Organizing and Analyzing Data at Tier I

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Katie Conley – University of Oregon
Bert Elston – University of Oregon

Session Description

- Struggling to help your Tier I PBIS team(s) use their data for decision making?
- Confused about how often and which data to review?
- Trying to make sense of fidelity vs. implementation data?

This session will explore strategies for you to offer teams as they organize their systems, data, and practices to more efficiently and effectively reach better outcomes.

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Educational and Community Supports

- **Educational and Community Supports (ECS)** is a research unit within the College of Education at the University of Oregon.
- ECS focuses on the development and implementation of practices that result in positive, durable, and scientifically substantiated change in the lives of individuals.
- Federal and state funded projects support research, teaching, dissemination, and technical assistance.

- **PBIS Applications (PBISApps)** is a series of educational tools created within ECS and related to the implementation of multi-tiered systems of support (MTSS).
  - The PBIS Application tools have been utilized in 25,000+ schools both domestically and internationally.

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Who is in the audience?

- School/Faculty
  - Teacher
  - PBIS Coach
  - Administrator
  - Related Service Provider

- District/Regional Program Coordinator

- Implementing at:
  - Tier I
    - Utilizing SWIS
  - Tier II
  - Tier III
Tier I Universal Systems of Support

- Where are your schools in Tier I Implementation?
- Where is your confidence level in coaching Tier II?

Foundational Elements

Essential Components of MTSS

The intent of MTSS is to improve outcomes for all students while providing immediate supplemental supports for students at risk of poor academic and social outcomes.

Universal (Tier I) Systems of Prevention

- Primary Prevention Level
  - Focus = All students
  - Setting = General environment
  - Instruction = Core curriculum and instructional practices that are evidence-based and incorporate differentiated instruction
  - Assessments = Screening, continuous progress monitoring, and outcome measures
Important Components of SWPBIS

- Defined Behavior Expectations
- Teaching of Behavior Expectations
- Acknowledgment Systems
- Consequence Systems
- Evaluation

Systems Change

- Outcomes: Social Competence & Academic Achievement
- Supporting Decision Making
- Supporting Student Behavior
- Supporting Staff Behavior

Continuous Quality Improvement

1. Plan
2. Implement
3. Evaluate

- Reassess and revise solution(s) as needed
- Identify problems with precision
- Monitor outcomes and compare to goal(s)
- Establish goal(s)
- Develop solution(s)
- Implement solution(s) with integrity and fidelity

Value and Utility of Data
What single factor is most related to high sustainability?

The frequency that data are presented to all school staff.

Value and Utility of High Quality Decision Systems

- What’s the goal?
  - To make schools more effective learning environments

- How?
  - Repeatedly giving people the right information, at the right time, in the right format is the single most effective way to improve decision making and achieve valued outcomes [Gilbert, 1978].

- Why focus on behavior?
  - Social behavior is the single, most common reason students are excluded from education.
Data-Based Decision Making

- Decisions are more likely to be effective and efficient when they are based on data.
- The quality of decision making depends most on the first step—defining the problem to be solved.

Big idea: Define problems with precision and clarity.

The value of data emerges only when analysis provides insight that direct decisions for students.

—Stephen M. Walt
Beyond the Numbers, 2003

Data-Based Decision Making

- Data help us ask the right questions. They do not provide the answers.
- We use data to:
  - Identify and refine problems
  - Define the questions that lead to solutions
- Data help place the “problem” in the context rather than on the students

Information with a Purpose

Different types of information serve different purposes.
Monitoring Implementation Fidelity

- **Fidelity of Implementation** determines the adults’ current level of understanding and implementation fluency.
  - **School-wide PBS Fidelity measures**
    - Identify evidence-based tools to assess the level of PBS Implementation across the school (e.g., TIC, SET, TFI, BoQ, SAS) to make system-level decisions.
  - **Staff/Level Training and Coaching**
    - Identify systems to ensure that all faculty/staff are oriented and fluent in delivering SWPBIS practices.
    - Make consistent sharing of fidelity and outcome data across staff and local community a priority.

