



Michigan Evaluation Brief

How are Schools Using the School-wide PBIS Tiered Fidelity Inventory?

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Michigan Evaluation Brief: How are Schools Using the School-wide PBIS Tiered Fidelity Inventory?

The document provides a summary of how Michigan Schools used the School-wide PBIS Tiered Fidelity Inventory (SWPBIS TFI) during the 2018-19 school year.

Introduction

Michigan's MTSS (MiMTSS) Technical Assistance Center works on behalf of the Michigan Department of Education to provide a continuum of technical assistance to ISDs, districts, and schools. The mission is to improve outcomes for all learners by assisting educators in developing infrastructures to support high-quality and sustained implementation of effective, data-driven practices within a Multi-Tiered System of Supports framework.

The MiMTSS TA Center achieves this in part by providing professional learning and technical assistance to educators. School leadership teams engage in professional learning while setting up MTSS data, systems, and practices. Teams then assess their implementation efforts using fidelity measures. Evidence suggest that achieving implementation thresholds for School-wide Positive Behavioral Interventions and Supports (SWPBIS) is critical for demonstrating positive outcomes (Freeman et al., 2016; Benner et al., 2010). As such, School Leadership Teams (SLT) need to know how well their SWPBIS is implemented in their school.

To understand how Michigan schools are using the SWPBIS TFI, this evaluation brief aims to answer the following research questions:

1. How often do schools complete the SWPBIS TFI per year?
2. How many tiers are assessed during each SWPBIS TFI administration?
3. What are the average scores at each tier of the SWPBIS TFI?
4. What subscales and items on the SWPBIS TFI have the highest and lowest scores?
5. How do Michigan SWPBIS TFI results compare to National data?

Methodology

Data for this analysis were pulled from the MiMTSS Data System, a free web-based data system available to Michigan school districts to support decision-making related to an MTSS framework. School teams enter SWPBIS TFI scores into PBIS Assessment, a free web-based data system for PBIS fidelity, safety, and school climate measures. The MiMTSS Data System has an application programming interface (API) established that directly pushes SWPBIS TFI scores from PBIS Assessment to the MiMTSS Data System each night.

For this evaluation brief, the sample consists of 655 schools that assessed at least one tier of the PBIS implementation using the SWPBIS TFI during the 2018-19 school year. Schools must have completed at least one item in a tier to have scores from that tier included in the analyses. For research questions 3 and 4, if schools completed the SWPBIS TFI more than one time during the year, we used the assessment with the highest Total Score in the analyses.

For research question 5, the sample national data consisted of 8,640 schools that assessed at least one tier of the TFI during the 2016-17 school year.

School Characteristics

School demographic information was gathered from the National Center for Education Statistics (NCES) for the 2018-19 school year. Of the 174 districts that housed the 655 schools, there were on average, 7.6 schools, 3277 students, and 18 students per teacher, across each district. Further, 72 districts (42%) were located in rural areas, 50 (29%) were located in suburban areas, 28 (16%) were in cities, and 23 (13%) were in towns. Elementary, middle, high, K-12, elementary/middle, and middle/high schools were represented of the sample population.

