KyMTSS
Multi-Tiered System of Supports

Implementation Guide

2nd Edition

March 2025

Kentucky Department of
EDUCATION

Acknowledgements

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Introduction

The *Kentucky Multi-Tiered System of Supports (KyMTSS) Implementation Guide, 2nd Edition*, builds upon guidance from the 2021 edition in response to revised Kentucky administrative regulations that require district-wide use of a multi-tiered system of supports for all students in kindergarten through grade 12 (704 KAR 3:095). This implementation guide is designed to provide educators with a common definition and understanding of the essential elements of Kentucky's framework for a multi-tiered system of supports (KyMTSS). The information in this guide reflects current research and evidence-based practices and is intended to support districts and schools in implementation, improvement and sustainability of an integrated multi-tiered system of supports.

Suggested Usage of Implementation Guide:

- Utilize the guide after completing the KyMTSS Self-Assessment Tool to highlight areas for focus and planning;
- Use with MTSS teams and leads for initial implementation guidance;
- Provide professional learning for MTSS team, school and district staff;
- Use for onboarding new staff; or
- Locate resources to support implementation.

Definition:

As of July 1, 2024, Kentucky's statewide framework for a multi-tiered system of supports (KyMTSS) is defined in statute as "a multi-level prevention system designed to maximize student achievement and social and behavioral competencies through an integration of differentiated universal instruction, assessment and intervention" (704 KAR 3:095 (1)(6)). This definition reflects the evolution of Kentucky's Response to Intervention model to a more comprehensive framework that addresses the needs of the whole child.

Vision and Mission of the Kentucky Department of Education:

United We Learn sets the focus for the work of the Kentucky Department of Education (KDE) and is the vision for the future of public education in Kentucky. This vision builds around three big ideas: **creating a more vibrant learning experience for every student**, **encouraging innovation in our schools** and **collaboration with our communities**. KyMTSS is one of the key statewide initiatives of KDEs strategic plan that supports the United We Learn vision.

Associated Kentucky Department of Education Statutes and Regulations:

KRS 158:305 KRS 158.6459 KRS 158:791 KRS 158:840 KRS 158.8401 KRS 158:8402 704 KAR 3:095

Overview

Kentucky's multi-tiered system of supports (KyMTSS) is a continuous improvement framework that promotes coherence through the integration and alignment of academic and behavioral multi-tiered systems. KyMTSS encourages alignment of state, district and school resources and initiatives that support student achievement, positive behavior and social-emotional well-being under one comprehensive framework. Reading and math proficiency, access to a strong local curriculum aligned to *Kentucky Academic Standards*, high quality instructional resources (HQIRs), positive behavior intervention and supports (PBIS), chronic absenteeism, school-based mental health, social, emotional and behavioral health, and trauma-informed practices are just a few examples of initiatives that are strategically integrated under this single, cohesive system of supports.

McIntosh and Goodman in their book, *Integrated Multi-Tiered Systems of Support: Blending RTI and PBIS* (2016), emphasize that the goal of an integrated MTSS is improved student outcomes by making systems more "effective, efficient, equitable and sustainable" (p. 236). An integrated framework aligns to the research that demonstrates the interconnectedness of academic and behavior skills and provides more cohesive support using integrated teams, data and practices for a more efficient use of resources (Algozzine et al., 2012; Ervin et al., 2006; Lee & Gage, 2020; McIntosh, et al., 2006; Swain-Bradway et al., 2019). Kentucky districts and schools are in various stages of implementing KyMTSS with many of the procedures, resources and supporting structures already in place for some domains and grade levels. However, academic, behavior and social-emotional supports too often are implemented in silos or parallel systems that work independently of each other. When each system or initiative functions with its own set of teams, data and practices, it unintentionally creates instructional incoherence. KyMTSS promotes building one coherent, strategically combined system that interconnects domains and initiatives to effectively achieve and sustain positive outcomes for all students across all grade-levels.

While there are various ways to develop this integrated model, the decision of how to do so will be dependent on individual school and/or district circumstances and needs. For those operating as two parallel systems or ready to add a new system to an existing MTSS model, an integrated MTSS framework can be developed from existing systems by expanding the scope. For schools in the exploration or beginning implementation stages, a fully integrated model may be developed right from the start (McIntosh & Goodman, 2016). The first step in this process is building a common understanding around the essential elements of KyMTSS.

KyMTSS utilizes a three-tiered prevention-based framework with a continuum of instruction, intervention and supports designed to address the needs of the whole child. The foundation of the framework is strong Tier 1 instruction using high-quality instructional resources aligned with grade-level academic standards, schoolwide positive behavioral expectations and core social-emotional competencies so all students thrive. A coordinated system of valid and reliable

assessments, including screening, diagnostic and progress monitoring measures, provides relevant and useful data to inform instructional and programmatic decisions at both the system and student level. Collaborative teams engage in data-based decision-making related to program improvement, high-quality instructional practices and evidence-based interventions matched to student need to ensure positive outcomes for districts, schools, teachers and students.

Essential Elements of the KyMTSS Framework

KDE has identified six interconnected elements as essential to the implementation, improvement and sustainability of an effective district-wide K-12 multi-tiered system of supports:

1. Collaborative Problem-Solving Teams (shared leadership, collaboration and communication)
2. Data-Based Decision Making with a Comprehensive Screening and Assessment System
3. Tiered Delivery System with a Continuum of Supports
4. Evidence-Based Instruction, Intervention and Supports
5. Equitable Access and Opportunity
6. Family, School and Community Partnerships

The KyMTSS graphic (see Figure 1.1) illustrates how these six essential elements are interconnected and work together to promote positive outcomes for all students.

Figure 1.1 KyMTSS Graphic

- **Equitable Access and Opportunity** surrounds the entire framework to represent an intentional commitment to maximize student outcomes for each and every student within and across all components of KyMTSS.
- At the center of the model is the familiar triangle representing the **Tiered Delivery System** with a continuum of supports that are designed to promote students' academic proficiency, positive behavioral and social-emotional well-being. These domains surround the triangle to show they are embedded into all layers of the system.
- **Collaborative Problem-Solving Teams**, the strategic use of **Data-Based Decision Making within a comprehensive screening and assessment** system, **Evidence-Based Instruction, Intervention and Supports** and **Family, School and Community Partnerships** surround the triangle to demonstrate practices that are interconnected and address the needs of the whole learner across the continuum of supports.

Infrastructure for Effective Implementation

Enabling systems and infrastructure are critical to the successful implementation and sustainability of KyMTSS. Key features of district and school infrastructure that support effective implementation include:

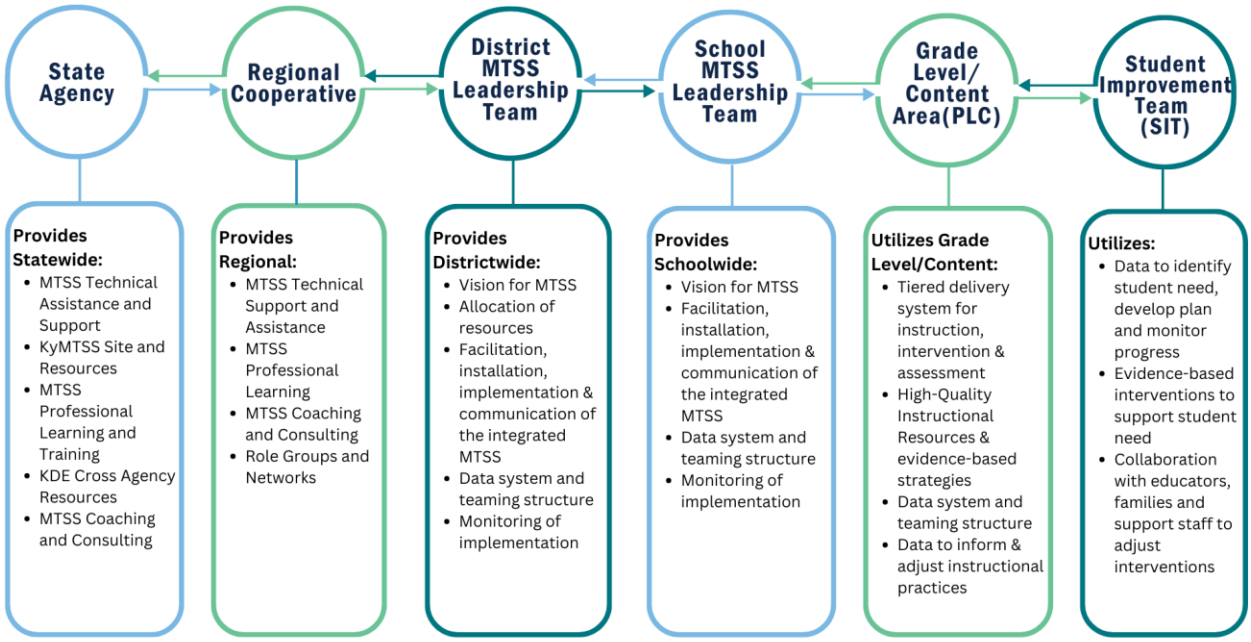
1. Leadership teams that actively provide a visible connection between the MTSS framework with district and school improvement efforts.
2. Policies and procedures that are aligned across classroom, grade, school, district and state levels.
3. Systematic problem-solving process used to support planning, implementing and evaluating the effectiveness of services.
4. Collaborative partnerships with all stakeholders who provide educational services and support or benefit from improved student outcomes.
5. Data systems that are comprehensive, efficient, user-friendly and used to inform decision-making at all levels of the system (individual student level up to the aggregated district level).
6. Coaching supports that assist teams at all levels of the system with data-based decision-making and problem-solving.
7. High-quality, data-driven professional learning opportunities that are aligned to school and district improvement efforts.
8. Communication of outcomes, information about the multi-tiered system and action plans with all stakeholders and celebrations of success (adapted from Florida's PBIS: MTSS and FL PS/RTI, n.d.).

Collaborative Problem-Solving Teams (with Shared Leadership, Collaboration and Communication)

Overview

As an essential element of Kentucky's Mult-Tiered System of Supports (KyMTSS), collaborative problem-solving teams work across all three tiers and at multiple implementation levels of the educational system. Teams at each level from the state to the individual student level are aligned to support common goals and outcomes related to students' academic proficiency, behavior and social-emotional wellness (Figure 2.1).

Figure 2.1 Implementation Levels of KyMTSS Teams



Collaborative Problem-Solving Teaming Structural Considerations

For effective and sustainable MTSS implementation, teams at each level of the system should reflect a cross-section of key stakeholders and the initiatives prioritized by the district and school. Collaborative teams meet regularly using data-driven discussions to determine strengths and needs at both the system and student levels. Through collaboration, KyMTSS leadership teams develop a common vision, align efforts across academic, behavioral and social-emotional domains, set goals, establish evidence-based practices and create action plans based on input from diverse stakeholders. The district leadership teams ensure a seamless alignment between school improvement plans and the KyMTSS framework.

