Assessment Practices Within a Multi-Tiered System of Supports

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Innovation Configuration for Assessment Practices Within a Multi-Tiered System of Supports

This innovation configuration (IC) features a matrix that may help guide teacher preparation faculty and professional development providers in the development of the appropriate use of assessment within a multi-tiered system of supports (MTSS) framework. This matrix appears in the appendix of this document.

An IC is a tool that identifies and describes the major components of a practice or innovation. With the implementation of any innovation comes a continuum of configurations of implementation from non-use to the ideal. ICs are organized around two dimensions: essential components and degree of implementation (Hall & Hord, 1987; Roy & Hord, 2004). Essential components of the IC—along with descriptors and examples to guide application of the criteria to course work, standards, and classroom practices—are listed in the rows of the far left column of the matrix. Several levels of implementation are defined in the top row of the matrix. For example, no mention of the essential component is the lowest level of implementation and would receive a score of zero. Increasing levels of implementation receive progressively higher scores.

ICs have been used in the development and implementation of educational innovations for at least 30 years (Hall & Hord, 2001; Hall, Loucks, Rutherford, & Newton, 1975; Hord, Rutherford, Huling-Austin, & Hall, 1987; Roy & Hord, 2004). Experts studying educational change in a national research center originally developed these tools, which are used for professional development (PD) in the Concerns-Based Adoption Model (CBAM). The tools have also been used for program evaluation (Hall & Hord, 2001; Roy & Hord, 2004).

Use of this tool to evaluate course syllabi can help teacher preparation leaders ensure that they emphasize proactive, preventative approaches instead of exclusive reliance on behavior reduction strategies. The IC included in Appendix A of this paper is designed for teacher preparation programs, although it can be modified as an observation tool for PD purposes.

This IC was developed by the National Center on Intensive Intervention (NCII) and the Collaboration for Effective Educator, Development, Accountability, and Reform (CEEDAR) Center. ICs are extensions of the seven ICs originally created by the National Comprehensive Center for Teacher Quality (NCCTQ). NCCTQ professionals wrote the above description.

The *Individuals with Disabilities Education Act* (IDEA, 2018) and the *Every Student Succeeds Act* (ESSA, 2015) place an emphasis on the use of a multi-tiered system of supports (MTSS) to increase all learners' access to effective academic and behavioral instruction. Within MTSS, student-level data are used to match instruction to student needs and for frequent progress monitoring so that struggling students are identified early and provided services promptly. To accomplish this task, educators need to use academic and nonacademic student assessment data to both inform and improve instruction. A recent study identified 23 studies meeting rigorous standards of evidence that found teachers' use of formative assessment has been shown to have a significant and positive effect on student learning in mathematics, reading, and writing (Klute, Apthorp, Harlacher, & Reale, 2017). However, research also suggests that teachers often struggle with analyzing and interpreting assessment data, and their likelihood of using data in decision making is affected by how confident they feel about their knowledge and skills in data analysis and data interpretation (U.S. Department of Education, 2008; 2016). Likewise, studies suggest that teachers' fundamental assessment and measurement knowledge is insufficient (Supovitz, 2012). Yet, reports continue to indicate that teacher preparation programs generally do not include data literacy knowledge and skills (data analysis or data-driven decision-making processes) within their coursework or field experiences (Choppin, 2002; Mandinach & Gummer, 2013).

In 2014, the Data Quality Campaign (DQC; see https://dataqualitycampaign.org/) defined data literacy and recommended that states include data literacy skills in their teacher preparation policies. Since then, research has emerged, including suggestions about how preparation programs can integrate data literacy knowledge and skills within their coursework and field experiences, citing the key role that teacher educators play in developing the data literacy skills

of teachers (Madinach & Gummer, 2016; Salmacia, 2017). Nonetheless, change within preparation programs has been slow (Bocala & Boudett, 2015; Mandinach, Friedman, & Gummer, 2015). Ensuring that teachers are comfortable with and proficient in utilizing different types of data to make instructional decisions takes time, extending beyond preservice into inservice, and includes multiple practice-based opportunities to hone the skills and confidence needed to support instruction and learning (Data Quality Campaign, 2014; Mandinach & Gummer, 2013). This degree of data literacy cannot be replaced with technological advancements of data systems and tools but is, rather, essential to teachers' expertise and ability to operate effectively within a schoolwide data culture (Mandinach & Gummer, 2016). Teacher educators and programs have an important responsibility to equip preservice teachers with the knowledge and skills to administer, score, and interpret a variety of assessments to support data-based educational decision making.

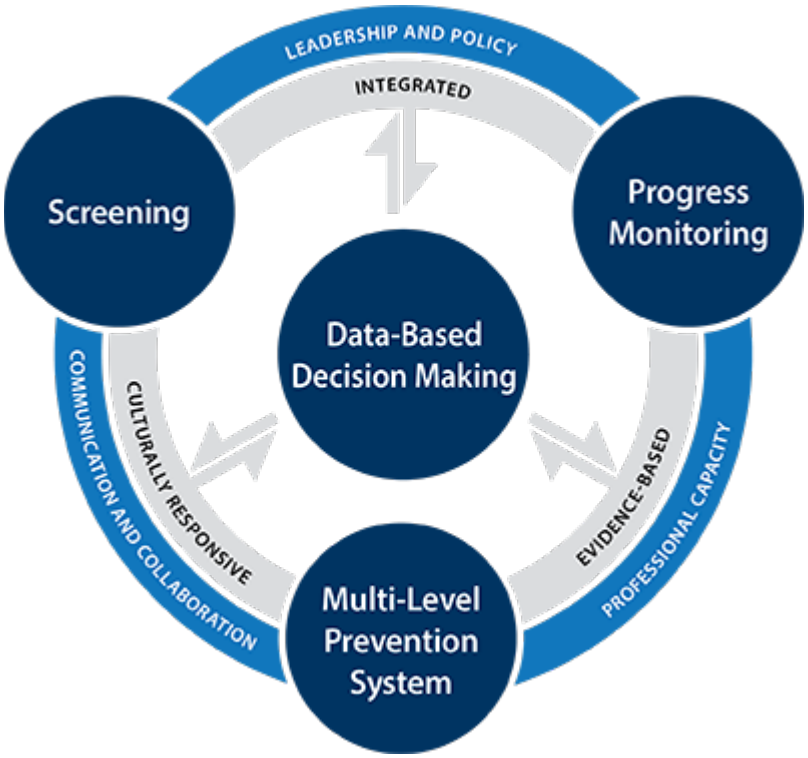
This innovation configuration (IC) can serve as a foundation for strengthening existing preparation programs so that educators exit with the ability to use various forms of assessment to make data-based educational and instructional decisions within an MTSS. The expectation is that these skills can be further honed and supported through inservice as practicing teachers As such, this IC examines the following:

- Foundations of MTSS Assessment
- Universal Screening
- Progress Monitoring
- Intensifying Instruction Using Data-Based Individualization (DBI)
- Using MTSS Data

Foundations of MTSS Assessment

MTSS is a prevention framework designed to integrate assessment data and intervention within a multi-level prevention system to maximize student achievement and support students' social, emotional, and behavior needs from a strengths-based perspective (Center on Multi-Tiered Systems of Support [MTSS Center], 2020). The MTSS Center (www.mtss4success.org), formerly the Center on Response to Intervention, identified four essential components for an effective MTSS framework (see Figure 1). These components, all of which depend on MTSS data sources, include universal screening, progress monitoring, data-based decision making, and the multi-level prevention system. Figure 1 demonstrates the relationship among these four components.

