COLLECTING FIDELITY DATA TO SUPPORT AND SUSTAIN PBIS/MTSS IN SCHOOLS

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September 2022
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Purpose

Prioritizing social, emotional, and behavioral supports is essential for student success. By establishing systems to support students' social (how they interact), emotional (how they feel), and behavioral (how they act) needs and growth, educators and leaders can ensure that all students have full access to instruction and the essential skills for any challenge they encounter (Center on PBIS, 2021; Chafouleas, 2020). Investing in Positive Behavioral Interventions and Supports (PBIS) or a Multi-Tiered System of Support (MTSS) which emphasizes social, emotional, behavioral supports enables schools, districts, and states to advance student outcomes and school climate effectively, efficiently, and relevantly.
Value of Implementing PBIS/MTSS

Positive Behavioral Intervention and Supports (PBIS) is an example of a MTSS focused on improving school climate and the social-emotional-behavioral health of all students. As well, PBIS is an evidence-based framework for achieving equitable outcomes for all student groups (Mitchell et al., 2018). Adopting the PBIS framework gives schools and facilities a way to:

- organize a continuum of proactive, evidence-based practices for supporting students' social-emotional-behavioral health
- integrate systems to support staff with sustainable implementation of practices, interventions, and strategies to support students
- collect and use data to support decision making on outcomes, practices, and systems

Research shows that implementing an evidence-based MTSS framework, like PBIS, positively impacts students' academic achievement and social-emotional-behavioral health, as well as improves school climate and teacher self-efficacy.

Using Fidelity of Implementation Data to Guide Decision Making

Using data to support and guide decision making is a hallmark of the PBIS framework and an essential characteristic of any MTSS. Data-based decision making facilitates cycles of continuous improvement and builds capacity for implementation that is culturally and contextually relevant, sustainable, and promotes implementation fidelity. A key element of data-based decision making is fidelity data. Fidelity data helps teams assess and monitor the extent to which the core features and practices of PBIS are in place and being implemented with integrity. Collecting and assessing fidelity data enables teams to better evaluate implementation progress and make more informed decisions about the supports necessary to achieve valued outcomes.

Value of Using Validated Tools

Many state- and district-level decisions are high stakes and involve significant time and resources. Additionally, strategic efforts in professional development and coaching impact numerous students, staff, and families across schools and communities. For these reasons, and more, having accurate information from validated, trusted tools is important. Validated tools are those that have been researched and proven to measure what they intend to measure. When a tool or assessment has been rigorously validated, the data can be trusted, and decision makers can be confident in the information they gain. By using validated tools to
measure fidelity of implementation, districts and states can trust the resulting data and make clearer decision regarding planning, implementation activities, and resources allocation.

Many tools for measuring fidelity of implementation are available at no cost through the Center on PBIS and PBIS Assessment. The more recently released and recommended tool for assessing implementation of the core features across all Tier 1, 2, and 3 PBIS is the PBIS Tiered Fidelity Inventory (TFI). The TFI is a validated measure of implementation fidelity which can be used annually or more frequently depending on the team’s implementation status. Additionally, the Benchmarks of Quality (BoQ) is validated tool teams can use to monitor implementation at Tier 1. Essentially, using validated tools to assess fidelity of implementation helps teams and leaders identify detailed information that can guide training, coaching, allocation of resources, and alignment of initiatives.

Basic and Comprehensive Ways to Track Implementation

There are various ways to track implementation across tiers, and each way will be framed by the purpose, questions, and needs of the stakeholders. Examples of basic and comprehensive ways to track implementation progress using different measures and tailored to stakeholder needs are provided for the Wisconsin RtI Center, Florida PBIS, Missouri PBIS, and the Massachusetts PBIS Academy as highlighted below.

The Wisconsin RtI Center’s annual report provides an annual summary of effectiveness and impact of statewide support with PBIS implementation. Table 1 highlights how state leaders answer the question of how many schools across the Wisconsin are implementing a PBIS framework, as well as how many schools are implementing with fidelity across tiers as indicated by a validated measure of implementation fidelity (e.g., TFI, BoQ). Additionally, the Wisconsin RtI Center has been collecting fidelity data since 2009 to support schools in their journey of implementing an equitable, multi-tiered system of supports for both academic and behavior. The data in Figure 1 allow for celebration and show that since 2009 half of Wisconsin schools have reached fidelity or full implementation at any tier.