District and school leadership teams are responsible for building the infrastructure, guiding implementation and supporting the sustainability of the multi-tiered system. Leadership teams bring together the knowledge, resources and organizational structures necessary to operationalize all components of an integrated KyMTSS to meet the established goals of the district and/or school.

A team approach helps distribute the workload among multiple individuals, facilitates stakeholder collaboration and promotes the flow of communication. Teams that establish efficient systems to collaborate and communicate contribute to the alignment and cohesion of the work across the multiple levels of the system (McIntosh & Goodman, 2016).

A collaborative problem-solving team approach maximizes both the implementation and sustainability of an integrated KyMTSS plan. To be truly effective, district and school leadership teams must create a system for teachers and staff to communicate and collaborate effectively. This can be accomplished through intentionally designed collaborative teams at the school staff and student levels with shared goals that integrate the various academic, behavioral and social-emotional initiatives identified as key priorities of the district and school.

KyMTSS Tool: MTSS Annual Plan of Action Template

Integration and Alignment of Teams

Within the KyMTSS comprehensive K-12 framework, strategic alignment and integration of teams are essential to bringing separate initiatives and innovations together under one unified system of support. The alignment of district and school leadership teams encourages a consistent, systematic approach to data-based problem-solving and keeps the focus on improved academic, behavioral and social-emotional outcomes for all students. An integrated team approach brings together a range of skills and knowledge around a shared set of values to solve problems and guide actions to improve outcomes for all students.

Districts and schools may be in varying stages of implementing an integrated multi-tiered system of supports. Subcommittees are sometimes formed to address specific initiatives or academic, behavioral and social-emotional focus areas. While these subcommittees can serve a purpose, maintaining standalone teams can unintentionally create incoherence and inefficiencies. To ensure alignment, it is critical for subcommittees to operate under the shared vision and purpose of the MTSS framework.

To strategically implement an integrated teaming structure within the KyMTSS framework, it is recommended that leadership teams conduct an inventory of existing teams and initiatives.

This process includes identifying the team's purpose, typical members, common roles and responsibilities and alignment to school and district improvement goals (McIntosh & Goodman, 2016). By conducting an inventory, schools and districts can determine which teams may need to be consolidated, supported, eliminated or added to build efficiency in the problem-solving process. Thus, the KyMTSS framework becomes an effective way to organize existing and future initiatives for continuous district and school improvement. It is important to note that there is not one optimal teaming structure that will meet the needs of every school or one perfect configuration of teams. To assist schools and districts in finding the right balance of teaming structures, McIntosh and Goodman (2016) recommend starting with the most logical teams to integrate and offer three methods for districts and schools to consider:

1. Adapt existing teams;
2. Integrate across domains; or
3. Integrate across tiers.

Regardless of the number and configuration of KyMTSS teams, it is critical that teams are aligned with each other and with the goal of promoting academic, behavioral and social-emotional outcomes for all students.

KyMTSS Tools: Teaming Structure: Working Smarter Matrix and Initiative Inventory

KyMTSS Teaming Structures

District and school leadership teams comprised of individuals with diverse skills and perspectives are the foundation of a successful KyMTSS. Chenoweth and Everhart (2002) recommend that teams be reflective of the diversity of the staff, students and community. Team members should represent all grade levels, departments and support staff. These members are knowledgeable about school improvement efforts and possess the skills to move the team forward in meeting district or school improvement goals. They propose that leadership team members should:

- Be committed to district and school system-wide change;
- Be respected by colleagues;
- Possess leadership potential;
- Demonstrate effective interpersonal skills; and
- Be able to start projects and "get things done."

The leadership team crafts a clear vision that prioritizes the whole child and reflects the interconnected academic, behavioral and social-emotional domains of learning. KyMTSS leadership teams continuously analyze system and student outcome data, examine instructional and intervention practices, and assess effectiveness to ensure that improvement efforts move forward.

The leadership team actively facilitates installation, implementation, management and communication of the integrated KyMTSS framework as part of a continuous improvement process. Coordinated professional learning and on-going coaching on the essential components of KyMTSS, effective instructional practices and intervention implementation are provided to all staff as part of the overall MTSS action plan.

The District Leadership team provides direction and coordination to guide the implementation process. The team ensures a consistent, cohesive district vision of MTSS, provides long-term planning to improve student outcomes, evaluates the implementation and success of the system, and coordinates professional learning and coaching to develop capacity at the school level (McIntosh and Goodman, 2016). Membership should include district personnel with the authority to make funding and policy decisions and represent key stakeholders in the district, schools and community. Core functions of the district team include evaluating the implementation and impact of the multi-tiered system, building local capacity to implement and long-term (e.g., 3-5 year) action planning for sustainability.

An effective district leadership team typically includes school administrators; district curriculum and instructional leaders; the district MTSS coordinator; district coaches or content area specialists; mental health or behavioral specialists; family voices and local community agency representatives. By including family and community representation, KyMTSS teams recognize that families, educators and others in the community share responsibility for student learning and well-being.

The district team utilizes a collaborative problem-solving model to identify and align key priorities that will have the greatest impact on student outcomes based on data from a whole child perspective. They problem-solve to remove barriers to learning by allocating funding, resources and time to implement those priorities. Multiple sources of data are continually gathered and analyzed to evaluate KyMTSS implementation and the impact on student outcomes. The district team typically meets on a monthly or quarterly basis to evaluate the effectiveness of their action plan. Table 2.1 summarizes the common district leadership teaming structures.

Table 2.1. Common District KyMTSS Leadership Teaming Structures

Membership	Level of Focus	Core Functions
• District administrators (superintendent or assistant superintendent, curriculum and instruction supervisor, director of special education, etc.) • School administrators • Community representatives • Family representatives • District MTSS coordinator • District content/behavior specialists, and/or teacher leader/coach • Gifted/talented coordinator • Extended School Services (ESS) coordinator • Family resource/nurse/mental health • Staff with cultural and linguistic expertise • Behavior specialists	• KyMTSS Framework –developing system capacity for each school • KyMTSS Framework for guidance and direction • Tier 1 Universal • Tier 2 Targeted and Tier 3 Intensive systems	• Establish vision and strategic implementation plan; plan for long-term sustainability. • Develop and facilitate a district MTSS action plan for implementation and sustainability. • Coordinate and monitor the plan. • Oversee the use of a comprehensive data system and track effectiveness of the tiered delivery system, adjusting strategies as needed. • Collect, summarize and analyze districtwide academic and social-emotional behavioral data. • Identify trends in district-wide data to inform decision-making. • Evaluate fidelity of implementation and effectiveness of KyMTSS. • Build local capacity to implement through targeted, ongoing professional learning and coaching. • Communicate current status of KyMTSS implementation and student outcomes to key stakeholders. • Remove barriers to implementation.

Adapted from: McIntosh, K. & Goodman, G. (2016); Center for Instructional Research in Schools-CIBRS (n.d.).

The School Leadership team aligns their vision and action plan with the district priorities and builds a tiered system of evidence-based instruction, intervention and supports that are culturally and contextually a fit for their school. The team identifies the fidelity and student outcomes they wish to achieve, and the data needed to monitor progress toward those outcomes. They intentionally plan the professional learning and coaching needed to increase staff understanding of KyMTSS, to support the implementation of the identified practices and gather the required data.

This team provides oversight for initial and sustained implementation of KyMTSS within the school building. Team membership typically includes administrator(s), teacher representatives of grade levels/content areas and representatives from other teams or school initiatives. It also includes staff with expertise relevant to cultural and linguistic differences, families or school personnel central to working with families (school nurse, family resource, school social workers, etc.) and community partners or school personnel central to work with community agencies or

organizations. The school leadership team meets regularly to analyze relevant data and evaluate KyMTSS implementation and progress toward their goals. This team provides regular updates on the current status and outcomes to staff, district and other stakeholders.

In addition to Tier 1 implementation, the school leadership team ensures that Tier 2 and Tier 3 *systems* are addressed (McIntosh & Goodman, 2016). This can be accomplished by either setting up subcommittees to facilitate the coordination of Tiers 2 and 3 or having the school leadership team serve the function of the Tier 2 and Tier 3 systems team. The focus of this work is establishing systems, data and practices to support students identified as at-risk for not meeting grade-level academic, behavioral and/or social-emotional benchmarks, students exceeding benchmarks and for students with more intensive academic and/or nonacademic needs.

A leadership team that is responsible for coordinating, managing and monitoring the effectiveness of academic, behavioral and social-emotional instruction, intervention and supports reflects the continuum of supports of an integrated KyMTSS. Table 2.2 summarizes common school leadership membership and responsibilities.

Table 2.2. Common School KyMTSS Leadership Teaming Structures

Membership	Level of Focus	Core Functions
• Principal • Grade-level or content-level team representatives • Behavior specialists • Staff with cultural and linguistic expertise • School counselor/social worker/school psychologist • Extended School Services (ESS) coordinator • Gifted and talented coordinator • Family resource coordinator/nurse/mental health professional • Family representative(s) • Student(s)	• School capacity building • School-wide level: all students • Primary Focus: Tier 1 Universal • Tier 2 and Tier3 systems	• Develop, coordinate and facilitate an integrated school-wide MTSS plan that aligns with district-level goals and priorities. • Develop an annual plan of action and evaluation. • Collect, summarize and analyze school level academic, behavioral and social-emotional data. • Develop a master schedule based on identified areas of need (Tier 1, 2 and 3). • Define process of how Tier 2 and Tier 3 interventions are selected and how students are identified and matched to intervention based on needs. • Define decision rules for determining student response to intervention and supports. • Evaluate fidelity of implementation and effectiveness of Tier 1, Tier 2 and Tier 3 systems based on data. • Ensure school level supports is in place for smooth implementation of the tiered delivery system. • Communicate regularly to ensure consistency and alignment of KyMTSS implementation and student outcomes to stakeholders. • Coordinate professional learning and coaching for staff to connect district goals with school-based practices for Tier 1, 2 and 3 implementation. • Collaborate with families to ensure supports are responsive and that communication systems are clear and consistent across tiers.

Adapted from: McIntosh, K. & Goodman, G. (2016); Center for Instructional and Behavioral Research in Schools-CIBRS (n.d.).

Center for Multi-Tiered System of Supports Resource: MTSS Schedules Tip Sheet

Grade-level/content teams manage and implement evidence-based practices for students within their specific grade or content area. These teams collaborate to clarify the essential learning and skills students must master, the level of rigor and what constitutes proficiency, and the prerequisite skills and knowledge necessary for students to be successful. They use student outcome data to increase consistency across classrooms and facilitate collaboration in problem solving. Teams regularly review universal screening, formative assessment and progress monitoring data to monitor student progress and adjust instruction accordingly. Table 2.3 shows the common membership, focus and responsibilities of the grade- or content-level KyMTSS teams.