The SWPBIS TFI Measure

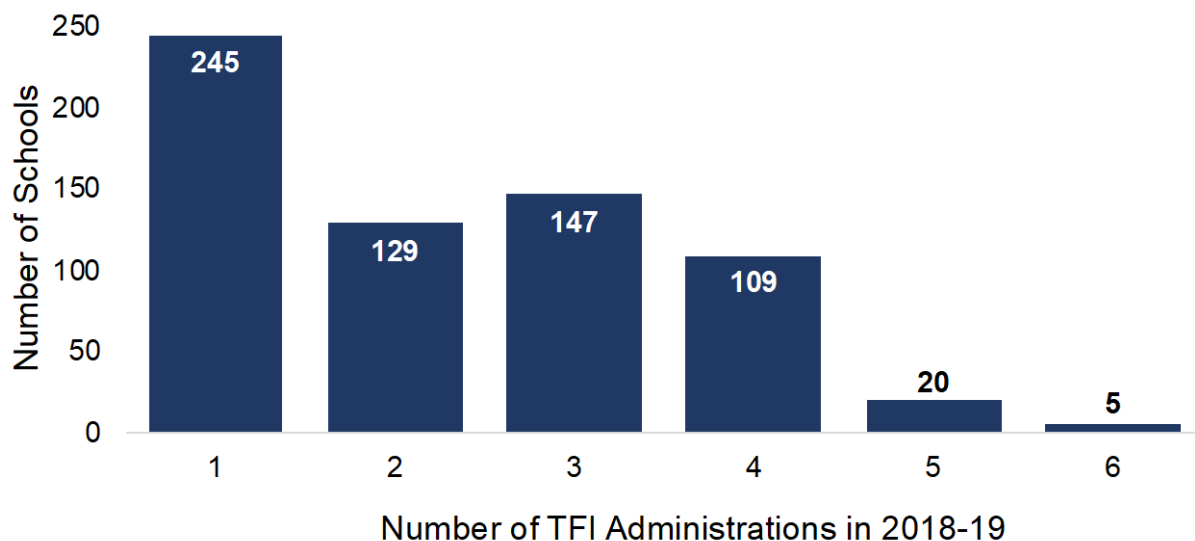
The SWPBIS Tiered Fidelity Inventory (SWPBIS TFI; Algozzine et al., 2014) is a research-validated instrument for assessing SWPBIS implementation fidelity. The measure is comprehensive and unique because it measures the implementation of the core SWPBIS features across all three tiers. The result is a single, reliable assessment to assist with implementing and sustaining SWPBIS (Massar et al., 2017).

Results

1. How often do schools complete the SWPBIS TFI per year?

The 655 Michigan schools completed 1509 SWPBIS TFI administrations during the 2018-19 school year. As shown in figure 1, 245 schools (37%) completed the SWPBIS TFI once, 129 (20%) completed the SWPBIS TFI twice, 147 (22%) completed the SWPBIS TFI three times, 109 (17%) completed it four times, 20 (3%) completed it five times, and 5 (0.8%) completed it six times. Compared to 2016-17 national data, Michigan had a greater proportion of schools complete the TFI three times (22% vs 12%; Kittelman et al., 2018).

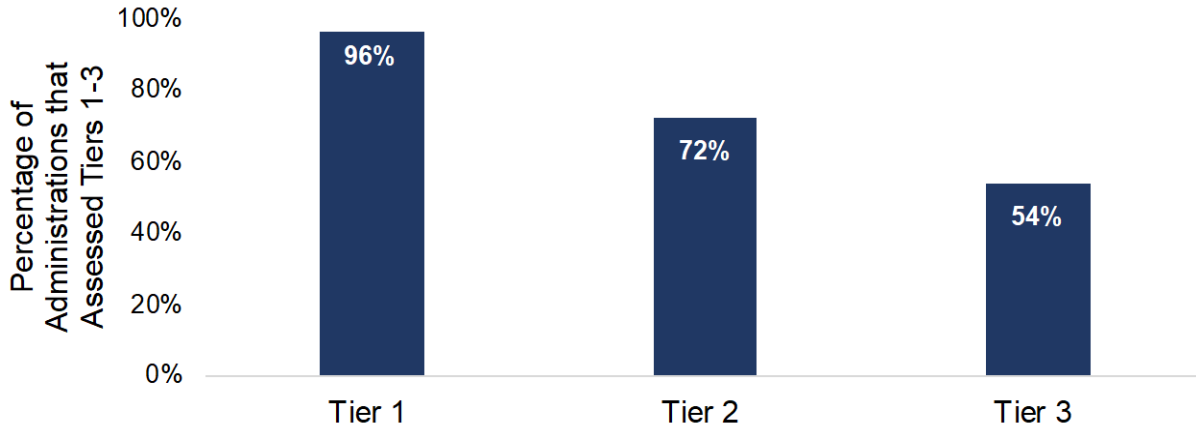
Figure 1. Majority of Michigan Schools Administer the SWPBIS TFI Once on an Annual Basis