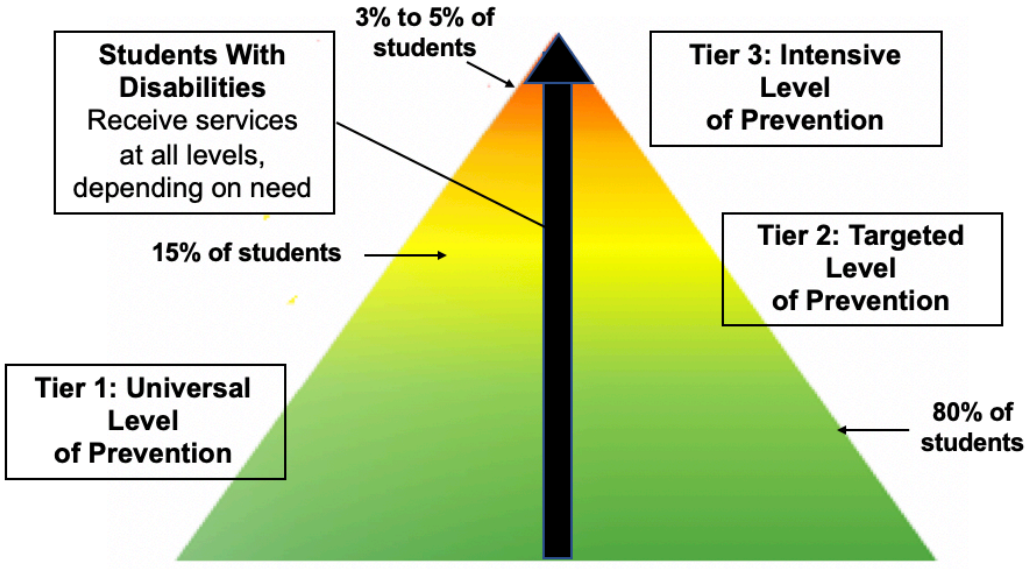
Figure 1. Multi-Tiered System of Supports Center's Four Essential Components



The multi-level prevention system includes three levels—or tiers—of intensity as shown in Figure 2. Tier 1 refers to core programming that addresses academic, social, emotional, and

behavioral curriculum, instruction, and supports aligned to grade-level standards and student needs. With Tier 2, schools provide small-group, standardized academic interventions or targeted behavioral or mental health supports using validated intervention programs. Tier 3 includes the most intensive supports for students with severe and persistent learning and/or behavioral needs, including students with disabilities. Students with disabilities receive supports at all levels of the system, depending on their individualized needs.

Figure 2. Breakdown of Multi-Level Prevention System Within Multi-Tiered Systems of Support



Assessment data play a key role in successful implementation of MTSS. Teachers with the requisite knowledge and skills can use these data to understand students' learning, and apply that information to make needed instructional adjustments and provide additional supports. To do so, teachers should use multiple data sources to develop a comprehensive understanding of a student's strengths and needs and to continuously analyze, revise, and enhance instruction and interventions to improve the learning environment and promote student success (McLesky et al., 2017). Teachers also can use the MTSS assessment data to monitor students' progress upon

receiving supports, evaluate the evidence of interventions and supports, and assess core programming effectiveness.

Effective educators depend on summative, formative, and diagnostic data to implement the essential components of MTSS. **Summative assessments** are a type of outcome measure that provide data at the end of student learning and are generally based on end-of-year or unit outcomes outlined in state standards and benchmarks. Common examples are state- or district-wide assessments. Teachers use summative assessment data to judge the effectiveness of their teaching and make adjustments to improve the learning of future students (Ainsworth &Viegut, 2006). Statewide summative assessments are often used to determine if students have met state standards and, in some cases, to make high-stakes decisions about grade promotion or graduation (Burke, 2010). They also may be used to inform decisions regarding student programming and the overall effectiveness of MTSS.

While summative assessments serve as an indicator of learning, **formative assessments** give insight into whether or not the progress is occuring (Burke, 2010; Klute et al., 2017). They provide data about student learning during instruction and help teachers determine if instruction is effective and/or *when* to adjust instruction. They also support evaluation of instruction for individual or groups of students. Formative assessments used within an MTSS may include both informal and formal measures. Many teachers are familiar with informal measures of learning that provide immediate feedback about student learning, such as observations of behavior, checklists, or writing samples. Effective teachers use informal formative assessment to monitor the progress of their students during instruction so that they can reteach or adjust their instruction as needed. Formal formative assessments in MTSS include universal screening and progress monitoring validated measures. These assessments, which will be discussed in greater detail in

later sections, differ from informal assessments because they require valid and reliable tools delivered in a standardized way.

Diagnostic assessments differ from formative assessments in that they help educators identify strengths and weaknesses and determine *how* to adjust instruction and provide data about students' current knowledge and skills. They also can help identify the appropriate intervention platforms and to inform adaptations that would benefit an individual or group of students (Harlacher, Nelson, Walker, & Sandford, 2010).They can be informal, which are easy-to-use tools that can be administered with little training, or standardized, which must be delivered in a standard way by trained staff. Standardized diagnostic tools, which require more time to administer and interpret, may be required for students who continually demonstrate a lack of response or who require special education. Because diagnostic data provide detailed information about individual student learning, assessments are typically administered only to some, not all, students (Torgesen & Wagner, 1998). For examples of formal diagnostic tools used within an MTSS, visit the National Center on Intensive Intervention's (NCII's) table of diagnostic tools (NCII, n.d.a).

Assessment Within the Tiers

Different types of assessments are used at different levels within the multi-level prevention system. At Tier 1, educators use a balance of different assessments to make student-, class-, school-, and district-level decisions. Universal screening assessments should be validated, standardized, and administered to all students at least two times (e.g., beginning and middle) during the school year (Gersten et al., 2009. Screening data, which may be considered a type of formal formative assessment, help educators identify students who may need additional assessment and instruction, and they can help assess the impact of core programming for all

students. Summative data, like state assessments and end-of-unit tests, assist teachers in program decisions and evaluation of student performance. Informal progress and other classroom data support teachers in making daily instructional decisions, such as differentiating instruction for struggling students, reteaching or preteaching, and pacing and feedback.

