions?

3. Do we have a clear **process** for defining problems, building solutions, and building action plans?

4. Do we actually **implement** solutions / plans? And do we use data to adapt over time?

**Student Outcomes**