Monitoring Outcomes

- **Universal Screening** determines students’ current level of performance.
  - Collect information on all students at least twice a year,
    - After the first 6 weeks of the new school year
    - 6 weeks after the return from winter break
  - Use data-decision rules for decision making,
    - Green zone = 0-1 ODRs
    - Yellow zone = 2-5 ODRs
    - Red zone = 6+ ODRs
Monitoring Outcomes

- We use Continuous Progress Monitoring to identify system-level as well as student-level performance.
  - Regular collection and review of data [e.g., referrals, reading probes, standardized assessments]
  - Use of data for decision making and action planning

Monitoring Outcomes

- Outcome Measures or Summative Assessments
Organizing the Data
Tier I Universal

Fidelity Universal, Tier 1

- Team Assessments
  - Tiered Fidelity Inventory (TFI)
  - Walkthrough Report
  - Benchmarks of Quality (BoQ)
  - Team Implementation Checklist (TIC)

- Self-Assessments
  - Self-Assessment Survey (SAS)

TFI: Total Score Report

TFI: Scale Report
Behavioral Outcomes
Universal, Tier I

- Office Discipline Referrals (ODRs)
  - Majors (admin managed)
  - Minors (staff managed)
- Attendance/Tardy
- Climate/Culture
- School Safety

SWIS Reports can help teams develop precise problem statements for decision making.
Individual Student Data

Analyzing the Data
Tier I Universal

Building Decision Systems
Guide schools to build comprehensive “decision systems” not “data systems”.

<table>
<thead>
<tr>
<th>Data System</th>
<th>Decision System</th>
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</thead>
<tbody>
<tr>
<td>Technology that houses data</td>
<td>• Agreements on the collection and use of data (including a data system)</td>
</tr>
<tr>
<td>District student information system (SIS)</td>
<td>• Routines and procedures to embed SWS application data into decision making</td>
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<tr>
<td>Excel spreadsheet</td>
<td></td>
</tr>
<tr>
<td>SWS application</td>
<td></td>
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</tbody>
</table>

Tips for Building Decision Systems
- Analyzing data in layers to “drill down”
  - What is our current reality?
  - Is there a problem? (a red flag)
    - Note: It’s ok to be doing well!
  - Put the problem into context (get specific)
    - what, where, when, who, how often, why
  - Be efficient, don’t drown in the data
Problem Solving with Precision

- The statement(s) of a problem is important for team-based problem solving.
  - Everyone must be working on the same problem with the same assumptions.
- Problems are often framed in the “primary” form.
  - Raises awareness
  - Not useful for problem solving
- Precise problem statements result from a detailed data review and are solvable.

The Value of Drilling Down (Fidelity Tools)

- Drilling down into data allows us to identify specific areas of success and growth.
  - Based on our recent efforts, what growth or improvements have we made? (Time to celebrate!)
  - What target areas are left to address, and how will we prioritize our next steps?
  - What are the specific items or tasks that need to be completed? By when? By whom?

Asking the Right Questions: Fidelity

- Our TFI Total Score was below 80%
  - Which tiers?
  - Which subscale(s)?
  - Which items?
  - Compared to other/previous fidelity data

“We’ve had a decreasing trend in our Tier 1 Scale for the last three months. Looks like the subscale of implementation is the area we need to focus on, specifically with defining and teaching expectations, discipline policies, as well as feedback/acknowledgement. Additionally, our faculty and student/family/community involvement have decreased over the same time period....The staff are reporting the same areas as not in place and priorities on the SAS.”

The Value of Drilling Down (Referrals)

- Drilling down into data allows us to move from general to precise problem statements.
  - What problem behaviors are most common?
  - Where are problem behaviors most likely?
  - When are problem behaviors most likely?
  - Who is engaged in the problem behavior?
  - Why are problem behaviors sustaining (i.e., perceived motivation)?
  - How often are problems occurring?
Problem Solving with Precision

- There are more ODRs for aggression on the playground than last month. 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.

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<tr>
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</thead>
<tbody>
<tr>
<td>Aggression</td>
<td>Playground</td>
<td>1st Recess</td>
<td>Large number of students</td>
<td>To get new playground equipment</td>
</tr>
</tbody>
</table>

Data Analysis for Precision

Goal Development

- Once we know where we are, then we can identify where we want to be in clear, measurable terms.

Our Tier 1 implementation subscale on the TFI was at 11% implementation when we last assessed.

By June, we want our Tier 1 implementation subscale to be at 50% or greater.

In October, there were 15 students and 25 ODRs for aggression on the playground during first recess related to getting access to the new playground equipment.

By December 1st, we want fewer than 5 students and 10 ODRs per month for aggression on the playground during first recess.
What If I Don’t Have a Way to Drill Down?