Despite the delivery of high-quality core programming, some students will need supplemental supports. As the intensity and frequency of these supplemental instructional or intervention supports increase, so do the intensity of assessments. Although screening data support identification of students who may need Tier 2 and Tier 3 supports, additional data are needed to inform instructional decisions for students who require intervention. Christ and Silberglitt (2007) found that six to nine data points were necessary for making decisions about students' response to supports at Tiers 2 and 3. As result, formal progress monitoring data represent a key data source for decision making at these levels of intensity. Diagnostic data also are important for ensuring that interventions are matched to student needs and supporting the hypothesis development necessary for intensifying interventions. Given the intensity of assessment data collection and use, Tier 2 and 3 assessments are generally limited to those students receiving supplemental and intensive interventions

Universal Screening

The purpose of universal screening is to evaluate the efficacy of core programming; to identify students who may be at risk for poor learning or social, emotional, and behavioral outcomes (i.e., not meeting end-of-year benchmarks or schoolwide expectations); and to identify students who need more intensive services provided through Tier 2 or 3 intervention. Effective implementation of universal screening requires that educators possess the knowledge and skills of screening's three critical features (Center on RTI, 2014):

1. Validated screening procedures
2. Risk verification
3. Valid and reliable screening tools

Validated screening procedures ensure that all students are screened with fidelity more than once a year (Center on RTI, 2014). Gersten and colleagues (2008; 2009) noted that universal screening should occur for all elementary students at least twice a year, generally the beginning and middle of the school year. However, it is common for schools to conduct screening assessments three times a year (i.e., fall, winter, and spring). The spring screening assessment data are generally used for program evaluation, program planning, and continuous improvement rather than identifying individual risk status. In secondary settings, many schools use early warning systems to identify students at risk for not meeting desired educational outcomes, such as school completion, academic success, and college and career readiness (American Institutes for Research, 2019; U.S. Department of Education, 2016). An early warning system uses research-based indicators, such as attendance or course grades, to identify students at risk. Regardless of the procedures used, screening should include the use of cut scores or benchmarks to support risk identification. Over the last decade, many published tools or early warning systems have established national norms, indicators, or growth rates to support educators in making screening decisions.

Risk verification is a critical feature of a validated screening process. The NCII screening tools charts (NCII, 2019) make clear that existing screening tools are not 100% accurate. As a result, schools risk over- and under-identifying students in need of additional intervention and assessment, which can be costly. The MTSS Center recommends that at least two data sources are used to confirm students' risk status through triangulation of data (Center on RTI, 2014).

These data may include measures of classroom performance, performance on state assessments, diagnostic data, or short-term progress monitoring data.

NCII defines screening as a process that uses "tools with convincing evidence of classification accuracy, reliability, and validity to identify students who may require intensive intervention efforts to meet their academic needs" (2020, p. 2). Educators should be able to articulate the existing evidence for their screening tools (Center on RTI, 2014) and understand that screening tools vary by domain and age span. At the elementary grades, educators select screening tools that cover critical math instructional objectives (Gersten et al., 2009) and indicators of poor literacy outcomes (Gersten et al., 2008). At the secondary level, early warning systems use several validated indicators—course performance, attendance, and behavior/suspension data—to identify students at risk (Allensworth & Easton, 2005; 2007). When selecting appropriate screening tools, educators must consider their needs, context, and desired outcomes. Existing resources, including the Selecting an MTSS Data System and NCII Screening Tools Charts, are useful tools for building educators' capacity to select appropriate tools for MTSS screening.

Selecting a Screening Tool

To select and effectively use screening data, educators need knowledge and skills to analyze the technical adequacy and usability of potential screening tools. At a minimum, screening tools must be valid and reliable, strongly correlate with relevant outcomes, and accurately predict risk status, also known as classification accuracy (NCII, 2019). Classification accuracy is important because it provides essential information about how well the screening tool accurately classifies students as at risk or not at risk. The classification accuracy is impacted by the tool's sensitivity, or the probability of correctly identifying a student at risk, and specificity,

or the probability of correctly identifying a student not at risk. Increasing educators' understanding of the technical standards necessary for screening tools can help them not only select valid and reliable tools for screening but effectively use these data for instructional and program decision making. NCII publishes information about the technical rigor of published tools and, in collaboration with the National Center on Improving Literacy (NCIL), shares resources to help build educators' understanding of these and additional technical standards necessary for screening tools (see Box 1).

Box 1. Educator Tools for Understanding and Evaluating the Technical Adequacy of Screening Tools

NCII's Series: *Understanding Screening: What Do the Technical Standards Mean?*

1. **Classification Accuracy**—Extent to which the tool accurately groups student into at risk and not at risk
2. **Validity**—Extent to which the screening tool measures what it is supposed to measure
3. **Reliability**—Extent to which the tool results in consistent information
4. **Statistical Bias**—Extent to which the screening assessment is biased against different groups of students
5. **Sample Representativeness**—Extent to which a group closely matches the characteristics of its population as a whole

NCII's *Screening Tools Charts*

1. Academic Screening Tools Chart
2. Behavior Screening Tools Chart

When selecting screening tools, educators also must consider the usability of the tool, particularly the administration format, administration and scoring time, and scoring format. Usability can impact students' time away from instruction or intervention as well as increase the burden on the teacher or administrator. Educators also should select tools that have established benchmarks, or cut scores, as well as recommended decision rules for interpreting the screening data (NCII, 2019). Decision rules may include how students are identified as at risk or not at risk, rules for risk verification, or rules for administration to specific groups of students. Although

each tool will likely have its own decision rules, educators must be able to understand and apply the rules associated with the selected tool.

Understanding the appropriateness and location of screening cut scores or benchmarks also is an essential skill for educators. A **cut score** is a score on a screening measure that divides students who are considered potentially at risk from those who are not at risk (Gandhi, 2019). Screening cut scores help teams make decisions about who will receive additional intervention and assessment as well as assess the efficacy of core programming. When assessing Tier 1 effectiveness, teams look for evidence that at least 80% of students are at or above the established cut score. Cut scores, and information about how they were established, are generally found in the technical manuals associated with the tool. This information also can be found for reviewed tools on the NCII screening tools charts (NCII, 2019).

How the cut score is set may impact ***how many*** and ***which*** students are identified as at risk. Thus, it is important to use realistic cut scores that will help distinguish between students who are struggling in academics and/or behavior as opposed to those students who are making adequate progress.

Administering and Scoring Screening Assessments

For effective implementation of MTSS, educators must possess the knowledge and skills for administering and scoring screening tools. Screening instruments are generally divided into two administration formats: individual or group administration. Administration and scoring times vary by the tool and can range from 1 minute to 30 minutes. Computer-adapted screening tools, which are typically administered in group settings, often take longer to administer because there are more items. Individual measures, such as curriculum-based measurement (CBM; Deno, 1985) or the Student Risk Screening Scale (SSRS; Drummond, 1994), can take as little as 1–2

minutes to administer and score per student. CBM tools are commonly used to screen literacy but also be used to screen mathematics, spelling, and writing (Hosp, Hosp, & Howell, 2007). Behavior screeners, which often depend on teacher ratings, can screen for internalizing and externalizing behaviors (see Lane et al., 2015; Lane et al., 2016). Educators must understand that the administration procedures of a tool are dependent on its purpose, content area, and format.