2. How many tiers are assessed during each SWPBIS TFI administration?

Results are shown in figure 2. Of the 1509 SWPBIS TFI administrations that were completed by the 655 schools, 417 (28%) assessed Tier 1 only, 43 (3%) assessed Tier 2 only, 3 (0%) assessed Tier 3 only, 227 (15%) assessed Tiers 1 and 2, 7 (<1%) assessed Tiers 1 and 3, 12 (1%) assessed Tiers 2 and 3, and 798 (53%) assessed all three tiers during a single administration. Based on all 1509 administrations, figure 2 below shows the percentage of administrations that included Tiers 1, 2, and/or 3, irrespective of the combinations above.

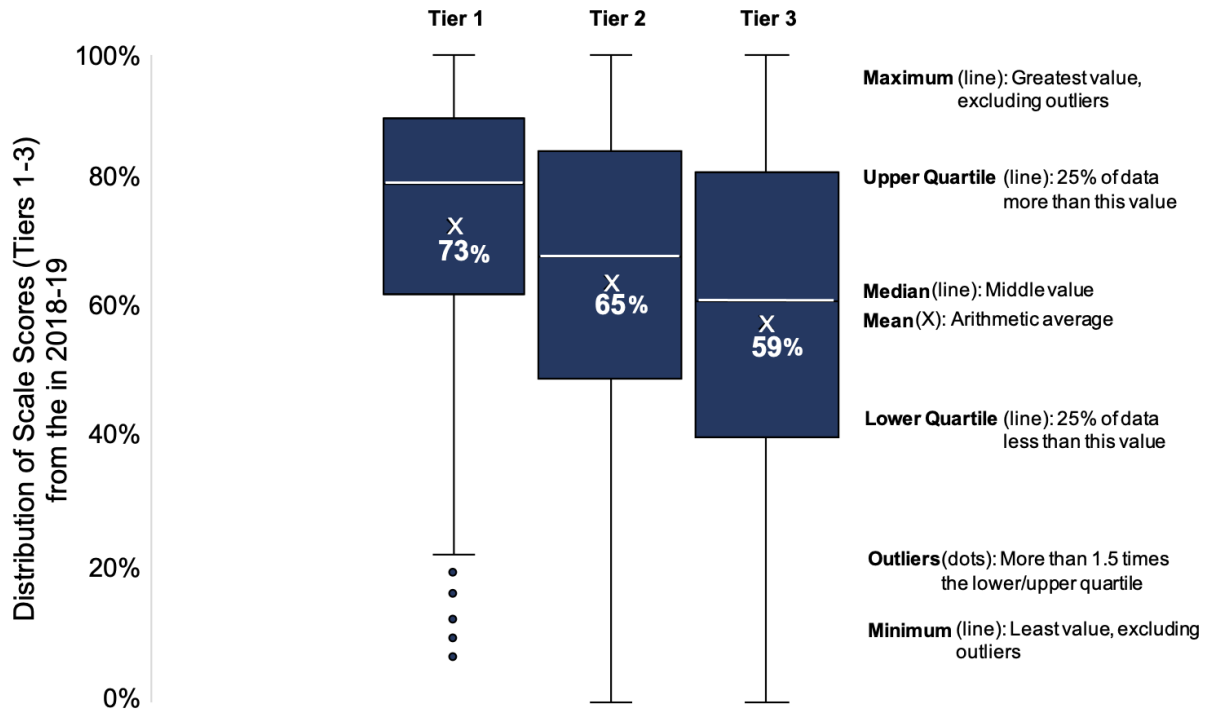
Figure 2. SWPBIS TFI Tier 1 Scale was Assessed More Often than Tiers 2 and 3



3. What are the average scores at each tier of the SWPBIS TFI?

Results are shown in figure 3. For the 646 schools that assessed Tier 1 at some time during the school year, the average score on the Tier 1 scale was 73% (SD = 22 percentage points). Of the 474 schools that assessed Tier 2, the average score on the Tier 2 scale was 65% (SD = 24 percentage points). Of the 392 schools that assessed Tier 3, the average Tier 3 score was 59% (SD = 26 percentage points).