Table 2.3. Common KyMTSS Grade-Level/Content Area Teaming Structures

Membership	Level of Focus	Core Functions
• School administrator • Grade-level or content area teachers • Support staff and other professionals	• All grade-level students with primary emphasis on strengthening Tier 1 and proactively addressing needs • Students receiving interventions and/or enrichments • Seamless transitions between tiers and grade levels	• Collect and review grade-level universal screening and diagnostic assessment data. • Collaborate and implement grade-level integrated academic, behavioral and social-emotional practices, such as intervention groupings and evidence-based intervention. • Monitor student progress regularly to assess intervention and enrichment effectiveness. • Utilize data-based decision-making to inform and adjust instructional practices. • Collaborate across teams to align academic, behavioral and social-emotional strategies. • Partner and communicate with families regarding their child's progress and supports. • Communicate with the school leadership team and other key stakeholders as needed.

Adapted from: McIntosh, K. & Goodman, G. (2016); Center for Instructional and Behavioral Research in Schools-CIBRS (n.d.).

Student Intervention teams focus on the needs of individual students who need more intensive support. A "reading improvement team" or "math improvement team" fits within the teaming structures of KyMTSS as a student intervention team that develops and oversees the progress of the evidence-based interventions (i.e., reading or math improvement plan) as long as the members required by statute are part of the team. A student intervention team is often a core multidisciplinary team with other members added as needed to meet the student's unique needs. The team's focus is to develop, implement, monitor and adjust the student's individualized intervention and supports as needed. These teams use data to continuously evaluate the effectiveness of interventions, adjust as needed, and ensure that the interventions are culturally and contextually appropriate for each student. Student intervention teams share relevant information with the adults involved with the student. The team collaborates with families, teachers, staff and school and community partners to ensure all aspects of the students' needs are addressed. These teams develop a plan for ongoing support and transition once the student meets their goals. Common structures of student intervention teams are outlined in Table 2.4.

Table 2.4. Common KyMTSS Student Intervention Teaming Structures

Membership	Level of Focus	Core Functions
• School administrator or school counselor knowledge about the intervention resources of the school • Classroom teacher • Consistent team members with academic and behavior/social-emotional expertise • Staff providing intensive intervention support • Student/family/community agency representative • Any certified staff of students receiving language or special education services • Any certified staff of students receiving gifted and talented, language and/or special education services *Note: To function as a reading or math improvement team membership must meet the requirements of KRS.158.305*	• Individual students requiring more intensive and individualized supports	• Use data-based decision-making to continuously evaluate and adjust interventions. • Engage in individual student problem-solving. • Set individual student goals and develop an intervention plan. • Select appropriate evidence-based interventions. • Develop a long-term plan for ongoing support and transition once the student meets their goals. • Monitor effectiveness of intervention by reviewing student progress monitoring data and fidelity of implementation data. • Collaborate with families, teachers and other stakeholders to ensure comprehensive support for the student.

Adapted from: McIntosh, K. & Goodman, G. (2016); Center for Instructional and Behavioral Research in Schools-CIBRS (n.d.).

Effective Teaming Process

KyMTSS teams at all implementation levels benefit by using organizational strategies that facilitate effective interactions, problem-solving and action planning. Clear agendas, roles and procedures help teams stay focused on relevant data analysis and decision making (Horner et al. 2018; Newton et al. 2012). McIntosh and Goodman (2016; pp. 173-183) propose the following strategies for effective teaming in an integrated MTSS model:

- Clear mission and purpose
- Agreements and norms
- Roles and Responsibilities clearly identified
    - Facilitator: sends meeting agenda and reminders; ensures the agenda is followed; guides discussions.
    - Recorder: keeps notes and documents actionable next steps (who, what, when); ensures all team members have access to meeting minutes promptly after meetings.
    - Timekeeper: keeps track of time and related agenda items during the meeting; ensures the meeting starts and ends on time;
    - Data analyst or coordinator: prepares data to review with team; prioritizes items for discussion; brings data visualizations and summaries to meeting for discussion.
    - Active team member: engages and contributes to problem-solving; completes assigned tasks as documented on the action plan; facilitates two-way communication with the group they represent.
- Structured agenda
    - Review of cascading system-level data (district, school, content/grade level or student outcome data) and fidelity of implementation data with a structured problem-solving and decision-making process;
    - Celebrate successes and address barriers;
    - Time allocated for each agenda item;
    - Tasks and action planning, including person responsible and due date for completion;
    - Communication plan; and
    - Meeting self-assessment

Communication Protocol

District and school-level teams develop and maintain a written communication protocol to share information and elicit input between the various MTSS teams, staff, families, students and relevant community agencies related to the implementation of KyMTSS. In this way, teams

at all levels of the system communicate progress and celebrate successes; identify and address barriers to implementation; and report on actions taken to resolve or address identified areas of concern (State Implementation and Scaling-up of Evidence-based Practices [SISEP], 2018). The written communication protocol should include all identified stakeholders and provide them with an opportunity to have input on the decisions being made based on the data.

An effective communication plan includes the following features:

- Information about the level of communication;
- Description of the information that will be communicated;
- Names of the individuals responsible for initiating the communication and who would receive it;
- Frequency of communication and time allotted for disseminating the information;
- Timeframe for the response/action; and
- Response format.

The communication process should be evaluated at least annually for effectiveness and functionality and adjusted as needed.

KyMTSS Tools: MTSS Annual Plan of Action; Team Roles and Responsibilities, MTSS Meeting Agenda and MTSS Communication Plan Template

Data-Based Decision Making with a Comprehensive Screening and Assessment System

Overview

Data-based decision making is a defining feature of Kentucky's framework for a multi-tiered system of supports (KyMTSS). This essential element refers to the systematic process of collecting and analyzing academic, behavioral and social-emotional data together to guide policy and practice decisions that promote continuous improvement. Data from a comprehensive screening and assessment system inform instructional and programmatic decisions at the district, school, classroom and individual student levels. Data-based decision making in KyMTSS is used by district and school leadership teams to evaluate the effectiveness of the multi-tiered system and identify any system level issues at the school, grade and subject level. Tier 2 and Tier 3 teams use this process to match students to appropriate evidence-based interventions, monitor student progress and evaluate outcomes.

Data-based decision-making is an iterative process implemented at all levels from district to individual student across all tiers. KyMTSS teams routinely analyze and use data from a variety of relevant sources to determine needs, set goals and to select, implement and adjust instructional and intervention practices to achieve improved and sustainable outcomes for all learners. By focusing on specific questions about student academic, behavioral and social-emotional outcomes, teams can prioritize which types of data to gather to inform programmatic and instructional decisions (Hamilton et al., 2009).

Potential data sources may include but are not limited to:

- Needs assessments;
- Universal screening and diagnostic assessments;
- Formative assessments (including curriculum-based assessments);
- Progress monitoring assessments;
- Demographic data;
- Kentucky Student Information Systems (KSIS) visualization aggregate data;
- Early warning indicators (e.g., attendance, behavior and course performance);
- Extended school year intervention data (e.g., intervention tab);
- Student/family/staff survey data; and
- Relevant community data.

KyMTSS district and school leadership teams systematically analyze data to evaluate the capacity, fidelity and effectiveness of the integrated multi-tiered system and address any barriers to implementation. Effective leadership teams establish routines and processes for conducting data reviews, systematic decision-making and assessing student progress. They establish a process to ensure valid and reliable screening, progress monitoring and diagnostic assessments are selected, matched to local context and used with fidelity. While data are an important component of data-based-decision making, all too often a great deal of data is collected that is rarely used explicitly or translated into a usable plan of action. KyMTSS team members need to be proficient in analyzing and synthesizing data, creating concise and targeted summaries of relevant information to inform their decisions around program effectiveness and student outcomes. District and school leaders make certain that KyMTSS team members have data literacy skills - the knowledge and skills to select, interpret and use data to make informed decisions, monitor implementation and student outcomes over time, and adjust instruction and intervention as needed.

To increase efficiency of data-based decision making at each tier, districts and schools need a systematic way to collect and organize the data and a protocol to ensure consistent collection, entry and accessibility to student and system level data (Rand, 2006). Although there are many different types of data systems, from vendor-published to district-created, there are critical features across all systems that facilitate effective collection and use of MTSS data.

Data systems, at a minimum, should allow educators to:

1. Access student-level data (including screening and progress monitoring data);
2. Enter data in a timely manner;
3. Represent data graphically; and
4. Set/evaluate district, school, grade and individual goals (Bailey et al., 2020, p. 33).

Data systems should be flexible enough for teams to be able to combine, disaggregate and display the information as needed to answer the questions being asked across the continuum of instruction, intervention and supports. Effective MTSS implementation depends on educators having access to the right data within the system at the right time to address their questions (Bailey et al., 2020).

In an effective system, various sources of data across academic, behavioral and social-emotional domains are analyzed, and trends are disaggregated by group to determine the assets, needs and resource allocation within the district and school. Data-based decision-making is essential to ensure the infrastructure, instructional practices and implementation efforts of the MTSS are effective in supporting all students. In addition, a systematic decision-

making process provides information that can be communicated to stakeholders about students' academic proficiency, behavior and social-emotional well-being.

 **KyMTSS Tools: Team Data Inventory and Self-Assessment Tool**

 **KDE Resource: Early Warning Tool One-Pager**

Problem-Solving Process

The use of a consistent problem-solving process is critical to making programmatic and instructional decisions needed for continuous improvement in an effective multi-tiered system of supports. Teams use relevant data sources to make decisions about instruction, movement within the multi-levels of prevention and intensification of interventions and support (Center for Multi-Tiered System of Supports, n.d.).

System-level questions for district and school KyMTSS leadership teams to ask during the problem-solving process include:

- Are the universal supports across academic, behavioral and social-emotional domains meeting the needs of most students in the district/school (at least 80% or more)?
- Are there differences among subgroups? What percentage of students in subgroups are meeting or exceeding benchmarks (at least 80% or more)?
- What percentage of students require additional support?
- How will the team determine when student(s) require supplemental or more intensive, targeted intervention and support?
- Which students are exceeding benchmarks and will benefit from planned enrichment opportunities?
- Are students doing better overall? Are most students responding to Tier 2 and Tier 3 intervention?
- Are systems and practices implemented as intended/designed?
- Are resources and professional learning provided to educators for implementation fidelity?

At Tier 2 and Tier 3, when analyzing data for groups of students or individual students, KyMTSS school-level teams would ask:

- What are the similar instructional, behavioral and/or social-emotional needs among these students?
- Which evidence-based instructional practices/interventions will best meet those needs?

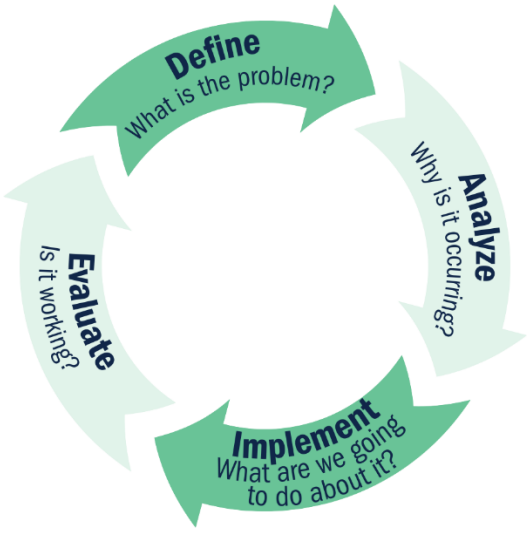
- Are most students making adequate progress when provided with supplemental/intensive intervention?
- Have the interventions been provided with fidelity?
- Are resources and professional learning provided to educators to ensure implementation fidelity?