The usefulness of screening data depends on the accuracy of the data. Educators must have fidelity to each component of the screening process. Taylor (2009) found that some educators struggle with consistently and accurately administering, scoring, and entering data. Errors in scoring administration are the most common and can result from giving incorrect instructions, providing inappropriate assistance, altering assessment protocols (e.g., increasing assessment time), or making changes due to the environment. Scoring errors, can result when an individual incorrectly scores a student's response or uses inconsistent scoring procedures. Data entry errors, although less common, can result while entering and transferring data. Over the last two decades, advances in technology have led to the availability of automatic scoring, which can reduce both scoring and data entry errors. Despite the increased technological capability, all educators should understand how to manually score academic and behavior tools, where appropriate. Understanding how tools are scored can help teams interpret and use individual or group screening data for decision making. Errors can also be reduced by providing ongoing training and practice opportunities coupled with coaching (NCII, n.d.b.). Adhering to administration and scoring requirements also can improve the quality of the screening data.

Analyzing and Using Screening Data

Many screening tools are available as part of a comprehensive data system and allow users to access summary reports of school, grade, class, and individual screening data (Center on

RTI, 2014). Because each MTSS data system may summarize and report data differently, educators need to possess the knowledge and skills of how these data may be reported and how different reports may be used to support decision making. As mentioned previously, educators should be able to first articulate the evidence for their selected tool and then ensure the data are accurate.

Screening data can support decision making at all levels of an education system, from the district level to the student level. Prior to analysis, educators should clarify how the data will be used and why they will be used in that way. District teams may use screening data to problem-solve and make decisions about districtwide program improvement and curriculum, innovation and sustainability, allocation of resources, and equitable services and supports across schools. School teams may use screening data to identify school- and grade-level trends, monitor the effectiveness of schoolwide curriculum and supports, determine areas of need, and provide guidance on how to set measurable schoolwide goals. Using data to improve district- and school-level supports can improve the infrastructure and supports necessary for educators to provide high-quality instruction. Teachers may use classwide screening data to support decisions regarding instructional grouping, placement in the next grade level, effectiveness of core programming, and identification of students in need of additional supports at Tiers 1, 2, and 3 (Kovaleski & Pedersen, 2008). Prior to using screening data for identifying individual students for supplemental supports at Tiers 2 and 3, educators should use screening data to evaluate whether core instruction at Tier 1 is effective for most students and develop a plan for improvement (Metcalf, n.d.).

Decisions about screening risk status should be operationalized with clear, established decision rules prior to administration of the tool. Written decision rules or decision trees can

facilitate the analysis and use of screening data. For example, VanDerHeyden (n.d.) suggested that when large numbers of students are identified as at risk during screening, educators should examine the adequacy of their core instruction at the school, grade, or class level. Once a plan is in place to improve core programming, teams can move to identifying students in need of group or individualized interventions through validated risk verification procedures, including progress monitoring.

Progress Monitoring

Progress monitoring is an essential feature of MTSS assessment that has been shown to positively impact student performance in academics and behavior (see Bruhn, McDaniel, Rila, & Estrapala, 2018; Gersten et al., 2008; Gersten et al., 2009). Progress monitoring data can be used to (1) confirm risk status and identify students who need additional intervention or assessment, (2) estimate rates of improvement, and (3) compare the efficacy of different forms of instruction (Stahl & McKenna, 2012). Progress monitoring data help teachers determine *if* and *when* instructional changes are needed. However, they are generally not sufficient on their own for determining the nature of the changes needed. Progress monitoring should not be confused with informal monitoring progress essential for daily instruction. Effective teachers use informal, often unstandardized, assessment approaches to make immediate, real-time instruction changes. This differs significantly from **progress monitoring** within MTSS. Progress monitoring is administered to only a few students, generally no more than 20% of the student population, using standardized, valid, and reliable tools. Progress monitoring requires repeated assessment over time (e.g., weekly for six to nine data points) that are graphed and compared with a goal set using validated strategies. Validated progress monitoring data can be used as part of entitlement decisions (e.g., eligibility for special education services) and to determine the effectiveness of an

intervention or instructional program. Effective implementation of progress monitoring requires identification of an appropriate valid, reliable assessment tool and implementation of standardized procedures for collecting data (Center on RTI, 2014).

Standardized procedures should include:

- Frequency of data collection and analysis
- Procedures for monitoring fidelity
- Procedures for setting goals

In most cases, progress monitoring assessments should be administered at least monthly for students identified for Tier 2 academic interventions and supports, and at least weekly for students identified for intensive intervention at Tier 3. Depending on the target behavior, progress monitoring for nonacademic skills and behaviors may be more frequent (daily, hourly). Like screening, there should be procedures in place to ensure the accuracy of progress monitoring implementation. This includes confirming that the appropriate students are tested (as opposed to testing everyone), applying decision-making rules consistently to determine changes in intervention, and ensuring that scores are accurate by monitoring trends over time.

Selecting Progress Monitoring Tools

To select and effectively use progress monitoring data, educators need knowledge and skills to analyze the technical adequacy and usability of potential progress monitoring tools. At a minimum, progress monitoring tools must (1) have a sufficient number of alternate forms, (2) specify minimum acceptable growth, (3) provide benchmarks, and (4) possess validity and reliability for the performance score (NCII, 2019). Increasing educators' understanding of the technical standards necessary for progress monitoring tools can help them not only select valid

and reliable tools for progress monitoring but effectively use these data for individual instructional and program decision making.

Progress monitoring assessments should be short and frequent skill-based assessments that offer a snapshot of student learning related to the instructional objective across both academics and behavior. Like screening, progress monitoring tools vary by grade span and domain. Academic progress monitoring tools measure student academic growth over a set period of time, and behavior progress monitoring tools measure behavioral progress. When selecting progress monitoring tools to be used with students who are at risk, teachers need to understand that there are two common types of measures: single-skill mastery measures and general outcome measures (GOMs). These measures serve different purposes for teachers—single-skill mastery measures are measures of short-term or single skills, while GOMs are measures of student performance toward an end-of-year goal. The key difference between single-skill measures and GOMs is the comparability of data longitudinally, or the ability to look at data across time. With GOMs, educators can compare a student's score in May with their score in September or compare the student with their peers or a national benchmark. This cannot be done with single-skill measures because each subskill is tracked separately. GOMs also allow teachers to determine if students are retaining taught skills and generalizing to skills that have not yet been taught. Box 2 includes resources to support educators in selecting academic and behavioral progress monitoring tools.

Progress Monitoring Goal Setting

Before collection of ongoing progress monitoring data can occur, educators must understand how to establish **individual student goals.** Established progress monitoring goals and goal lines provide the basis for visually determining whether or not students' rate of growth is adequate. To set goals, educators must consider why and how the goal was set, how long the student has to achieve the goal, and what the student is expected to do when the goal is met.