- Not all data sources will have efficient tools for drilling down.
- Is there an export tool that allows us to pull data and then aggregate that data in Excel or another spreadsheet tool?
- Do we have someone with the expertise (e.g., with Excel) and time to help us?
- What other ways can we take the “Drill Down” concept and focus conversations and questions more efficiently?

Putting It Into Practice

Humble Middle School TFI Subscales

Evaluation—SWIS had recently been installed for data collection and analysis but was still new.
Humble Middle: Action Planning

- PBIS Team used TFI results to identify items of importance
  1.3 & 1.4 Behavioral Expectations & Teaching Expectations
  1.6 Discipline Policies (e.g., create a flowchart)
  1.9 Feedback & Acknowledgement (e.g., menu of reinforcers)
- PBIS Team worked on items during team meetings
  • Solicited feedback from whole faculty
  • Revised plan as needed
- Created lesson plans to teach all staff the aspects of school-wide PBIS during in-service week

Humble Middle School TFI Subscales

<table>
<thead>
<tr>
<th></th>
<th>Jan-14</th>
<th>May-14</th>
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<tbody>
<tr>
<td>Tier I</td>
<td>39</td>
<td>50</td>
</tr>
<tr>
<td>Tier II</td>
<td>54</td>
<td>56</td>
</tr>
<tr>
<td>Tier III</td>
<td>71</td>
<td>44</td>
</tr>
</tbody>
</table>

Humble Middle School

- Is there a problem?
- If so, what is it?
Humble Middle School

School-wide Data

Average Referrals Per Day Per Month

What Do I Know?

What? Inappropriate language, defiance, disruption
Where? Class, playground, commons, and cafeteria
Who? Majority of referrals are from 8th grade
When? 11:15, 12:15, 1:15, & 2:00

Majority of referrals come from 8th grade.

44 students have more than 2 or more referrals.
The school considers the playground and the commons to be the common areas.

Change the graph type to change the analysis.

Use the summary to analyze problem 9.26.

Add the clues you learn to the dataset to analyze with more precision and clarity.

Change the graph type to change the analysis.

Use the summary to analyze problem 9.26.

Commons & Playground (outdoor common area)

Precise Problem Statement & Solution Development

- Many 8th grade students are engaging in disruptive and disrespectful behavior (specifically, physical aggression, inappropriate language, and disruption) in the indoor and outdoor common areas during lunch transition times, and the behavior is maintained by attention.
Solution Development

- **Target Area(s):** Problem behaviors in the indoor/outdoor common areas
- **Goal:** Reduce referrals for disruption in the commons and hallways by 50%

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<thead>
<tr>
<th>Solution Component</th>
<th>Action Step(s)</th>
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<tbody>
<tr>
<td>Prevention</td>
<td>Increase active supervision. Vice-principals share responsibility for indoor and outdoor common areas. Grade levels establish a supervision rotation.</td>
</tr>
<tr>
<td>Teaching</td>
<td>Teach behavioral expectations in the indoor and outdoor common areas.</td>
</tr>
<tr>
<td>Recognition</td>
<td>Increase recognition for appropriate behavior. Provide feedback tickets that can be collected and used for Spirit Week/Spirit Rally and Dance for the grade level with the fewest referrals.</td>
</tr>
<tr>
<td>Extinction</td>
<td>Post weekly, grade-level SWS data.</td>
</tr>
<tr>
<td>Corrective Consequence</td>
<td>Active supervision and continued early consequence (COD)</td>
</tr>
<tr>
<td>Data collection</td>
<td>Use weekly SWS data to evaluate change</td>
</tr>
</tbody>
</table>

**Tools for Your Toolbox**

- With so much data, how will we be able to build a comprehensive framework for data-based decision making?

**So Much Data, So Little Time!**
Tools to add to your toolbox

- Team Function Crosswalk
- SWIS Drill-Down Worksheet
- TIPS Meeting Minutes Form
- Action Plan
- Data Review and Monitoring Plan Guide
- PBIS Applications – PBISApps.org
- The Hexagon Tool
Contact Information

- Jessica Daily: jdaily@uoregon.edu
- Nadia Sampson: nkafu@uoregon.edu
- Bert Eliason: beliason@uoregon.edu
- Katie Conley: kconley1@uoregon.edu

- PBIS Applications Contacts
  - www.pbisapps
  - training@pbisapps.org
  - support@pbisapps.org