Figure 3. Average SWPBIS TFI Scale Scores Decreases and Variability Increases From Tier 1 to 3



4. What subscales and items on the SWPBIS TFI have the highest and lowest scores?

Tier 1: Teams

As shown in figure 4, the average score for the 655 schools completing the Tier 1: Teams subscale was 79% (SD = 22 percentage points). Mean scores for the two items on this subscale were 1.61 for *Team Composition* and 1.50 for *Team Operating Procedures*.

Tier 1: Implementation

As shown in figure 4, the average score for the Tier 1: Implementation subscale was 73% (SD = 23 percentage points). Mean scores for individual items on this subscale ranged from 1.72 for *Behavioral Expectations* to 1.25 for *Student/Family/Community Involvement*.

Tier 1: Evaluation

As shown in figure 4, the average score on the Tier 1: Evaluation subscale was 74% (SD = 25 percentage points). Mean scores for individual items on this subscale ranged from 1.65 for 1.12 *Discipline Data* to 1.20 for 1.15 *Annual Evaluation*.

Figure 4. Average Tier 1 Subscale Scores Based on School's Highest SWPBIS-TFI Total Score Show All Three Subscales Met the 70% Scale Fidelity Threshold

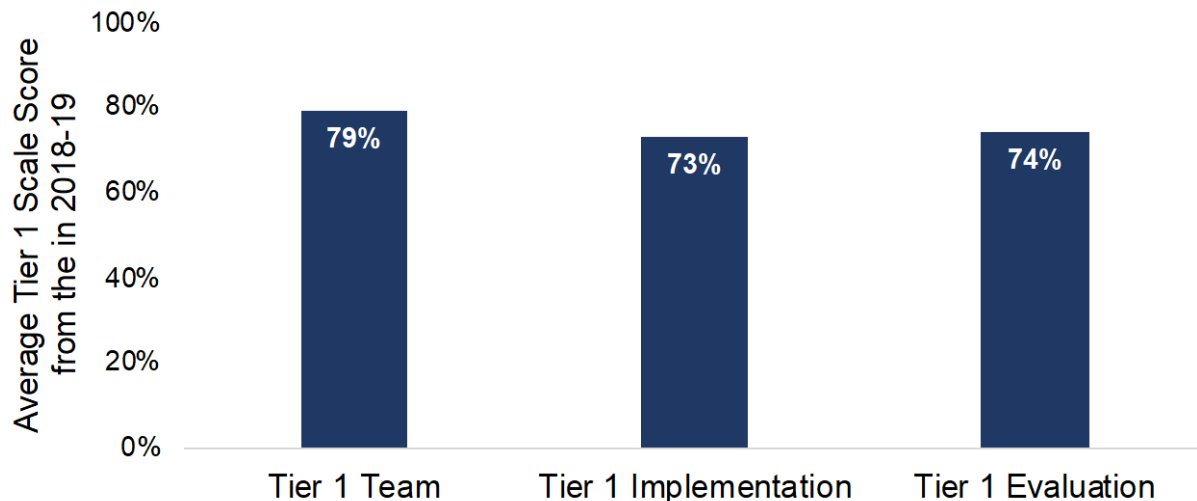


Table 1. Average Scores Across Items Within Tier 1 Subscales

Subscale	Item	Item Description	Score Average
Teams	1.1	Team Composition	1.50
Teams	1.2	Team Operating Procedures	1.61
Implementation	1.3	Behavioral Expectations	1.72
Implementation	1.4	Teaching Expectations	1.54
Implementation	1.5	Problem Behavior Definitions	1.51
Implementation	1.6	Discipline Policies	1.41
Implementation	1.7	Professional Development	1.35
Implementation	1.8	Classroom Procedures	1.46
Implementation	1.9	Feedback and Acknowledgement	1.46
Implementation	1.10	Faculty Involvement	1.37
Implementation	1.11	Student/Family/Community	1.25
Evaluation	1.12	Discipline Data	1.64
Evaluation	1.13	Data-based Decision Making	1.27
Evaluation	1.14	Fidelity Data	1.61
Evaluation	1.15	Annual Evaluation	1.20

Tier 2: Teams

As shown in figure 5, the average score for the 474 schools completing the Tier 2: Teams subscale was 76% (SD = 23 percentage points). Mean scores for individual items on this subscale ranged from 1.71 for *Team Composition* to 1.34 for *Request for Assistance*.