Box 2. Educator Tools for Understanding and Evaluating the Technical Adequacy of Progress Monitoring Tools

Technical Adequacy of Progress Monitoring

1. **Validity**—Extent to which the progress monitoring tool measures what it is supposed to measure
2. **Reliability**— Extent to which the tool results in consistent information
3. **Bias Analysis**—Extent to which the assessment is biased against different groups of students
4. **Alternate Forms**—Requires at least 20 alternate forms and strong evidence for comparability of alternate forms

NCII's Progress Monitoring Tools Charts

1. Academic Progress Monitoring Tools Chart
2. Behavior Progress Monitoring Tools Chart

Establishing the **baseline score,** which shows the student's initial performance on the assessment, is the first step to setting a progress monitoring goal. Most published assessment tools provide instructions for establishing this baseline, and educators should review this information prior to administering the tool. Given that procedures vary, educators should understand two common approaches to establishing a baseline (Bailey & Weingarten, 2019): (1) use a student's performance score from universal screening, and (2) administer three probes, in a single sitting or over multiple time points, and select the median score, or the middle score.

Once a baseline is established using the tool's guidelines and/or one of the above approaches, educators need to understand how to set a learning or behavior goal for a student

prior to beginning an intervention. Educators should understand the differences between setting academic and behavior goals.

Academic Goal-Setting Strategies

For students who will be receiving Tier 2 academic supports, research suggests first considering the use of **end- or middle-of-year benchmarks** to set student performance goals (Shapiro, 2008). This goal-setting approach is considered the most simplistic option and is appropriate for most students receiving Tier 2 services. To set a student's goal, an educator must identify the grade-level benchmark score for the middle or end of the year, relative to a student's grade level or performance level. Educators should plan to use benchmarks as goal levels when the student is monitored at their enrolled grade level.

Academic goals may also be set using different methods than the benchmark goal-setting strategy previously described. Educators must know how to set goals based on rate of improvement (ROI) and/or the intra-individual framework, also referred to as the student's rate of improvement (SROI). ROIs often are normed (either nationally or locally), which helps educators compare an individual student's performance with a sample of students. These norms are often identified by the assessment developer as what would constitute appropriate growth. ROIs, in that sense, will vary based on what is being assessed. The standard formula for setting a goal using norms for weekly ROI is Goal = ROI × # Weeks + Baseline Score (Bailey & Weingarten, 2019).

A third goal-setting option uses an intra-individual framework that measures the student's previous ROI. Instead of using national benchmarks or norms, this approach uses the student's previous growth rate to calculate an ambitious individualized goal (Bailey & Weingarten, 2019). The NCII provides resources for establishing academic and behavior goals.

Behavior Goal-Setting Strategies

Goal-setting standards are often different for behavioral domains because there are no grade-level behavioral benchmarks/standards or preidentified rates of improvement as there are in academics. Thus, teams may need to identify and prioritize the target behavior(s) that will be monitored and facilitate consensus across all school team members about what the behavior of an individual student looks and sounds like. Consensus is necessary because behaviors can vary from setting to setting (e.g., school to home, class to class), present differently from child to child, and be viewed differently from one educator to another. Therefore, operationally defining behavior (i.e., specific, measurable, and observable) helps reduce potential subjectivity. Operational definitions can be derived from classroom observations: teacher, parent, and/or student interviews; anecdotal reports; frequency counts; or point sheets (Marx & Miller, 2020).

After a behavior is clearly and operationally defined, a progress monitoring tool should be piloted to determine its utility and sensitivity at measuring the behavior. Once the tool is determined accurate at measuring the behavior, baseline data should be collected. Horner and colleagues (2005) suggested three to five data points when setting a baseline using behavioral data.

At this stage, school teams should identify an appropriate goal will vary based on the target behavior being monitored and current levels of performance (i.e., baseline). In addition, educators must define responsiveness up front to support with evaluation. This definition will likely include a specified percentage of time or frequency during which we expect the student to perform. For example, if we operationally defined the behavior we are monitoring as demonstrating academically engaged behaviors and established that a student's baseline rate is 40% of a class period, we should set a goal for academic engagement at a rate commensurate to

peers in the class (likely at or around 80%). Goals should reflect behavior that is more similar to peers, not "perfect" behavior. As with academic progress monitoring, educators also should determine regular intervals when data will be reviewed to ensure the provision of supports and services (Miller, Riley-Tillman, Chafouleas, & Schardt, 2016).

Similar to academic progress monitoring data, teachers should be able to graph and analyze progress monitoring data for behavior. Educators should be able to determine students' responsiveness by analyzing baseline to intervention data using an examination of level, trend, and variability.

Administering and Scoring Progress Monitoring Tools

For MTSS, possessing the knowledge and skills for administering and scoring progress monitoring tools is essential. Academic and behavior tools are generally divided into three administration formats: individual, group, or computer administered. Administration and scoring times vary by tool and can range from 1 minute to 30 minutes (NCII, 2019). Computer-adapted progress monitoring tools, which are typically administered in group settings, often take longer to administer because there are more items. Individual measures, CBMs (Deno, 1985) or Direct Behavior Rating (DBR; Christ, Riley-Tillman, Chafouleas, & Boice, 2010) can take a little as 1–2 minutes to administer and score per student. Although measures of oral reading fluency are common, teachers also can collect progress monitoring data in mathematics, spelling, and writing using CBMs (Hosp, Hosp, & Howell, 2007).

The purpose of behavioral progress monitoring is similar to that of academic progress monitoring—to determine student responsiveness to instruction/intervention. Teachers need to understand that with behavior progress monitoring, it is critical to (1) relate the assessment to

the function (i.e., purpose) of a student's behavior, (2) select evidence-based interventions that align with the functions of behavior, (3) link assessment and intervention through ongoing progress monitoring, and (4) analyze data to determine the effectiveness of intervention and student responsiveness. Because behavior can occur throughout the school day and across settings, the frequency of behavioral progress monitoring may need to be higher than for academics, with progress monitoring occurring daily and/or hourly depending on the frequency, duration, latency, and/or intensity of the behavior being monitored.

Progress Monitoring Data Decision-Making Strategies

Progress monitoring data should be collected and graphed frequently to reflect student performance and allow instructional decisions and adaptations to be made sooner (Bangert-Drowns, Kulik, & Kulik, 1991). Educators must consider school resources and feasibility when establishing their progress monitoring schedules. It is recommended that teachers collect six to nine data points before making decisions about instructional progress and potential changes that need to be made to instructional methods (Christ & Silberglitt, 2007). How frequently teachers review progress monitoring data and make instructional decisions will depend on the frequency of data collection. For example, teachers may review behavior data that are collected daily every other week, while they may review academic data collected weekly every other month.

Teachers should possess the skills and knowledge to use validated approaches to analyzing progress monitoring data. Access to graphed progress monitoring data, whether paper and pencil or electronic, is essential for making decisions using common validated decision-making rules. The Four-Point Method offers teachers an easy method for analyzing whether students are making progress toward their goal (IRIS Center, 2020). For the most accurate

estimate of progress, teachers need as least six data points that are graphed against the goal line, or the line between the baseline and goal. The decision rules for the Four-Point Method are straightforward. If the last four data points are on or above the goal line, the teacher should continue the current program. If the last four data points are below the goal line, the student is identified as not on track to meet their goal and the teacher should engage in the problem-solving process to adapt or modify the intervention. For a more sensitive approach to analysis, teachers may use trend line analysis (NCII, 2012). A trend line, which requires at least eight data points to calculate, is a line on a graph that represents a line of best fit through a student's data points. Many published data systems calculate the trend line, although teachers can draw it by hand. The trend line is compared against the goal line to help inform responsiveness to intervention.