The success of a systematic problem-solving process "depends on the quality of the data collection system and the willingness of all members not only to consider problems at the student level, but also at the systems level" (Pullen et al., 2019, p. 8).

Four-Step Problem-Solving Model

Utilizing a standardized problem-solving model at all levels of the system assists teams in determining district, school and student needs, identifying solutions, setting measurable goals and monitoring the impact of the multi-tiered systems (Burns et al., 2016). There are a variety of problem-solving models with many common features that educators use to improve the quality of instructional programs and student outcomes. Figure 3.1 shows four easily executed steps of a common problem-solving model (Tilly, 2008).

Figure 3.1: Four Step Problem-Solving Model



1. **Define the Problem:** The first step in the decision-making process is to determine whether a problem exists and define it as precisely and explicitly as possible. To help with this decision, KyMTSS teams compare current data to specific criteria – such as academic/nonacademic benchmarks, local or national norms, performance from

previous years, implementation benchmarks, etc. – to answer specific questions (adapted from Florida-PS/RTI, 2024):

- ❑ What should students *know, understand and be able to do* as a result of universal learning supports?
- ❑ What exactly is the problem or discrepancy between the current performance and the expected performance or goal?
- ❑ Are there students for whom the Tier 1 learning supports are ineffective?
    - Are more than 20% of students identified as at-risk or needing additional support (Tier 2)?
        - If yes, does the KyMTSS action plan address this (e.g., focus on strengthening Tier 1)?
    - Are more than 5% of students identified as needing intensive intervention (Tier 3)?
        - If yes, does the KyMTSS action plan address this?
- ❑ Is there evidence of disproportionality in academic/behavior/social-emotional outcomes (i.e., race, ethnicity, sex, disability, grade-level, class distribution, etc.)?

2. **Problem Analysis**: After a problem or goal has been defined, it is necessary to analyze the data with enough depth to develop hypotheses and identify potential barriers to successfully achieving the goal. This is an essential step that provides the foundation for the rest of the data-based decision-making process. KyMTSS teams use the data to generate hypotheses, or possible root causes, which are grounded in evidence. Careful data collection and analysis during this step will help develop solutions/interventions that are more directly linked to the problem to help the team answer these essential questions:

    - ❑ Why is the problem occurring?
    - ❑ What barriers prevent successful achievement of the goal?

3. **Planning and Implementation**: KyMTSS teams take the information from the problem analysis at Step 2 to match the solution or intervention to the possible root cause/specific skill deficit. Some guiding questions for teams as they begin to formulate action steps/interventions include (adapted from FL-PS/RTI, 2024):

    - ❑ What are we going to do to address the concern?
    - ❑ What evidence-based instructional practices and supports will be used?

- What resources are needed to support initial and on-going implementation of the plan?
- Are there standard interventions or approaches that might be beneficial for use?
- Are there students who might need more intensive or individualized learning support?
- How will the effectiveness of Tier 2 and Tier 3 intervention and supports be monitored over time?
- How will fidelity of implementation be monitored?
- What decision rules will be utilized to determine the response to the plan?

A good plan must be feasible to implement, have evidence of being effective and should include the following characteristics:

- ❑ Explicitly state what will be implemented/taught;
- ❑ Set a clear goal with criteria for success;
- ❑ Focus on measurable outcomes;
- ❑ Define who is responsible;
- ❑ Describe the plan for measuring and monitoring outcomes (aligned to the intervention that will be implemented):
- ❑ Describe the plan for monitoring fidelity; and
- ❑ Identify any needed resources and/or training available to implement the plan.

4. **Evaluation:** During this stage, the success of the plan is evaluated using data to determine whether the problem still exists. If so, the problem-solving steps will begin again, applying new information gained from the process. During this step, KyMTSS teams look at the outcome data (visually represented; ideally graphed) and fidelity data to answer the questions:
    - ❑ Did the plan (instruction/intervention/systems change) work? If not, how will the plan be adjusted?
    - ❑ Was the plan implemented as designed?
    - ❑ What is the response to instruction and intervention?
        - Positive: The gap between the expected performance and observed performance is closing.
        - Questionable: The rate at which the gap is widening slows considerably but is still widening or stops widening, but the closure does not occur.
        - Poor: The gap continues to widen with no change in rate of progress after instruction/intervention is implemented.

KyMTSS Tool: KyMTSS Data Analysis Protocol

Decision Rules

Criteria for decision-making or decision rules are articulated, in writing, and used by KyMTSS teams as a consistent way to determine:

- If universal instruction is effective for most students (e.g., minimum of 80% meeting benchmark);
- Which students are at risk or exceeding benchmarks and need supplemental support or enrichment;
- How frequently to monitor progress;
- When to review progress monitoring data;
- When to continue, intensify or exit a student from an intervention; and/or
- When to refer a student for a special education evaluation (in accordance with state regulations).

Decision rules facilitate the problem-solving process by clearly defining what happens when less than 80% of students are meeting benchmarks, progress varies by subgroup or lack of progress is evident. Decisions about risk status and response to instruction and intervention should be operationalized with clear, consistent rules prior to administration of the tool.

Written decision rules facilitate the analysis and use of screening, diagnostic and progress monitoring data. The Center on Multi-Tiered System of Supports recommends that at least two data sources be used when determining students' at-risk status (n.d.).

KyMTSS Resource: Written Decision Rules Protocol

Comprehensive Screening and Assessment System

A comprehensive system of valid and reliable assessments and screening measures is essential to provide relevant and useful data to inform instructional and programmatic decisions at both the system and student levels. In their white paper (2020), Jackson and Ehlers note that a system is comprehensive when it integrates a complete set of assessments to "appropriately and effectively support teaching and learning" (p. 5). Using the right assessment tools and practices, at the right time for the right reasons, allows various stakeholders at different levels of the system to monitor learning, identify needs and align just-in-time supports.

Assessments at all levels should work together in a system that is comprehensive, coherent and continuous (National Research Council, 2001). A comprehensive screening and assessment system serves a variety of purposes, uses multiple measures and provides the data used for decision-making at all levels and tiers of KyMTSS. This coordinated system of assessments includes:

1. Balanced Assessment (e.g., formative, benchmark/interim, diagnostic, summative)
2. Universal Screening
3. Progress Monitoring
4. Fidelity Assessment

Balanced Assessment System: *Kentucky's Model Curriculum Framework* Section III: Balanced Assessment (Kentucky Department of Education, 2023a) provides information around four primary assessment purposes that work together in a comprehensive, balanced assessment system:

- **Formative assessments** are administered on an on-going basis by teachers during an instructional unit to assess student learning continually and routinely as it happens. They are an integrated and iterative part of the learning and teaching process. Used effectively, formative assessments help teachers quickly monitor students' progress and adjust instruction to improve learning.

- **Diagnostic assessments** are generally used when students are demonstrating difficulties in learning and provide data about individual students' strengths and needs. They can help to inform the next steps for instruction, differentiation and intervention. Diagnostic assessments can be informal, easy-to-use tools which can be administered with little or no training, or formal diagnostic tools delivered in a standard way by trained staff. Valid and reliable diagnostic assessments are critical to ensure instruction is matched to student needs and support the hypothesis development necessary for intensifying interventions and supports (Bailey et al., 2020).

- **Interim/benchmark assessments** are typically administered at specific intervals over the course of an academic year to compare student understanding or performance against a set of learning standards or objectives. Interim assessments are often common across classes or schools in a district. Interim assessments can give educators information about progress toward the longer-term learning expectations and can inform future instructional decisions and school improvement planning. When well aligned to common learning expectations, interim assessments can be predictive of end-of-year performance.

- **Summative assessments** are administered at the end of a period of learning to measure the outcome of student learning and serve as an indicator of learning. Examples of summative assessments include the statewide end-of-year assessment and classroom-

level summative assessments. Summative assessments provide information about students in relation to a set of academic or nonacademic expectations and are intended to monitor and evaluate student performance at the group level. Summative assessments also may be used to provide information and inform decisions about the overall effectiveness of MTSS. Data are useful to inform program-level and school improvement planning; it provides an overall picture of how a system is preparing students to meet academic, behavioral and social expectations.

Universal screening and **progress monitoring** measures are two types of formative assessment used within the KyMTSS framework. These formative assessments are more formal in design than classroom formative assessments and require valid and reliable tools delivered in a standardized way (Bailey et al., 2020). KyMTSS teams use universal screening and progress monitoring data to make decisions about effectiveness of instruction, movement within the multi-level prevention system and intensification of instruction, interventions and supports.

Universal screening measures offer an evidence-based and proactive way to monitor Tier 1 instruction and supports. They are designed to be quick, efficient, reliable and predictive of risk. Using validated screening procedures, the KyMTSS leadership team ensures that all students are screened with fidelity on an on-going basis (Center on RTI, 2014); typically, three times during the school year (i.e., fall, winter and spring). In secondary settings, early warning systems may be used alongside historical data to identify students at risk for not meeting outcomes such as school completion, academic success and college and career readiness (Faria et al 2017). Early warning systems use research-based indicators, such as attendance, behavior, course performance and demographics, that when used with other sources of data can be used to evaluate the effectiveness of Tier 1 as well as identify students at risk (Scala et al, 2023; U.S. Department of Education, 2016).

Universal screening measures provide data on how all students are progressing to meet academic, behavioral and social-emotional indicators and to identify students who are at risk and may need additional support. However, it is important to remember that KyMTSS leadership teams also use the data to evaluate whether Tier 1 instruction is effective for most students and develop a plan for improvement if less than 80% of students are meeting benchmarks (FL-PS/RTI, 2024).

Universal screening data support decision-making at all levels of the system – from the district level to the student level. District teams use screening data to make decisions and set goals related to program improvement and curriculum, initiative alignment and sustainability, allocation of resources and equitable access and opportunity across schools. School teams use screening data to review school and grade-level trends, monitor effectiveness of schoolwide curriculum and supports, identify areas of need, and to set measurable schoolwide goals (Bailey et al., 2020). Teachers use screening data to identify students at risk for meeting or those exceeding end-of-year performance benchmarks. They adjust instruction, intervention and

supports as needed (Center on Multi-Tiered System of Supports, n.d.). When selecting appropriate screening tools, MTSS teams should consider the cultural and linguistic needs, context and desired outcomes of the school and/or district.