Tier 2: Interventions

As shown in figure 5, the average score on the Tier 2: Interventions subscale was 71 (SD = 23 percentage points). Mean scores for individual items on this subscale ranged from 1.73 for Access to Tier 1 Supports to 1.20 for Professional Development.

Tier 2: Evaluation

As shown in figure 5, the average score on the Tier 2: Evaluation subscale was 58% (SD = 27 percentage points). Mean scores for individual items on this subscale ranged from 1.10 for Student Performance Data to 0.86 for Fidelity Data.

Figure 5. Average Tier 2 Subscale Scores Based on School's Highest SWPBIS-TFI Total Score Show the Evaluation Subscale did not Meet the 70% Scale Fidelity Threshold

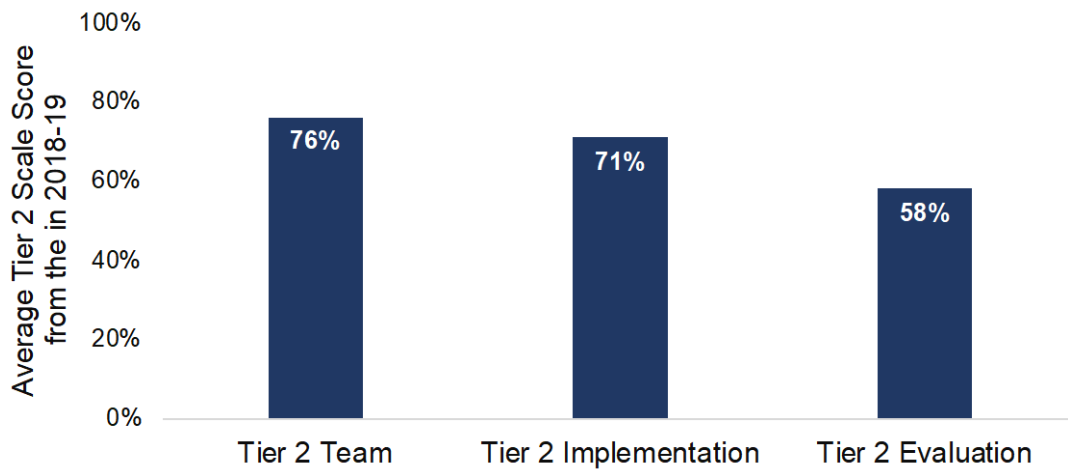


Table 2. Average Scores Across Items Within Tier 2 Subscales

Subscale	Item	Item Description	Score Average
Teams	2.1	Team Composition	1.71
Teams	2.2	Team Operating Procedures	1.49
Teams	2.3	Screening	1.44
Teams	2.4	Request for Assistance	1.34
Implementation	2.5	Options for Tier II Interventions	1.29
Implementation	2.6	Tier II Critical Features	1.31
Implementation	2.7	Practices Matched to Student Need	1.37
Implementation	2.8	Access to Tier I Supports	1.73
Implementation	2.9	Professional Development	1.20
Evaluation	2.10	Level of Use	1.07
Evaluation	2.11	Student Performance Data	1.10
Evaluation	2.12	Fidelity Data	0.86
Evaluation	2.13	Annual Evaluation	1.01

Tier 3: Teams

As shown in figure 6, the average score for the 392 schools completing the Tier 3: Teams subscale was 70% (SD = 25 percentage points). Mean scores for individual items on this subscale ranged from 1.52 for *Team Composition* to 1.30 for *Team Operating Procedures*.