When teachers frequently analyze progress monitoring data for students receiving an intervention, they can determine whether students are making adequate progress to achieve their goal. If a student progresses well within a Tier 2 intervention over the course of 8–15 weeks, they may no longer require Tier 2 intervention (Stecker, Fuchs, & Fuchs, 2008). However, it is important that progress is still monitored at Tier I to make sure they can benefit adequately from the core program, without supplemental supports. If a student does not respond as desired to the Tier 2 intervention that is delivered with fidelity, an additional round of Tier 2 instruction may be needed, or a team may determine that more intensive, individualized intervention at Tier 3 is warranted (Stecker et al., 2008).

Intensifying Instruction Using Data-Based Individualization (DBI)

Research suggests that evidence-based interventions or validated programs are not universally effective and that about 5–10% of students will need more intensive intervention to succeed within an MTSS (Fuchs et al., 2008; NCII, 2013). Intensive interventions differ from

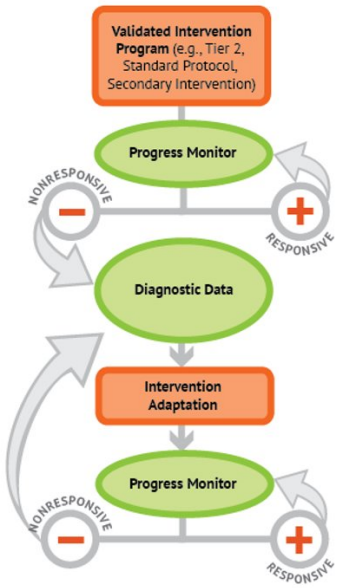
standardized protocol interventions common at Tier 2 in that they are driven by data and are characterized by increased intensity (NCII, 2020). In other words, their development and implementation are highly dependent on teachers' effective use of MTSS data, especially progress monitoring and diagnostic data.

To effectively implement intensive intervention through DBI, teachers need (1) training to effectively use data to design and intensify instruction, (2) multiple practice opportunities with feedback, and (3) coaching and support to apply data use skills. Intensive intervention is considered the most difficult component of MTSS to implement, especially when schools lack necessary Tier 1 and Tier 2 infrastructure and assessment practices (Ruffini, Miskell, Lindsay, McInerney, & Waite, 2016). DBI is one method to support educators in designing and implementing effective Tier 3 systems (Marx & Goodman, 2019). DBI is a validated process for individualizing and intensifying interventions for students with severe and persistent learning and behavioral needs (NCII, 2013).

The process requires the integration of validated interventions and assessments across the five steps (Peterson, Danielson, & Fuchs, 2019). NCII uses the graphic in Figure 3 to illustrate the progression of DBI, including the connections across assessment and instruction. The DBI process begins with a validated intervention program that is delivered in small groups or individually with fidelity. As part of effective delivery of the intervention, teachers will use informal, frequent measures of progress, such as observations, oral responses, or quick checks, to monitor the students' immediate response to the instruction. To monitor the students' overall response to the intervention, the teacher will use formal progress monitoring. Progress monitoring for intensive intervention is outlined in Step 2 of the DBI process as seen in Figure 3.

Teachers need skills and knowledge to develop progress monitoring or data collection plans for students receiving intensive intervention. The plan, which should be part of the overall student intervention plan, should include (1) the selected tool, (2) frequency of data collection, (3) person responsible, (4) progress monitoring goal, and (4) relevant decision rules for determining progress (e.g., review dates, number of data points). NCII provides a sample data plan within its Intervention Plan (For Small Groups or Individual Students) that can be adapted for local use. The teacher or interventionist is responsible for implementing the student intervention plan, which includes the progress monitoring plan, with fidelity. Once sufficient data are collected in accordance with the progress monitoring plan, the teacher or team of teachers uses the graphed progress monitoring data to determine the student's response to the intervention. The student's response, whether responsive or nonresponsive, determines whether the student continues with the current validated intervention and returns to Step 1 or moves to Step 3 of the DBI process to intensify the intervention.

Figure 3. Steps in the DBI Process



The use of data to individualize and intensify the intervention begins at Step 3. At this step, teachers review informal diagnostic data and develop a written hypothesis about the nature of the nonresponse. Diagnostic data may include data from informal and formal measures, such as classroom performance, parent/student interviews, observations, functional behavior assessments, or standardized academic achievement measures. The Clarifying Questions to

Create a Hypothesis to Guide Intervention Changes: Question Bank from NCII can assist teams in developing a hypothesis about why an individual or group of students may not be responding to an intervention.. The tool encourages teams to consider whether the intervention design, implementation fidelity, or learner needs are contributing to the lack of response.

At Step 4, the resulting hypothesis drives the team's decisions about how to intensify the supports and intervention to better meet the student's individual needs. When the intervention is adapted to meet unique needs, the team also must review the continued appropriateness of the progress monitoring plan. In some cases, the team may consider whether a new or additional progress monitoring tool is necessary to determine the student's response to the intervention adaptation(s) or whether they need to increase the frequency of data collection and analysis.

At Step 5, the team implements the current or revised progress monitoring plan and reviews the graphed data according to the plan. Collecting more frequent data may seem burdensome or counterproductive to delivering instruction, but for students with the most severe and persistent academic and/or behavioral needs, data allow educators to adjust instruction in a productive and timely manner. For academic domains, weekly formal progress monitoring is recommended for this reason (Fuchs & Fuchs, 2006). Teams will use similar teaming and data analysis approaches used following Step 2 to determine the student's response to the adapted intervention. In most cases, students with severe and persistent learning needs, including students with disabilities, will require several rounds of adaptation before progress is sufficient.

In summary, DBI is an ongoing, iterative process that should be reserved for the students with the most severe and persistent academic and/or behavioral needs. Educators who are supporting students with intensive needs through DBI must have the knowledge and skills to adequately assess and meet their needs accordingly.

Using MTSS Data

Conditions for Effective Use of MTSS Data

Effective use of MTSS data depends on the extent to which teachers and administrators have the capacity to access and use available MTSS data to make instructional decisions and improve implementation. Hamilton and colleagues (2009) outlined five recommendations for effectively using student data collected as part of MTSS (see Box 3).

Box 3. Using Student Achievement Data to Support Instructional Decision Making (Hamilton et al., 2009)

Recommendation 1. Make data part of an ongoing cycle of instructional improvement.

Recommendation 2. Teach students to examine their own data and set learning goals.

Recommendation 3. Establish a clear vision for schoolwide data use.

Recommendation 4. Provide supports that foster a data-driven culture within the school.

Recommendation 5. Develop and maintain a districtwide data system.