Progress monitoring measures are brief, repeated measures that capture students' progress or rate of improvement over time in response to instruction or intervention using valid and reliable measures (Center on Multi-Tiered System of Supports, n.d.). The data provide information on whether the student is making adequate progress with the current level of support. Progress monitoring requires repeated assessment with more frequent assessment when challenges are more intense. Data is collected and graphed regularly so student progress can be compared to a goal set using the standardized decision-making process. The frequency of progress monitoring should be matched to the intensity of the instruction. For example, progress monitoring at Tier 2 typically is every two weeks or at least monthly for students identified for academic intervention and supports, and at least weekly for students identified for more intensive intervention at Tier 3. Depending on the target behavior, progress monitoring for nonacademic skills and behaviors is usually more frequent (e.g., weekly, daily, hourly).

Critical Features of Progress Monitoring Tools:

- Have sufficient alternate forms of equal and controlled difficulty to allow for progress monitoring at recommended intervals based on intervention level.
- Specify minimum acceptable levels of growth or performance.
- Provide benchmarks for minimum acceptable end-of-year performance.
- Have available reliability and validity information of the performance level score and for growth for students with intensive needs.

Source: National Center for Intensive Intervention at the American Institutes for Research (NCII), 2024a

Progress monitoring targets one or two specific skills that are the best indicators of growth (McIntosh & Goodman, 2016). Grade-level and intervention teams use progress monitoring data to make decisions about student responsiveness to interventions and supports and to adjust as needed. Accurate decision-making requires ongoing data for valid interpretation. To obtain a reliable estimate of the student's response to the intervention, data should be collected for a minimum of six weeks of instruction or six data points if the data are collected biweekly or monthly (NCII, 2024b). As the number of data points increases, the chance of measurement errors decreases. To effectively evaluate student progress, teams must collect enough data points to ensure they have an accurate indication of the student's skills being measured. It is critical to balance allowing enough time for an intervention to work with the

goal of not wasting instructional time with an intervention that is not working. Teams review data patterns and compare students' rate of improvement to the growth necessary to meet their goals (The IRIS Center, 2015).

Fuchs and Kern (National Center for Intensive Intervention, 2014) identify the following considerations for optimizing data collection during progress monitoring**:**

- Does the measure align to the content of the intervention?
- Is the measure sensitive to change (i.e., will scores go up when the student is provided with instruction)?
- Is the data collected often enough?
- Is the measure too challenging to show improvement?
- Is there consistency in the administration and frequency of data collection?

District and school teams use systems-level progress monitoring data to assess the effectiveness of district and school level interventions (Center on Multi-Tiered System of Supports, n.d.).

Fidelity of implementation measures are used by teams to evaluate whether the systems, structures and evidence-based practices that are in place to support an effective MTSS are implemented as designed. Fidelity data are necessary for teams to be able to draw accurate conclusions regarding student outcomes and can also be used to inform professional learning (Lane, et al., 2019). Fidelity assessments are used for measuring:

- Implementation of the critical components of a multi-tiered system of supports (MTSS);
- Use of the problem-solving process across all three tiers; and
- Implementation of evidence-based instruction and interventions matched to specific need(s).

Two main types of systems-level measures are typically used – self-assessments completed by the team or whole school staff, or external evaluations conducted by a coach or district team. Fidelity assessments often are conducted as a baseline or needs assessment prior to implementation (to determine what processes are already in place) and then annually to assess progress. Fidelity of instruction and intervention practices often take the form of checklists or rating scales aligned to the critical components of intervention. They are used to assess whether these critical components of the intervention are being implemented as designed and are conducted as part of the progress monitoring review cycle.

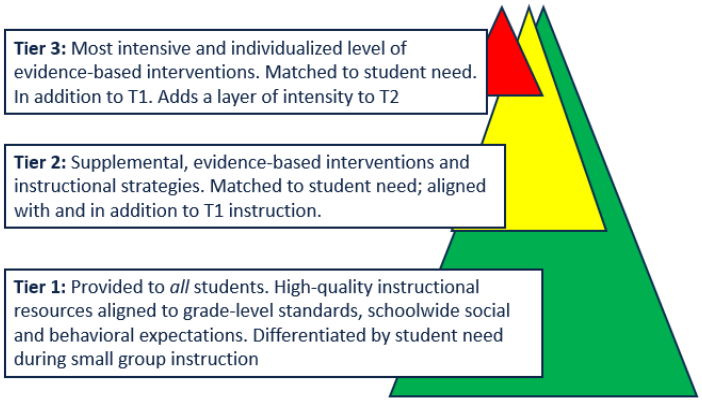
Tiered Delivery System with a Continuum of Supports

Overview

Kentucky's Multi-Tiered System of Supports (KyMTSS) is a comprehensive prevention framework organized to provide a continuum of increasingly intensive instruction, intervention and support. A tiered delivery system is designed to maximize achievement and support the social and behavioral competencies of all students. In this framework, three tiers (Figure 4.1) are used to describe the level of intensity and individualization across the continuum. Evidence-based instructional practices, interventions and strategies identified at each tier are delivered in an environment where students feel safe, supported and welcome.

Movement through the tiers is a flexible and fluid process driven by data-based decision-making and collaborative team decisions. Each tier represents an increase in the individualization and intensity of the instruction, intervention and support (e.g., more frequent and/or of longer duration, and smaller group size). It is important to note that the tiers are a model used to describe the *intensity of support* and are not intended to be used as a label for students. The design and implementation of a multi-tiered approach provides for efficient and effective allocation of resources within the educational system to improve academic, behavior and social-emotional outcomes for students. (Fuchs & Fuchs, 2006; McIntosh et al., 2009; Stoiber & Gettinger, 2016).

Figure 4.1 Multi-Tiered Delivery System



Organizational structures such as collaborative problem-solving teams, well-defined professional learning to support continuous improvement of MTSS implementation and instructional practices, data-based decision-making, and a system for collecting and analyzing data support effective implementation of the MTSS tiered delivery system (Center on Multi-Tiered Systems of Support, n.d.). Tier 1 is the foundation for the multi-tiered system; however, all three tiers should be viewed as inter-related and designed to be preventative. As shown in

Table 4.1 and discussed in more detail below, a tiered delivery system intensifies the focus, instruction or intervention and assessment across the continuum.

Table 4.1: Tiered Delivery System

	Tier 1	Tier 2	Tier 3
Focus	All students	Based on local decision rules. Students identified at risk or exceeding the grade-level benchmark. Academic and/or nonacademic (~10% - 15% of students).	Based on local decision rules. Students who have not responded to supplemental intervention (Tier 2) or those with persistent and significant academic and/or nonacademic needs or strengths (~3% - 5% of students).
Instruction or Intervention Approach	High-quality, evidence-based instructional resources and practices aligned with the *Kentucky Academic Standards*, schoolwide behavioral expectations and core social-emotional competencies. Differentiated based on student need to provide "just-in-time" instruction and support with needed scaffolds to access grade-level concepts and materials. Led by the classroom instructor.	Supplemental and aligned to Tier 1. Evidence-based interventions or instructional practices matched to student needs. Provided in addition to Tier 1. Delivered to small groups (typically 3-7 students or as determined by the intervention program). Led by an educator, paraprofessional, or supplemental staff.	Most intensive level of support. Evidence-based interventions aligned to Tier 1 and individualized to student need. In addition to Tier 1 and increases intensity of T2 through a change to frequency, duration, group size (typically 2-3 students or 1:1) instructor expertise; or change of intervention. Led by a highly specialized educator, behavior specialist or mental health professional.
Assessment	Universal screening, continuous progress monitoring (e.g., formative assessments) and outcome measures or summative assessments.	Diagnostic to determine root cause(s). Progress monitoring at regular intervals that match the level of need. Recommended every 2 weeks or at least monthly for academics; weekly for behavior.	Diagnostic assessment to determine root cause(s). Progress monitoring at regular intervals that match the level of need. Recommended weekly for academics; may be as frequently as daily for behavior.

Adapted from Hill & Theodore (2019). *Overview of multi-tiered systems of support – South Carolina MTSS*

Universal Level of Support: Tier 1

Tier 1 is the foundational or universal layer of support. *All* students receive instruction and support through the local curriculum aligned to the Kentucky Academic Standards, schoolwide behavioral expectations and designed to support core social-emotional competencies. KyMTSS is first and foremost a systems framework designed to prevent students from needing intensive intervention by ensuring that all students have access to high-quality instructional resources and evidence-based practices that are implemented as designed. Teaching and learning objectives should be intentional and well-articulated from one grade to another, as well as within grade levels so that all students have equitable experiences regardless of their assigned teacher (Center for MTSS, n.d.; Kentucky Department of Education, 2023). In an integrated MTSS, Tier 1 sets an intentional focus on academic, behavioral and social-emotional development.

Historically, in sustainable multi-tiered systems, districts and schools aim for at least 80% of students to have their needs met through this universal level of instruction and support (Fuchs & Deshler, 2007; Vaughn & Fletcher, 2012: Center on Multi-Tiered System of Supports, n.d.). When Tier 1 instruction is accessible to all students and meets the needs of most students, districts and schools will have the capacity to devote the necessary resources for those students who need supplemental or intensive intervention. At Tier 1, teachers use formative assessment data to identify and address the needs of students and provide "just-in-time" instruction along with needed scaffolds and differentiation, so all students are able to access grade-level concepts and materials. Extension and enrichment opportunities are built into the schedule and provided as needed for students exceeding benchmarks, and teachers implement those opportunities consistently at all grade levels (Center on Multi-Tiered System of Supports, n.d.; Hannigan & Hannigan, 2021; TNTP, 2022).

Differentiated, engaging grade-level instruction and consistency in the use of evidence-based practices and proactive behavioral and social-emotional supports are essential components of Tier 1. Within the continuum of instruction, intervention and support, a strong foundation at Tier 1 is critical to the success of the multi-tiered prevention system (Lee & Gage, 2006; McIntosh et al., 2006; Swanson et al., 2017).

Assessment in Tier 1

At Tier 1, data from a comprehensive system of assessments are used to make decisions at the district, school, classroom and student level. Formative assessments provide data about student learning as it happens and help teachers determine if instruction is effective or if adjustments to instruction are needed. Summative assessments are used to provide data at the end of student learning and generally are based on end-of-year or unit outcomes. Statewide summative assessments often are used to determine if students are meeting state academic

standards. They also can be used to inform decisions about system-level programming and the overall effectiveness of MTSS.

Universal screening is used at Tier 1 to (1) evaluate the effectiveness of the local curriculum and classroom instruction provided to all students, (2) identify students who may be at risk for poor academic or behavioral and social-emotional outcomes (i.e., not meeting end-of-year benchmarks, schoolwide behavioral expectations) and (3) identify students who need supplemental or intensive interventions. It is critical for teams to select valid and reliable screening tools with established benchmarks that accurately classify risk. This information can be found in the technical manual associated with the screening tool or on the National Center for Intensive Intervention (NCII) screening tools chart (NCII, n.d.).

Diagnostic assessments may be used to help educators identify strengths and weaknesses and provide data about students' knowledge and skills. They also can help the problem-solving team identify the intervention that is the best match for a group of students or an individual student.

Additional information on universal screening and diagnostic assessment may be found in the Data-Based Decision-Making with a Comprehensive Screening and Assessment system section (pp. 23-24).