Tier 3: Resources

As shown in figure 6, the average score on the Tier 3: Resources subscale was 66% (SD = 24 percentage points). Mean scores for individual items on this subscale ranged from 1.42 for *Staffing* to 0.98 for *Professional Development*.

Tier 3: Support Plans

As shown in figure 6, the average score on the Tier 3: Support Plans subscale was 66% (SD = 28 percentage points). Mean scores for individual items on this subscale ranged from 1.55 for *Access to Tier 1 and Tier 2 Supports* to 1.08 for *Comprehensive Support*.

Tier 3: Evaluation

As shown in figure 6, the average score on the Tier 3: Evaluation subscale was 56% (SD = 26 percentage points). Mean scores for individual items on this subscale ranged from 1.09 for *Level of Use* to 0.87 for *Data System*.

Figure 6. Average Tier 3 Subscale Scores Based on School's Highest SWPBIS-TFI Total Score Show the Evaluation Subscale did not Meet the 70% Scale Fidelity Threshold

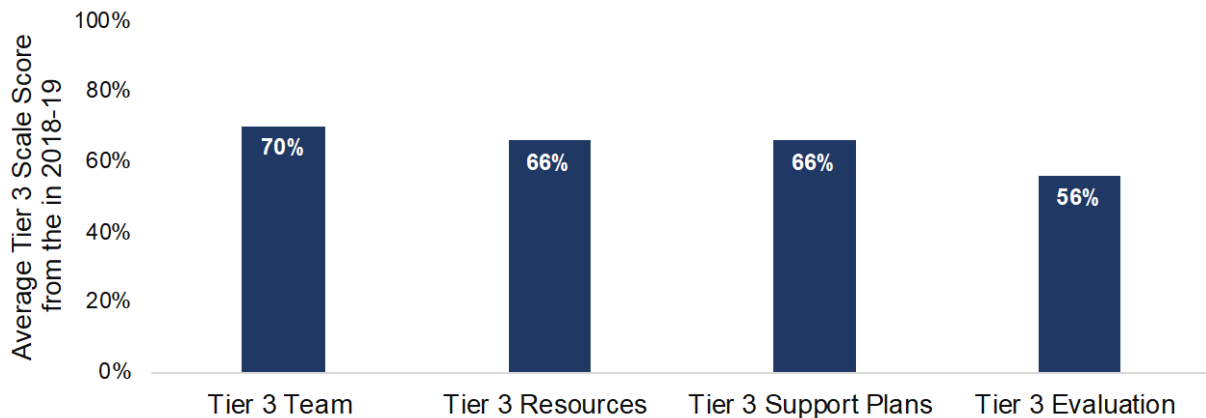


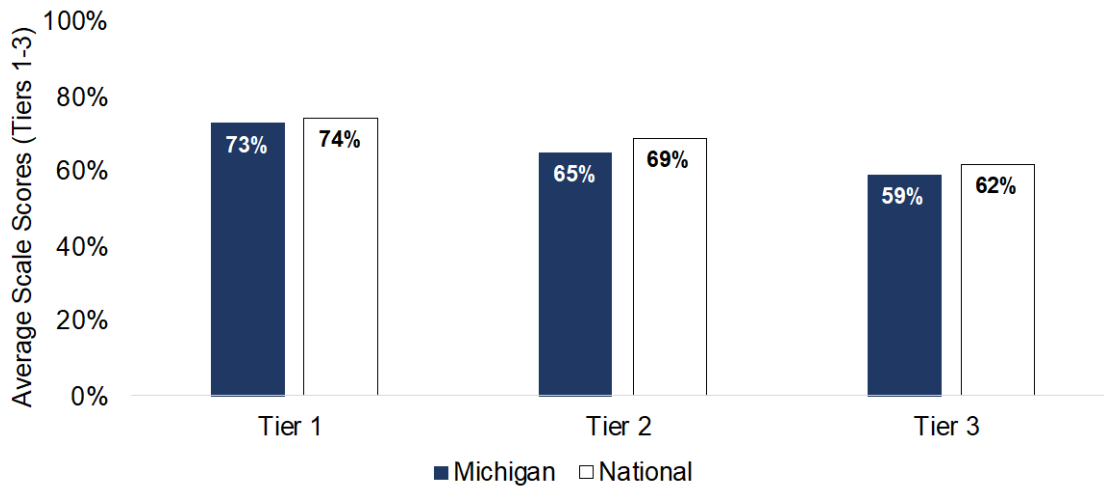
Table 3. Average Scores Across Items Within Tier 3 Subscales