MTSS teaming and data analysis, particularly at the school and grade levels, should focus on ongoing instructional and school improvement instead of accountability and required reporting (Schildkamp & Datnow, 2020). Teachers should adopt a systematic process for using data to justify their instructional decisions and improve their ability to meet students' learning needs. The systematic process should require teachers to use data to develop a hypothesis about why the data look the way they look, make changes based on the hypothesis, and then collect data to assess whether the changes led to the expected outcomes. DBI is an example of a validated systematic process for decision making (NCII, 2016). A similar process is essential for reviewing MTSS screening and progress monitoring data to make decisions for improving Tier 1 instruction and supports and improving the overall intervention systems at Tiers 2 and 3.

Phillips, Hamlett, Fuchs, and Fuchs (1993) found that interventions that included ongoing progress monitoring paired with opportunities for students to analyze their own graphed data and receive explicit teacher feedback contributed to statistically significant higher gains in math achievement. As a result, teachers need skills to support students in examining their own data using processes similar to those used by teachers. Hamilton and colleagues (2009) suggested that this approach can motivate both elementary and secondary students by "mapping out accomplishments that are attainable, revealing actual achievement gains and providing students with a sense of control over their own outcomes" (p. 19). In other words, MTSS data can provide direct benefits to students as well.

Having a clear vision for how data will be used at the school, grade, class, and student levels also is essential for effective MTSS data use. This vision is part of a school's data-driven culture that is generally facilitated by the school leadership, such as the principal (Moody & Dede, 2008; Ordóñez-Feliciano, 2017). To benefit from a school's data culture, teachers must possess not only the skills necessary to analyze the data but also to effectively collaborate with other teachers to problem-solve and plan for improvement (Gentry, 2012). Gentry found that this collaboration was particularly critical for developing teachers' practices, such as data practices, aimed at improving outcomes for students with disabilities. Educators should be prepared to work collaboratively to establish a plan for achieving this vision and create grade-level data teams responsible for analyzing group-level data (Vanlommel, Vanhoof, & Van Petegem, 2016).

Educators also must understand how to utilize the supports that promote a data-driven culture within an MTSS in a school. Although supports will vary based on the context, teachers may have access to coaches, professional learning communities, support networks, and ongoing professional development to support use of data for making instructional changes (Anderegg,

2007; Ordóñez-Feliciano, 2017). If these supports are not available, teachers may need to work with their MTSS leadership teams to identify ways for making these available as well as locate available resources and supports outside of the school or district.

Finally, effective implementation of an MTSS depends on an accessible district- or school-wide data system (Wayman, Cho, & Johnston, 2007; Hamilton et al., 2009; Center on RTI, 2014). When teachers have access to a data system, they are more likely to share data with families, monitor students' progress, and plan and refine instruction (U.S. Department of Education, 2007). Although there are many different types of MTSS data systems, from published to district created, there are critical features across all data systems that facilitate effective collection and use of MTSS data. At a minimum, MTSS data systems should (1) allow educators to access individual student-level data (including screening and progress monitoring data) and document instructional decisions; (2) enter data in a timely manner; (3) represent data graphically; and (4) set/evaluate school, grade, and individual goals (Center on RTI, 2014). Educators also must understand how to access the right data within the system to address their questions.

Teaming for MTSS Data Decision Making

Teaming is essential for the effective use of MTSS data to improve educator practice, tiered systems, and students' outcomes (Marx & Goodman, 2019). The conditions for effective data use, such as a data-driven culture and access to data supports, help increase the success and impact of teaming (Hamilton et al., 2009). Although the number and titles of MTSS teams will vary by local context, MTSS teams should (1) represent all key stakeholders impacted by the decisions made by the team, (2) include structures and clear processes to guide decision making, and (3) establish times for regular meetings (Center on RTI, 2014). Knowing that there are

various types of teams within an MTSS, educators should understand how to facilitate and participate in efficient and effective MTSS data-driven team meetings. Based on lessons learned from local implementers, NCII developed a set of teaming tools and resources to support implementation of data meetings for analysis of small group or individual student data. Running efficient and effective data meetings requires that data are summarized prior to the meeting, there is a meeting agenda and facilitator, participants adhere to meeting norms and structures, and the team uses systematic processes for making decisions and using data. To learn more, access NCII's Tools to Support Intensive Intervention Data Meetings.

Sharing Data With Other Educators, Families, and Students

All educators must possess the knowledge and skills necessary to effectively share MTSS data with other educators as well as families and students. The Education Trust (2004) found that sharing student and school data can support family engagement necessary for school improvement. The Harvard Family Research Project (2013) identified several strategies for effectively sharing data with staff, parents, and students. Sharing data is more than just printing reports and disseminating them to the intended audience. It requires that data are presented in ways that are meaningful, accessible, and useful to the recipient. Specifically, educators also need to ensure that the data are presented a way that is responsive to families' cultural and linguistic backgrounds and unique needs. Despite our best efforts to develop accessible MTSS data reports, teachers may need to provide an orientation or training to help recipients access and understand what the MTSS report is telling them. Sharing sensitive data, such as data indicating that the student is not responding as expected, can be particularly challenging for teachers. In these cases, teachers need the knowledge and skills to attend to privacy considerations, avoid non-parent-friendly jargon, and focus on growth and next steps.

Assessment Considerations for Students With Disabilities

In an effective MTSS framework, students with disabilities should have access to academic and behavior supports across the tiers, depending on their needs (Bailey, Chan, & Lembke, 2019). Because students with disabilities are supported across tiers—and are increasingly spending more of their time in general education settings—both general and special education teachers should know how to collect, analyze, and interpret various forms of student assessment data within an MTSS, and use these data to adjust their instruction and supports.

Many students in need of the most intensive intervention using DBI are students with disabilities. For these students, DBI provides a systematic, data-based process for (1) designing specialized instruction and individualized education programs (IEPs) based on student need, and (2) evaluating student progress toward individualized goals. Because students with disabilities should have access to tiered supports, there also should be adequate data from across tiers to help inform special education eligibility decisions and IEP development (i.e., universal screening, progress monitoring, diagnostic assessment, summative assessment). In addition to any mandatory assessments required by federal, state, and/or local regulations (e.g., psychoeducational assessments, standardized achievement tests, social-developmental histories, speech and language assessments), the assessments described throughout this IC provide data for IEP teams to use when identifying:

- Present levels of academic achievement and functional performance (PLAAFPs),
- Which content areas require specially designed instruction versus which require only accommodations,
- The frequency of specially designed instruction,

- The focus of IEP goals (GOMs or single skill), and
- Appropriate ways to measure progress toward IEP goals (i.e., progress monitoring).

When administering MTSS assessments to students with disabilities, educators also must know how to use accommodations appropriately. Accommodations are adaptations or changes to educational environments and practices that are implemented during testing and designed to help students with disabilities demonstrate their learning. They do not change *what* students learn but rather *how* they access learning. It is important to check with the technical manual for the selected MTSS assessments being used to determine which accommodations are allowed.