**Figure 1. Count of Wisconsin Schools Receiving Professional Learning, Full Trainings, Measuring Fidelity, and Reaching Fidelity Since 2009**

<table>
<thead>
<tr>
<th>Content Area</th>
<th># of Schools Assessing</th>
<th># of Schools at Fidelity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior (PBIS tier 1)</td>
<td>769</td>
<td>528</td>
</tr>
<tr>
<td>Behavior (PBIS tier 2)</td>
<td>254</td>
<td>198</td>
</tr>
<tr>
<td>Behavior (PBIS tier 3)</td>
<td>82</td>
<td>54</td>
</tr>
</tbody>
</table>

Table 1. Number of Schools Who Self-Assessed in 2019-20

Positive Behavioral Interventions & Supports (PBIS)
Within the report, state leaders also elaborate on the importance of continually using fidelity data to identify areas of strength and areas for improvement. Figure 2 shows that over a three-year period (2017-2020) schools who were trained and regularly assessed implementation sustained implementation with fidelity in comparison to schools that were trained but did not regularly assess implementation. Such information is helpful in planning refresher and booster professional development for both schools and districts.

Figure 2. Comparison of Wisconsin Schools Completing Tier 1 PBIS Training and Regularly Assessing Fidelity Since 2017-2020

The Florida PBIS Project’s annual report* provides another example of using validated fidelity tools for state-level decision making. In the report, state leaders explore differential student outcomes for schools that implement with high fidelity versus low fidelity. The analysis used the BoQ as the validated fidelity tool and compared results against office discipline referrals (see Figure 3) and out of school suspensions (see Figure 4). Sharing these data with stakeholders, state leaders, and valued partners can be helpful in advocating for the importance and prioritization of implementing a MTSS like PBIS.

Figure 3. Average Rate of Office Discipline Referrals per 100 Students per Day by Tier 1 Fidelity Level

Figure 4. Average Rate of Out of School Suspensions per 100 Students per Day by Tier 1 Fidelity Level
Additionally, the report illustrates how state leaders worked to examine the effectiveness training at Tier 2 and 3. Figure 5 presents the number of schools having received Tier 2 training and measuring fidelity of implementation using the TFI as the validated tool while Figure 6 highlights the percentage of Florida schools implementing Tier 2 and Tier 3 with fidelity. Like other states, Florida monitors fidelity of implementation across years. Answering these questions assists state leaders in better understanding the impact of their state training and development resources and sharing this with key stakeholders.

**Figure 5. Count of Florida Schools Trained and Measuring**

- **517** active schools trained in Tier 2
- **402** submitted a TFI
- **277** reported high Tier 2 fidelity (TFI≥70%)

**Figure 6. Percent of Florida Schools Implementing with Fidelity**

- **71%** of schools are implementing Tier 2 with fidelity (TFI Score ≥ 70%), with an average TFI score of 79%.
- **76%** of schools are implementing Tier 3 with fidelity (TFI Score ≥ 70%), with an average TFI score of 80%.
The annual report produced by Missouri School-wide Positive Behavior Support provides a valuable example of incorporating data from various validated fidelity tools to answer the evaluation questions outlined in the PBIS Evaluation Blueprint (Center on PBIS, 2020). In addition to using the TFI to monitor training effectiveness on PBIS implementation (Figure 7), state leaders used additional self-report measures like the Self-Assessment Survey (Figure 8), to aid state-level efforts for identifying and recognizing exemplar schools and districts. These data help identify schools that are implementing at greater and deeper levels, including implementation in specific areas such as classrooms.

**Figure 7. Missouri Schools Receiving Training Across Tiers and Measuring Implementation Fidelity**

- **42%** Eligible completed Tier 1 Scale*
  - 89% ≥ 70% on Tier 1 Scale*
  - *513 Eligible = Training Emerging through Maintenance

- **50%** Eligible completed Tier 2 Scale*
  - 72% ≥ 70% on Tier 2 Scale
  - *374 Eligible = Training Tier 2 through Maintenance

- **48%** Eligible completed Tier 3 Scale*
  - 67% ≥ 70% on Tier 3 Scale
  - *189 Eligible = Training Tier 3 through Maintenance