Decision-Making at Tier 1

KyMTSS leadership teams analyze data from valid and reliable universal screening assessments to monitor the implementation and effectiveness of Tier 1 instruction. If the data indicates that less than 80% of students are meeting benchmarks for academic proficiency, behavior expectations or social-emotional competencies, leadership teams examine the difference between the actual and the desired performance in order to identify areas in need of improvement at the systems level. Utilizing the problem-solving process, teams analyze the local curriculum, instruction and assessment that is happening in general education classrooms and evaluate how well these systems align with each other and with state academic standards, schoolwide behavioral expectations and identified core social-emotional competencies. This systematic analysis of time, instructional resources and delivery of universal instruction is an essential piece of determining which components of Tier 1 are working well and which need to be improved.

KyMTSS leadership teams use a consistent problem-solving process to identify the area(s) of concern and consider school-wide or whole-class instructional strategies to improve student performance that match the identified areas of need. Strategies are analyzed according to the extent to which they are evidence-based, a cultural and contextual fit to the school and are feasible to implement. The school team then sets improvement goals, develops a plan of action

and uses outcome data to monitor progress. Some guiding questions for teams to consider at Tier 1 include:

- What do we expect our students to learn?
- How will we know if they are learning?
- How will we respond when some students do not learn?
- How will we enrich and extend learning for students who already know it?
- How will fidelity of instruction be monitored over time?

Analyzing universal screening data at the student level, teams use an established data-driven process to identify students in need of intervention or enrichment to accelerate learning. Teams determine whether additional assessments are needed in order to identify the specific area(s) of focus so that intervention and supports are matched to student needs.

Additional information on this process may be found in the Data-Based Decision-Making with a Comprehensive Screening and Assessment System section).

Center on Multi-Tiered Systems of Support Resources: Essential Features of Tier 1 and Tips for Intensifying Instruction at Tier 1

Supplemental Level of Support: Tier 2

Tier 2 is the supplemental or targeted level of support intended for *some* learners who require support or extension beyond what is provided to all students. This level is intended for short-term, evidence-based intervention aligned with Tier 1 instruction and targeting the skills needed to accelerate the grade-level learning and objectives of the universal academic, behavior and social-emotional curriculum and instruction. Interventions should be provided by individuals who meet the qualifications and training specified by the intervention. In sustainable systems, the rule of thumb is 10% - 15% of learners access this level of support in addition to the universal Tier 1 instruction. At the Tier 2 level, schools provide small group, standardized academic interventions and/or targeted behavioral or social-emotional supports using evidence-based intervention programs and practices to support students identified as at risk through the assessment process (Center on Multi-Tiered System of Supports, n.d.).

For students exceeding academic and nonacademic benchmarks, interventions at Tier 2 may focus on adding complexity or abstraction, adjusting the pace of instruction or compacting the curriculum (Rogers, 2015; Van-Tassel-Baska & Johnsen, 2015). These interventions do not necessarily require additional work for advanced students, but they do require adjusting the instructional process or product expectation.

Assessment at Tier 2

Students meeting criteria for Tier 2 supports are identified based on their risk level for academic, behavioral and social-emotional difficulties as indicated by valid and reliable universal screening and other available data – disciplinary referrals, attendance data, early warning systems, etc. Valid and reliable diagnostic assessments are then used to provide information about students who are in need of intervention by identifying individual strengths and weaknesses.

Progress monitoring is an essential component of MTSS assessment that can be used to confirm risk status and identify students in need of additional intervention or assessment as well as to determine the effectiveness of an intervention or instructional program. Progress monitoring tools measure student growth over an established period of time. The frequency of progress monitoring matches the level of student need (recommended every two weeks or at least monthly for Tier 2), and student progress toward the established goals should be evaluated at regular intervals. As in the screening process, there should be procedures in place to ensure the accuracy of progress monitoring implementation. Teams make certain that the appropriate students are tested, data is entered accurately, decision-making rules are applied consistently to determine changes in intervention and scores are accurate by monitoring trends over time (Bailey et al., 2020). Tier 2 teams also ensure that fidelity measures are in place to make sure the interventions are implemented as designed.

Decision-Making at Tier 2

At the systems level, MTSS teams analyze fidelity of implementation data alongside student outcome data to determine the effectiveness of the tiered delivery system. As teams review their data across tiers, they should consider (Bailey et al., 2020; p.37):

- To what extent is the school under- or over-identifying students for intervention?
- Are most students benefiting from the Tier 2 intervention system?
- How can the school improve implementation of Tier 2 interventions and supports?

At the student level, KyMTSS teams analyze results of the diagnostic assessment(s) and determine the specific interventions for groups of students with similar academic, behavioral and/or social-emotional needs who require supplemental instruction and supports in addition to the universal level of support. Teams use decision rules to determine when students are identified for intervention, if they are responding to interventions, if the intervention needs to be adapted or if the student needs a more intensive intervention. Guiding questions for problem-solving at Tier 2 include (adapted from FL-PS/RTI, 2024):

- What are the academic, behavioral and/or social-emotional needs of these students?

- Which small-group or low intensity individual evidence-based interventions will meet those needs?
- Are most students receiving supplemental interventions making adequate progress?
    - If so, which students are ready to transition from the Tier 2 support?
    - If not, does the fidelity data indicate the intervention was implemented as designed? Is a change to the intervention needed (i.e., a different intervention or change in intensity – duration, frequency or area of focus)?
- Are students who are progressing at Tier 2 also demonstrating progress toward the grade-level Tier 1 expectations?

Center on MTSS Resource: 10 Essential Features of Tier 2

Intensive Level of Support: Tier 3

Tier 3, the most intensive level of support, is intended for learners whose needs extend well beyond the reach of the universal level. In effective systems, typically 3% - 5% of learners will need access to this level of support. Intervention at this level is delivered to smaller groups or individually and delivered by individuals with the most expertise, such as a reading or math specialist, behavior specialist, social worker or mental health professional, depending on the student's needs. Intensification of Tier 3 interventions may include:

- Increased duration or frequency;
- Change in interventionist, decreased group size;
- Change in instructional delivery; and/or
- Change in type of intervention.

For academic, behavioral and social-emotional achievement that is well below benchmark, learners are provided intensive, individualized research-based intervention and supports in addition to Tier 1 instruction and with more intensity than Tier 2. For learners significantly exceeding academic and nonacademic benchmarks, collaborative teams may determine a student requires more individualized acceleration utilizing research-based interventions to maximize growth. Acceleration is well documented in the research as effective gifted education practices (Rogers, 2015). Acceleration for gifted and talented students may take various forms, depending on student assessment. The student might need content-based acceleration or whole grade acceleration. For primary students, districts should have an evaluation process for early entrance to kindergarten. For middle and high school students, there should be an early exit plan.

Assessment at Tier 3

Assessment at Tier 3 is used to individualize and intensify the intervention. Progress monitoring data as well as valid and reliable diagnostic measures provide the information for teams to use in developing a hypothesis about why an individual or group of students may not be responding to an intervention. Progress monitoring data also is used to identify students making a rate of progress that indicates they are ready to transition to a less intensive level of support.

Decision-Making at Tier 3

At the systems level, MTSS teams analyze implementation data alongside student outcome data to determine the effectiveness of the tiered delivery system. As teams review their data across tiers, some considerations are (Bailey, et al., 2020):

- ❑ To what extent are students under- or over-identified for Tier 3 or referred for special education?
- ❑ Are most students benefiting from intensive intervention at Tier 3?
- ❑ How can the school improve the integration of data and intervention at Tier 3?

School MTSS teams determine the specific intensive, individualized interventions needed to improve the rate of progress of individual students. Teams use decision rules to determine when students are identified, if students are responding to intervention or if a change of intervention or intervention intensity is needed. Guiding questions for Tier 3 include (adapted from FL-PS/RTI, 2024):

- ❑ Are most students receiving intensive intervention making expected gains (e.g., scores at or above the established criterion for either performance or rate of growth)?
    - ○ If so, which students may be ready to transition from Tier 3 supports to less intense Tier 2 supports?
    - ○ If not,
        - ▪ Have interventions been provided with fidelity?
        - ▪ Are assessment strategies sensitive enough to identify progress?
        - ▪ Is a change of intervention or a change to the intensity of interventions needed to create a better match to the academic, behavioral and social-emotional needs of the student?
- ❑ Are students who are progressing at Tier 3 also demonstrating progress toward the Tier 1 expectations?

Center on MTSS Resource: Essential Features of Tier 3

Summary

Within an effective MTSS, all students have access to Tier 1 instruction and supports. Tier 2 and Tier 3 interventions and supports are delivered with increasing layers of intensity, frequency and individualization and do not replace Tier 1 instruction. The multi-tiered delivery system is designed to be responsive to student progress so that students move fluidly through Tiers 1, 2 and 3 levels of support as needed.

All families are updated on their child's progress in meeting grade-level academic, behavioral and social-emotional expectations. For Tier 2 and Tier 3 levels of support, families are kept informed on their child's response to intervention and are engaged in the problem-solving process when making decisions related to more intensive interventions.

Evidence-Based Instruction, Intervention and Supports

Overview

Within the framework of Kentucky's Multi-Tiered System of Supports, leadership teams develop and consistently use a formal process to select/de-select, adopt and monitor the effectiveness of a continuum of evidence-based instructional resources, intervention and supports. Evidence-based practices are defined as those shown to be effective through research to promote positive academic, behavioral and social-emotional outcomes when implemented as designed.

The Every Student Succeeds Act (ESSA), establishes a framework with four levels of evidence for consideration and use by school districts when selecting evidence-based interventions – especially as related to school improvement (USED, 2023). The four ESSA levels reflect the rigor of the study used to design the intervention. Table 5.1 provides a summary of how to identify evidence at each of ESSA's four levels.

Table 5.1: ESSA Levels of Evidence Framework (USED, 2023, p. 16)

Evidence Requirement	Level I: Strong Evidence	Level II: Moderate Evidence	Level III: Promising Evidence	Level IV: Demonstrates a Rationale
Outcomes	At least one statistically significant and positive effect on a relevant outcome; no statistically significant and negative effects on a relevant outcome	At least one statistically significant and positive effect on a relevant outcome; no statistically significant and negative effects on a relevant outcome	At least one statistically significant and positive effect on a relevant outcome	Not applicable
Study Design	Experimental study	Experimental study or quasi-experimental design study	Experimental study, quasi-experimental design study or correlational study with statistical controls for selection bias	Logic model informed by research or evaluation findings
WWC Evidence Rating	Meets WWC without reservations	Meets WWC with or without reservations	Not Applicable	Not Applicable
Sample Size	A large sample (n= 350+) and a multi-site sample	A large sample (n= 350+) and a multi-site sample	Not Applicable	Not Applicable

According to ESSA, schools receiving federal funding must use evidence-based interventions for specific programs described in Titles I, II and IV of the ESEA. Some federal and state programs and funding streams allow the use of all four levels. However, school improvement funds may only be spent on interventions supported by Level I, Level II or Level III.