Subscale	Item	Item Description	Score Average
Teams	3.1	Team Composition	1.52
Teams	3.2	Team Operating Procedures	1.30
Teams	3.3	Screening	1.33
Teams	3.4	Student Support Team	1.35
Resources	3.5	Staffing	1.42
Resources	3.6	Student/Family/Community Involvement	1.38
Resources	3.7	Professional Development	0.98
Support Plans	3.8	Quality of Life Indicators	1.11
Support Plans	3.9	Academic, Social, and Physical Indicators	1.28
Support Plans	3.10	Hypothesis Statement	1.17
Support Plans	3.11	Comprehensive Support	1.08
Support Plans	3.12	Formal and Natural Supports	1.11
Support Plans	3.13	Access to Tier I and Tier II Supports	1.55
Evaluation	3.14	Data System	0.87
Evaluation	3.15	Data-based Decision Making	1.02
Evaluation	3.16	Level of Use	1.09
Evaluation	3.17	Annual Evaluation	0.93

5. How do Michigan SWPBIS TFI results compare to National data?

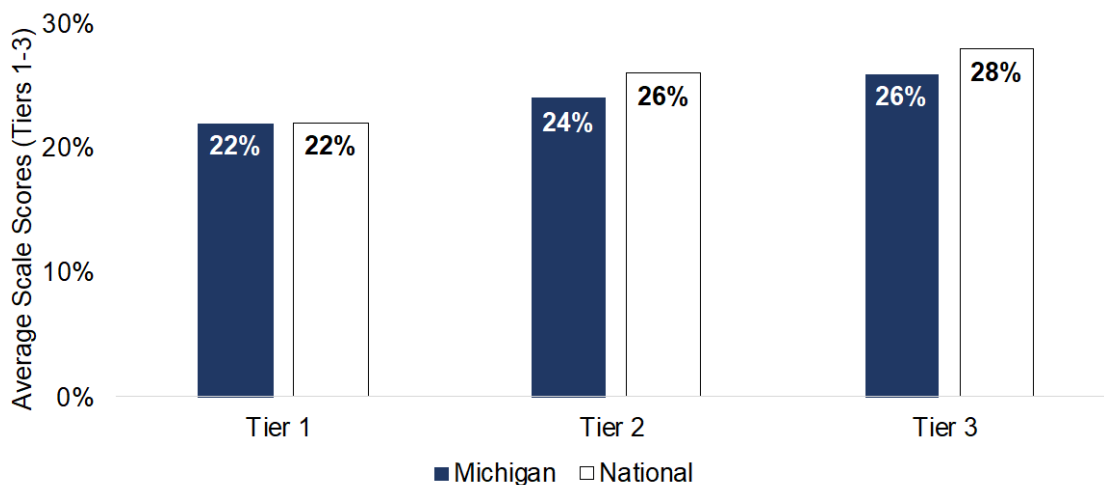
Results are shown in figure 7. Michigan schools' average SWPBIS TFI scores during 2018-19 were slightly lower compared to the National Average from 2017-18, but the differences were small (i.e., -2.66; Kittelman et al., 2018). The Tier 1 Scale Score average was above the 70% threshold for both Michigan schools (73%) and the National sample (74%). Tier 2 and 3 scores were below the 70% threshold for Michigan (65% and 59%, respectively) and the National average (69% and 62%, respectively). The data may suggest that Tier 3 is the most difficult or time-consuming for schools to fully implement, followed by Tier 2.