**Figure 8. Percent of Self-Assessment Survey Items In Place for Missouri Schools Receiving Training Across Tiers**

- **74.7%** Schoolwide In Place
- **77.6%** Non-Classroom In Place
- **75.2%** Classroom In Place
- **66.6%** Individual Students In Place
Finally, the Massachusetts PBIS Academy brief examines the impact of PBIS implementation in high need schools. This report demonstrates the use of validated fidelity tools to compare the impact of state organized PBIS training on both student behavior and academic outcomes for high need schools and districts. In this example, the Massachusetts PBIS Academy compares schools’ level of implementation using the TFI to both state discipline levels (Figure 9) and reported academic levels (Figure 10). This examination of fidelity data compared with student outcome data helps showcases the impact of this training model and helps support state-level planning for high need schools. Like other exemplars above, by using validated fidelity measures, state leaders and decision makers can trust the data and have confidence in the information as it is used to better understand the effectiveness of state supported programming, make decisions about continued investment in the initiative, and justify recommending this training model to districts across the state.

**Figure 9. Decreases in Percentages of Students Receiving Suspensions 2017-2020**

<table>
<thead>
<tr>
<th>School Type</th>
<th>Percent Change</th>
<th>In School Suspensions</th>
<th>Out of School Suspensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.B.S Schools (n=55)</td>
<td>-49%</td>
<td><img src="chart1.png" alt="Bar Chart" /></td>
<td><img src="chart2.png" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Matched Controls (n=55)</td>
<td>-29%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 10. Percent of Change of Students Meeting or Exceeding Expectations for the Massachusetts Comprehensive Assessment System 2017-2020**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Percent Change</th>
<th>P.B.S Schools (n=16)</th>
<th>Matched Controls (n=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>7%</td>
<td><img src="chart3.png" alt="Bar Chart" /></td>
<td><img src="chart4.png" alt="Bar Chart" /></td>
</tr>
<tr>
<td>English/Language Arts</td>
<td>-10%</td>
<td><img src="chart5.png" alt="Bar Chart" /></td>
<td><img src="chart6.png" alt="Bar Chart" /></td>
</tr>
</tbody>
</table>
Evaluating Student Outcomes with Implementation Fidelity

Another common element of the evaluation process is student outcome data. Student outcome data should be reviewed alongside fidelity data to determine if implementation is achieving intended benefits and goals. An important question in the evaluation process is whether schools implementing with fidelity also show improved student outcomes. One guiding principle for schools, districts, and states is to evaluate student outcomes (i.e., effectiveness) in relation to implementation fidelity. Student outcomes and effectiveness should be examined prior to implementation and once individual schools have achieved fidelity criterion to identify trends and overall impact. If PBIS is not being implemented with fidelity, changes in outcomes are unlikely (Center on Positive Behavioral Intervention and Supports, 2020). Likewise, if schools are implementing with fidelity but student outcomes are not improving, the intensity (e.g., frequency, duration) of key practices may need to increase.

Valuable information and insights can be gained by examining student outcomes in light of implementation fidelity. Several of the exemplars highlighted above model connecting these two data sources as part of an evaluation process. The Wisconsin RTI Center Annual Report (pages 10-13) provides a series of graphics illustrating benefits for students who attend schools implementing PBIS with high fidelity such as increased attendance, improved academic outcomes, and increases in equitable outcomes. As well, the Florida PBIS Project’s Annual Report (page 10) links student outcomes to fidelity by providing an analysis showing decreases in both office discipline referrals and out of school suspensions for schools with higher rates of fidelity. Both examples serve as evidence for state leaders for the value of implementing PBIS in schools and districts.

Additional Resources

To learn more about the implementation of the PBIS framework and multi-tiered systems of support, check out the resource pages Getting Started with PBIS and What is PBIS from the Center on PBIS. For more information regarding benefits of implementing the PBIS framework, see the list of references for the evidence base of PBIS and the evaluation brief Is School-wide Positive Behavior Support an Evidence-based Practice? available from the Center on PBIS.
References


Embedded Hyperlinks

1. www.pbis.org

This document was supported from funds provided by the Center on Positive Behavioral Interventions and Supports cooperative grant supported by the Office of Special Education Programs (OSEP) and Office of Elementary and Secondary Education (OESE) of the U.S. Department of Education (H326S180001). Mohamed Soliman, MA, EdS serves as the project officer. The views expressed herein do not necessarily represent the positions or policies of the U.S. Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, or enterprise mentioned in this document is intended or should be inferred.

Suggested Citation for this Publication