The Office of Continuous Improvement and Support at the Kentucky Department of Education (KDE) has provided a variety of tools and resources to support districts and schools in understanding, identifying and implementing evidence-based practices. These may be found on the KDE website on the Evidence-Based Practices page.

The Role of Evidence within the KyMTSS Framework

The instruction, intervention and supports delivered across the continuum of KyMTSS should be grounded in the evidence of what works for the population served, and aligned with the school and district vision, programs and initiatives.

According to the National Center on Intensive Intervention (NCII) (n/d), evidence-based at the **universal level or Tier 1** is defined as the "comprehensive, research-based curriculum, delivered class-wide to all students." At Tier 1, all students should have access to a guaranteed and viable curriculum supported by high-quality instructional resources and instructional practices with documented evidence of effectiveness for the student population and educational context. The research is clear that when students are provided with quality, standards-aligned, grade-level instruction it improves learning (Hattie, et al., 2021; Marzano, 2003; TNTP, 2018). The focus is optimizing learning and preventing problems as early as possible.

Kentucky's **Model Curriculum Framework** (KDE, 2023b) guides schools and districts in the creation of curricular coherence through the alignment of standards, curriculum, instructional resources and practices, assessment and professional learning within and across grade-levels. At Tier 1, there should be evidence that the local curriculum anchored in high-quality instructional resources (HQIR) includes comprehensive coverage of grade-level content and skills aligned with the *Kentucky Academic Standards (KAS)*, schoolwide positive behavioral expectations and core social-emotional competencies. A well implemented and effective Tier 1 provides equitable access and opportunity for all students to learn the content/skills and should lead to fewer students needing intervention. Teachers use data from assessments (e.g., formative assessments including universal screening and progress monitoring) to ensure that selected instructional practices, strategies and resources are effective for most students and are the right fit for the educational context and student population.

Teachers adjust, scaffold and differentiate grade-level instruction, as needed, to meet diverse student needs (Fuchs and Vaughn, 2012; Gandi et al., 2016). As teachers implement their local curriculum, it is important that they are strategic and intentional in the use of evidence-based instructional practices to support students in reaching intended outcomes (KDE, 2023, p.

8). Instructional resources and practices that meet ESSA levels I-III are most likely to accelerate student growth to meet grade-level academic, behavioral and social-emotional benchmarks.

KDE Resource: Kentucky's Model Curriculum Framework

Evidence-based interventions are those validated for a specific purpose with a specific population and must be used in the way they were researched. At **Tier 2,** evidence-based intervention programs and practices are selected that (a) align to the student population, (b) match the identified need based on data and (c) have been shown through rigorous research to have a positive impact on the targeted outcomes for students identified as at risk, when implemented as designed (Gandi et al. 2016).

Tier 2 interventions should be supported by the highest levels of evidence, *strong evidence* (ESSA Level I) or *moderate evidence* (ESSA Level II), as these are most likely to improve student outcomes. Tier 2 interventions are supplemental and aligned to Tier 1 and delivered to small, homogenous groups by a trained interventionist. However, not all students respond to standardized, evidence-based intervention programs and instructional practices implemented at Tier 2, even when those interventions are delivered with fidelity. In an effective MTSS, approximately 1% - 5% of students will need access to more intensive, targeted support (Tier 3).

Evidence-based intervention at **Tier 3** includes all the features of Tier 2, but intensifies the individualization of the intervention, embedding evidence-based instructional strategies and supports based on student progress data (Gandi et al., 2016; Jung et al., 2018). Interventions at Tier 3 should be supported by the highest levels of evidence (ESSA levels I-III). However, when the data indicates a need to individualize an intervention, there should be a level of evidence based on high-quality research findings that the change is likely to improve student outcomes (ESSA level IV).

The NCII (n/d) recommends that intensive intervention should be designed from an evidence-based platform (when available), be specifically aligned to student needs and be intensified appropriately. The *Taxonomy of Intervention Intensity* (Fuchs et al., 2017) can be used to help educators systematically evaluate or intensify an intervention at Tier 3. Table 5.2 outlines the seven dimensions of a taxonomy for evaluating a current intervention and building intervention intensity based on research:

Table 5.2: Dimensions of the Taxonomy of Intervention Intensity (Fuchs et al., 2017)

Dimension	Description
Strength	How well the intervention works for students with intensive needs – the evidence base.
Dosage	The number of opportunities the student has to respond to demonstrate their learning during the lesson (verbal, written, physical responses) and receive corrective feedback. Also includes information about the number of lessons, length of time for each lesson and group size. Dosage should increase as the intensity of students' needs increase.
Alignment	How well the intervention (a) matches the targeted academic skills or behaviors of concern, (b) does not include skills already mastered, and (c) incorporates a meaningful focus on grade-appropriate standards, behavioral expectations or social-emotional competencies.
Attention to transfer	The extent to which an intervention is explicitly designed to help students make connections between the skills taught in the intervention and skills learned in other contexts and environments.
Comprehensiveness	The number of explicit instruction principles the intervention incorporates (e.g., providing explanations in clear, concise language; teacher modeling of efficient solution strategies; ensuring necessary background knowledge and skills; gradual fading of instructional supports; providing opportunities for practice; and incorporating distributive and cumulative review).
Behavioral or academic support	The extent to which an academic intervention incorporates behavioral strategies that may support students with self-regulation, motivation or externalizing behaviors that may impact their ability to learn, or whether a behavioral intervention considers academic components as part of the intervention.
Individualization	The ongoing use of progress monitoring data and other diagnostic data sources to intensify and individualize the intervention based on student need.

Selection and Adoption of Evidence-Based Instruction, Intervention and Supports

Within the KyMTSS framework, integrated leadership teams use a range of school and community data to assess the needs of the students, families and community. They use a formal process to select evidence-based practices that are aligned to identified needs; establish measurable goals for improvement; and monitor progress and make adaptations to instruction, intervention and supports as needed. Outcome and fidelity of implementation data are gathered and analyzed to monitor the effectiveness of the instruction, intervention and supports.

In the *ESSA Action Guide: Selecting Evidence-Based Practices for Low Performing Schools*, Garcia and Davis (2019) propose the following three action steps that integrate ESSA requirements and local needs and context during the selection and adoption process of evidence-based practices:

1. Review the data and practices to prioritize improvement areas.
2. Explore key resources to identify programs, practices or strategies that meet evidence requirements.
3. Apply other criteria to identify evidence-based programs, practices or strategies that meet local priorities (p. 4).

Review the data and practices to prioritize improvement areas. The first action for teams is to analyze the data and current practices to identify and prioritize improvement areas. Using a standardized problem-solving process, KyMTSS leadership teams use multiple data sources to (a) determine whether a problem exists, (b) define it as precisely and explicitly as possible and (c) identify student outcomes that evidence-based practices should address. The team then analyzes the data with enough depth to identify possible underlying factors or root causes behind the prioritized areas for improvement. Careful data collection and analysis is critical at this step to help the team generate actions or strategies to achieve the identified goal. Identifying the actions needed will determine the general topic area for choosing an evidence-based practice. Teams create an audit or initiative inventory of current academic, behavioral and social-emotional instructional practices, interventions and supports to determine which current practices address their prioritized outcomes. An inventory also can help teams identify which practices have been successful and which are not resulting in desired outcomes or are not matched to student need and should be ended.

KyMTSS Resource: KyMTSS Data-Based Decision-Making Protocol

Explore key resources to identify programs, practices or strategies that meet evidence requirements. KyMTSS leadership teams review existing online clearinghouses or databases for potential evidence-based practices matched to identified prioritized area(s). Clearinghouses are tools that provide independent evaluations of research related to programs, practices and interventions. They typically include a searchable database of research that supports easy filtering of results or ranking of practices by various quality factors. They also synthesize research into user-friendly reports and are widely available and free to use. For example, the What Works Clearinghouse contains the “Find What Works” database of studies and practice guides that summarize research across classroom and schoolwide practices.

Clearinghouses can have their drawbacks. They may not be comprehensive in scope, and teams may need to explore multiple clearinghouses to get the full picture of the potential impact of a program, practice or strategy. Clearinghouses are largely self-governed, meaning they have different standards for inclusion and quality, and they also may reflect organizational or review bias.

Some best practices to consider when using online clearinghouses include:

- Check to see that the research is cited and referenced in the discussion;
- Read the report with a critical eye and scan for bias;
- Pay attention to the scope and methods of implementation discussed in the report (often research only supports the use of a practice with a specific group of students or under certain circumstances); and
- Review reports from multiple clearinghouses, if available.

The KDE maintains a running list of clearinghouses posted on the evidence-based practices webpage ESSA Evidence Resources.

If online clearinghouses do not contain studies that address the program, practice or intervention teams are considering, another option is to review research studies found at sources like the Education Resources Information Center (ERIC). ERIC is a free database that archives articles from most educational research journals. Kentucky educators also can set up a free account and have access to 62 different academic databases through the Kentucky Virtual Library (KVL). Academic databases provide a comprehensive list of research pulled directly from journal articles. This means that the information comes directly from the researcher without any additional reviewer bias. However, databases often require a subscription for use and may not be very user-friendly.

Apply other criteria to identify evidence-based programs, practices or strategies that meet local priorities. Once the team determines that the program, practice or strategy selected is backed by evidence showing a positive impact on student outcomes, they examine additional criteria to better understand how the new or existing program or practice fits into their existing work and context. Contextual fit plays an important role in the selection process. Horner and Blitz (2014) define contextual fit as the "match between the strategies, procedures or elements of an intervention and the values, needs, skills and resources available in a setting" (p. 1). An intervention may be said to possess good contextual fit when implementers, recipients and other stakeholders identify the intervention as "acceptable, doable, effective and sustainable" (p. 3). To facilitate the selection and adoption process, KyMTSS leadership teams should develop and consistently use a systematic process to review, select and de-select instructional practices, interventions and supports. Table 5.3 provides a description of key indicators to guide selection and help teams assess the fit and feasibility of current and potential programs and practices (Metz & Louison, 2018):

Table 5.3: Key Indicators to Guide Selection of Evidence-Based Practices

Indicator	Description
Need	• Identification of the target population and/or subpopulation the program or practice will serve • Use of multiple data sources and disaggregated data to understand needs and assets of this population • Family and community perception of needs and assets
Evidence	• Outcome, fidelity and cost effectiveness data • Strength of evidence: for whom and in what conditions
Fit	• Fit with current instructional practices, interventions and supports of the school or district • Alignment with other priorities • Fit with family and community values, culture and history
Usability	• Core features of the program/practice clearly defined • Mature examples/model sites to observe • Replicated • Adaptions for context and populations
Capacity	• Implementation costs • Resources needed and available for implementation (staffing, staff knowledge base, supervisory support, technology resources and support, etc.)
Supports	• Staff meet minimum qualifications • Able to sustain staffing, coaching, training, data systems, performance assessment and administration

The KyMTSS district leadership team then ensures that resources are equitably allocated so that all educators have access to the high-quality professional learning, coaching, materials, time and space necessary to implement instructional practices, interventions and supports with fidelity. Once an instructional resource, practice or intervention has been selected and implemented, it is critical that the district and school leadership teams have a process in place to evaluate effectiveness and implementation integrity. By collecting and analyzing student outcome and fidelity data, teams will be able to determine whether the intervention was successful and warrants further use. Using evidence-based practices with fidelity within KyMTSS increases the likelihood of positive student outcomes and improves efficiency of the responsiveness to students' needs because educators start with what is known to be effective.