Figure 7. Michigan Schools' Average SWPBIS TFI Tier Scores Were Comparable to the National Average



As for variability across schools, Michigan schools' standard deviations were slightly lower on average (figure 8), suggesting Michigan schools were more similar in their implementation. Averaging across tiers, the differences were minor (i.e., -1.33), suggesting that Michigan schools were quite similar to the National standard deviation. Specifically, Michigan and the National standard deviation for Tier 1 were identical at 22%; at Tier 2 Michigan's standard deviation was 24% and nationwide was 26%; and at Tier 3, Michigan's standard deviation was 26% and nationwide was 28%.

Figure 8. Michigan Schools' Variability of SWPBIS TFI Tier Scores Were Comparable to the National Average



Discussion

The measurement of implementation fidelity helps to demonstrate the impact of professional learning and provides context for interpreting student outcome data. Schools that participate in professional learning for MTSS/PBIS and commit to implementation should be using a fidelity measure, such as the SWPBIS TFI, to monitor implementation and make improvements,

minimally once per school year. This evaluation brief can be used by educators across the educational cascade.

Schools

Schools can use these results to understand how their SWPBIS TFI administration schedule and scores compare to other schools in the state. If schools are just getting started with Tier 1, they can use the evaluation results to anticipate upcoming challenges they may need to plan for with Tier 2 and 3 implementation. Schools that are performing better than statewide patterns should celebrate their accomplishments and consider how they will sustain their implementation. They may choose to share their successes and examples within their district, region, or with state leaders so that others can benefit from their learning.

Districts and Intermediate School Districts

Districts and Intermediate School Districts can use these results to understand how schools in their area compare to other schools in the state. They can use the results to predict the implementation supports that schools will need as they work to implement and sustain MTSS/PBIS. Districts and ISDs may seek to learn from schools in their area with successful implementation across multiple Tiers and then share resources across the district or region. Districts and ISDs may reach out to the MiMTSS TA Center and the Michigan Department of Education to request supports in areas of MTSS/PBIS implementation that their local schools are struggling to fully implement. If districts and ISDs are providing their own MTSS/PBIS professional learning to schools, they can use these statewide data to design professional learning materials that will address common needs that we see in Michigan schools.

MiMTSS TA Center and Michigan Department of Education

The MiMTSS TA Center analyzes these data to inform professional learning. For instance, Content Specialists working to develop and refine the online modules for SWPBIS TFI Facilitator certification are using the results to identify which items on the SWPBIS TFI to focus on when designing the online courses. Items with the lowest scores were selected to be highlighted with example products, additional instruction, review, and explanation, and became the focus of in-course assessments.

Data from this report suggest that schools may need more intensive and sustained supports to fully implement Tier 2 and 3 PBIS systems, practices, and data. In addition, item analysis helps to identify the specific concepts that schools may need more support with, such as more explicit guidance, worked examples, and more opportunities to practice and receive feedback. These resources can be embedded within professional learning materials and offered as stand-alone resources. Specifically, these results were used when designing the online training for SWPBIS TFI Facilitators. Items with low average scores from this report were selected to illustrate specific examples and challenging points when preparing SWPBIS TFI Facilitators.

The TA Center can also offer clearer guidance on suggested administration schedules for the SWPBIS TFI. Once per year may be sufficient for schools that have achieved the 70% fidelity thresholds and are looking to make continuous adjustments for sustained implementation. Once per year might also be sufficient if it represents baseline data for schools that are just getting started with PBIS training and implementation. Schools in between those two ends of the implementation continuum may need to use a fidelity tool more frequently. However, schools

are unlikely to benefit from using the SWPBIS TFI 5-6 times per year if they are focused on implementing and monitoring their action plans after each SWPBIS TFI administration.

The MiMTSS TA Center also reports statewide fidelity data (i.e., this evaluation brief) to the Michigan Department of Education and other funding agencies to demonstrate the impact of the TA Center's supports to the field, to identify shared priorities, and to work together to address any potential barriers to improving MTSS implementation fidelity.

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