Evaluating MTSS Implementation

MTSS implementation and student assessment data play a key role in evaluating the efficiency and efficacy of MTSS (Reedy & Lacireno-Paquet, 2015). Educators should be familiar with available tools to support class-, grade-, and school-level MTSS evaluation. The MTSS Center (Center on RTI, 2014) provides educators a freely available rubric to self-evaluate the extent to which they are implementing each of the four essential components—universal screening, progress monitoring, a multi-level prevention system, and data-based decision making —with fidelity. The tool also allows teams to self-evaluate the extent to which critical infrastructure, such as teaming and communication strategies, are in place. Other commonly used tools include the Reading Tiered Fidelity Inventory (R-TFI; St. Martin, Nantais, Harms, & Huth, 2015) and Self-Assessment of MTSS Implementation: Version 2.0 (SAM; Problem Solving & Response to Intervention Project, 2015).

Regardless of the tool used to evaluate MTSS implementation, educators will need to use implementation data (i.e., fidelity data) in conjunction with impact data, which can include

results from statewide summative assessments or screening data, to evaluate how well an MTSS is being implemented. Evaluating the efficacy of MTSS implementation helps teams to refine and improve overall MTSS assessment processes and procedures. The results can support teams in making decisions about resource allocation, staff allocation, ongoing professional learning, tool selection, and target areas for improvement.

Evaluation should occur at all levels of the MTSS system. As educators review their data across tiers, they may consider the following examples of questions:

Tiers of Support	**Evaluation Questions for Consideration**
Tier 1	• Is our core programming working for most students? • Do staff have the knowledge and skills necessary to effectively use data and support students? • What are the strengths and areas of improvement of our current MTSS implementation?
Tier 2	• To what extent are we under- or over-identifying students for intervention? • Are most students benefiting from the Tier 2 intervention system? • How can we improve our implementation of Tier 2 interventions and supports?
Tier 3	• To what extent are students under- or over-identified for Tier 3 or referred for special education evaluation? • Are most students benefiting from intensive intervention at Tier 3? • How can we improve the integration of data and intervention at Tier 3?

Conclusion

The use of MTSS assessments for continuous improvement is integral to effective teaching and learning. When teachers have in-depth knowledge of academic and behavior

assessments and can effectively use data to make informed instructional decisions, they are more likely to truly understand and address their students' needs. Teachers need to understand the various types of assessments and how each one is used to measure student needs and inform instruction at various levels within the MTSS framework. When administered consistently, and with fidelity, assessments hold all teachers and students accountable for demonstrating measurable progress toward learning goals and objectives. To effectively apply these assessment practices, all teachers, including those in both general and special education, must be prepared with the skills and knowledge needed to administer, understand, and interpret assessments that are relevant and meaningful in academic and/or functional areas. Teachers need high-quality preservice preparation that incorporates ample opportunities to practice with school-age students, accompanied by specific feedback from preparation program supervisors. Practicing educators also need ongoing support to adapt to new assessment tools and technologies. We have a collective responsibility in education to ensure that all students succeed toward college and career readiness; knowing how to appropriately collect, analyze, and use assessment data can help us achieve this goal.

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Appendix

Innovation Configuration for Appendix: Assessment Practices Within a Multi-Tiered System of Supports (December 2020)

Essential Components	Implementation Levels				
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	Level 0 There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Level 1 Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/ demonstration, or quiz.	Level 2 Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Level 3 Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small-group student teaching, or whole-group internship.	Rating Rate each item as the number of the highest variation receiving an X under it.
1.0—Foundations of Multi-Tiered System of Supports (MTSS) Assessment					
1.1—Purpose of MTSS assessment 1.2—Differences among summative, formative, and diagnostic data 1.3—Relationship between screening and progress monitoring 1.4—Assessment within high-quality Tier 1 1.5—Assessment within Tier 2 evidence-based supplemental intervention 1.6—Assessment within Tier 3 intensive intervention					
2.0—Universal Screening					
2.1—Purpose of screening 2.2—Features of screening process:					

Essential Components	Implementation Levels				
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• Screening is conducted for all students. • Procedures are in place to ensure implementation accuracy (i.e., all students are tested, scores are accurate, cut points/decisions are accurate). • A process to screen all students occurs at least twice and as often as three times annually (e.g., fall, winter, spring). 2.3—Risk verification process 2.4—Considerations for selecting screening tools: • Classification accuracy • Technical standards • Usability					

Essential Components	Implementation Levels				
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	Level 0 There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Level 1 Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/ demonstration, or quiz.	Level 2 Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Level 3 Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small-group student teaching, or whole-group internship.	Rating Rate each item as the number of the highest variation receiving an X under it.
2.5—Establishing and using screening benchmarks and cut scores 2.6—Scoring and administration of academic tools 2.7—Scoring and administration of behavior tools 2.8—Analysis and use of screening data					
3.0—Progress Monitoring					
3.1—Purpose of progress monitoring 3.2—Features of progress monitoring process: • Occurs at least monthly for Tier 2. • Occurs at least weekly for students receiving intensive intervention, or Tier 3.					

Essential Components	Implementation Levels				
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	Level 0 There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Level 1 Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/ demonstration, or quiz.	Level 2 Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Level 3 Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small-group student teaching, or whole-group internship.	Rating Rate each item as the number of the highest variation receiving an X under it.
• Procedures are in place to ensure implementation accuracy. 3.3—Considerations for selecting progress monitoring tools: • General outcome measures versus single-skill mastery measures • Technical adequacy • Usability 3.4—Academic progress monitoring goal-setting strategies • Benchmarks for middle- or end-of-year performance • National norms for rate of improvement • Intraindividual framework 3.5—Behavior progress monitoring goal-setting strategies					

Essential Components	Implementation Levels				
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	Level 0 There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Level 1 Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/ demonstration, or quiz.	Level 2 Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Level 3 Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small-group student teaching, or whole-group internship.	Rating Rate each item as the number of the highest variation receiving an X under it.
3.6—Scoring and administration of academic progress monitoring tools 3.7—Scoring and administration of progress monitoring behavior tools 3.8—Progress monitoring data decision-making strategies • Four-Point Rule • Trend line analysis					
4.0—Intensifying Instruction Using Data-Based Individualization (DBI)					
4.1—Overview of DBI 4.2—Role of assessment in DBI 4.3—Using diagnostic data to intensify interventions 4.4—Using progress monitoring data to monitor intensive intervention					
5.0—Using MTSS Data					
5.1—Conditions for effective use of MTSS data					

Essential Components	Implementation Levels				
Instructions: Place an X under the appropriate variation implementation score for each course syllabus that meets the criteria level from 0 to 3. Score and rate each item separately.	Level 0 There is no evidence that the component is included in the syllabus, or the syllabus only mentions the component.	Level 1 Must contain at least one of the following: reading, test, lecture/presentation, discussion, modeling/ demonstration, or quiz.	Level 2 Must contain at least one item from Level 1, plus at least one of the following: observation, project/activity, case study, or lesson plan study.	Level 3 Must contain at least one item from Level 1 as well as at least one item from Level 2, plus at least one of the following: tutoring, small-group student teaching, or whole-group internship.	Rating Rate each item as the number of the highest variation receiving an X under it.
5.2—Teaming for MTSS data decision making 5.3—Sharing MTSS data with educators, families, and students 5.4—Evaluating efficacy of MTSS Implementation					