Equitable Access and Opportunity

Overview

Kentucky's Multi-Tiered System of Supports (KyMTSS) ensures equitable access and opportunity by integrating differentiated universal instruction, assessment and intervention to responsively adjust the intensity and nature of support to maximize academic, behavioral and social-emotional outcomes for *all* students. It is, first and foremost, a framework that organizes the systems, data and practices along a layered continuum of supports to build responsive, engaging and inclusive learning experiences.

Equitable access and opportunity in education means each and every student must have "access to the educational resources and rigor they need at the right moment in their education" (Council of Chief State School Officers [CCSSO], 2017, p. 3). An intentional commitment to equitable access and opportunity is embedded into all elements of the KyMTSS framework across each level of the system - state, region, district, school and student to ensure that all students have the opportunity to learn and thrive.

Building Access and Opportunity Through MTSS

Strong and engaged district and school leadership teams are the foundation for implementing, improving and sustaining an effective KyMTSS that is committed to improving outcomes for each and every student. Leadership teams that are representative of key stakeholders including administrators, teachers, students, family and community partners advocate for and ensure all students have access to the range of opportunities and resources critical to student success. These teams strategically analyze data across subpopulations represented in their district and schools and develop evidence-based solutions to improve student outcomes. KyMTSS leadership teams start with a systems approach to examine distribution of funding and access to highly effective teachers, rigorous coursework, support services, supportive school climates and extracurricular opportunities to ensure:

- All students are taught by educators who are fully prepared and supported throughout their career.
- Students are provided with access to a range of supportive services that ensure their health and well-being.
- Schools are funded in a way that is equitable, stable and adequate to provide all students with 21st Century skills and other modern technology.
- All students are provided access to high-quality instructional resources aligned to the *Kentucky Academic Standards,* school-wide behavioral expectations and core social-

emotional competencies, evidenced-based instructional practices and up-to-date instructional resources and tools, including computers and related technology (adapted from The Learning Policy Institute, 2021).

KyMTSS leadership teams systematically examine current policies, programs and practices to create action plans that address academic, behavioral and social expectations, access to learning opportunities, high-quality instruction, resource allocation and/or accountability to achieve student success for all. Teams engage in ongoing, embedded and systematic professional learning to deepen their understanding of the characteristics and practices of an equitable school.

Data-Based Decision-Making

KyMTSS teams intentionally disaggregate and analyze data on student performance and experience. Data analysis for student success moves beyond a routine analysis of achievement data to asking questions that help the team understand what drives actions, decisions, policies, etc. KyMTSS leadership teams might start the data-based decision-making process by asking the question," What do we need to know and do to ensure access and opportunity for all students?" In order to do this, teams must ensure the right data is collected and analyzed to answer those questions. Systematic use of a broad range of disaggregated quantitative and qualitative data is essential to enhance opportunities, experiences and outcomes. Disaggregating data in meaningful ways, calculating risk ratios, using root cause analyses, recognizing disproportionate representation and identifying families who are or are not present at school events all are ways in which districts and schools can begin this work.

Multiple sources of data are disaggregated by subpopulations (e.g., office referrals, suspensions, measures of academic achievement and growth, behavior screening, early warning systems, school climate surveys, etc.) and analyzed to inform decisions and monitor student outcomes. KyMTSS teams use a systematic problem-solving process to identify trends, patterns and differences in how students are experiencing school and performing academically, behaviorally and social-emotionally. Teams intentionally examine inequitable outcomes from a systems perspective first before viewing it as an issue with an individual student or family. As part of the problem-solving process, teams identify possible root causes that the school or district has the ability to act on and the influence to change.

Guiding questions for the KyMTSS leadership team when identifying root causes during the problem-solving process might include:

- What is the performance by school and by student group?
- Do all schools have adequate funding? Are funds allocated according to identified need based on data?

- Do all schools provide high-quality instructional resources anchored to a standards-aligned curriculum?
- Who is chronically absent? What might keep this group from attending school?
- Which students receive the highest number of office disciplinary referrals? Suspensions?
- Which students have access to rigorous and advanced courses?
- Which students are graduating college or career ready?
- Which students are taught by the most experienced and highly effective teachers?
- Are financial and human resources distributed equitably within the school/district? (Villani, 2018)

Once a reasonable set of root causes have been identified, the next step in the problem-solving process for teams is to investigate the research on evidence-based interventions and best practices to address the identified area(s) of concern (Villani, 2018, p. 5). KyMTSS leadership teams use evidence for what works to develop plans to remove barriers and commit to the allocation of sufficient funds, resources (people, materials, training, etc.) and time based on the needs of the school and its students. Goals are set and monitored using implementation and student outcome data.

Practices

Within an integrated KyMTSS, the universal level of support (Tier 1) available to all students includes high-quality instruction and resources through a coherent local curriculum aligned to the rigor of the grade-level Ken*tucky Academic Standards (KAS),* schoolwide behavioral expectations and core social-emotional competencies. Practices that promote access and opportunity at Tier 1 include:

- Universal instruction that is intentionally designed in a way that allows *all* students to engage.
- Evidence-based instructional resources and practices used to maximize academic proficiency, positive behavior and social-emotional well-being are responsive to the varying backgrounds, abilities and life experiences represented by the students and the community.
- Practices, curriculum, instructional resources and the school environment authentically reflect the images and experiences of all students.
- Differentiated and scaffolded instruction, provided as needed, to ensure that each and every student has access to the grade-level content and skills taught.
- A positive school climate that encourages engagement of all students and promotes respect for the identities and cultures of the learners and families served.
- School and classroom spaces that are inviting, physically and environmentally safe, and supportive of learning and engagement for all students.

Supplemental (Tier 2) and intensive (Tier 3) practices that promote access and opportunity include:

- Interventions that are matched to meet the individual needs of the learner based on data.
- Interventions that not only have evidence of effectiveness but also are appropriate for the population served.
- Universal screening and progress monitoring practices that are inclusive and are used to ensure that students receive just the right amount of support they need at the right moment in their education.

KyMTSS leadership teams ensure that resources are allocated for professional learning that address the needs of the whole child. Continuous, sustained and job-embedded professional learning and coaching help teachers evaluate, explore and expand their instructional practices to meet the needs of diverse learners.

Family, School and Community Partnerships

Overview

The National Center on Safe Supportive Learning Environments (2021) defines family, school and community partnerships as purposeful, reciprocal relationships in which schools, families and other community agencies and organizations actively engage in meaningful and culturally appropriate collaboration with the goal of improving student outcomes. For the purpose of this document, "family" means natural, adoptive or foster parents; close relatives; legal or educational guardians; and/or community or agency advocates."

Kentucky's Multi-Tiered System of Supports (KyMTSS) provides a framework for families, schools and community partners to work together to support and improve the learning and well-being of each and every student. Using multi-tiered prevention logic, data-based decision-making and evidence-based practices, districts and schools can become more intentional in supporting all families to be more involved at school and better informed about ways to support their children at home. KyMTSS district and school leadership teams strategically leverage community partnerships to extend their reach, create more fluid and comprehensive supports and help bridge the cultural and linguistic gaps between families and the educational system. Partnerships with local organizations, mental health providers, mentorship programs and after-school services can create more comprehensive supports that bridge the gaps between families and the educational system (U.S. Department of Education, 2023).

A growing body of evidence is clear and convincing (Henderson & Mapp, 2002; Weiss, Lopez, & Rosenberg, 2010):

When families, community groups and schools collaborate to support learning, students of all ages, backgrounds, race and ethnicity:

- Earn higher grades;
- Attend school more regularly;
- Have better social skills, display a more positive attitude toward school and behave better both in and out of school; and
- Enroll in higher-level programs and persist to graduation.

Henderson and Mapp's synthesis of the research (2002) recognizes that families of all income and education levels, and from all ethnic and cultural groups, support their children's learning at home. However, the data indicates that families with higher income and education levels tend to be more engaged at school and have more resources to help their children at home. The more the relationship between families, schools and the community is a real partnership,

well-planned and intentionally executed, the more student achievement increases (Garcia, et al., 2016; Henderson, et al., 2007). This concept of partnerships expands the idea of engagement and recognizes that families, educators and others in the community share responsibility for students' learning and well-being. The partnership between schools and families encompasses and reinforces student achievement, behavior and social-emotional well-being in multiple settings - at home, in school, in out-of-school programs and in the community.

Key Features of Implementation

Implementing MTSS successfully requires appropriate district and school infrastructure and support systems (Center on Multi-Tiered System of Supports, 2021). When KyMTSS leadership teams intentionally incorporate family and community representation, they are better able to address potential barriers to engagement. In Part 1 of the *Toolkit for Engaging Families and the Community as Partners in Education,* Garcia et al. (2016) summarize the research around barriers to family and community engagement that can pose challenges for educators. These include:

- Parents' (and other family members') previous negative experiences or interactions with schools (e.g., parents did not do well in school or educators told parents only what they should do without acknowledging what they might already be doing);
- Language and cultural barriers (e.g., parents or their representatives believe they should defer to educators and not play an active role in education);
- Limited professional development and training of educators in family and community engagement;
- Educators' own cultural beliefs and attitudes (p. 4).

Other barriers to family and community engagement may arise if families have not been exposed to the "practices, experiences and beliefs that are validated by the school culture" (Garcia et al., 2016, p. 6). For example, school personnel might assume that all parents and families are familiar with school grading practices, the *Kentucky Academic Standards*, the value placed on parent-teacher conferences, the methods schools use to communicate with parents (for example, newsletters, websites and daily folders), or attendance policies. If parents and family members are not aware of these practices, providing clear guidance and support to navigate the educational system may lead to increased involvement. Additionally, this may result in greater participation in family engagement activities.

KyMTSS leadership teams can help ensure that a proactive and responsive continuum of supports is in place to assist families and increase engagement. Within the KyMTSS framework, family engagement occurs across all tiers—ensuring that all families, regardless of their background or circumstances, have access to the resources and support they need to be

actively involved in their student's education. Utilizing high-impact practices at the universal level creates strong, engaged partnerships among families, educators and community agencies. For example, most families will be able to navigate the educational system and have the resources to do that (e.g., transportation, language proficiency, ways to communicate with staff – phones, email). Some families may not know how to access the information they need. In this scenario, all that may be required is to identify the need and provide them with supplemental supports (e.g., explain the routines, supply the number to call or name of the person to contact, provide an interpreter). A few families will have a very difficult time even though they know the routines and how to make contact. In this case, families simply may not have the resources to be able to access the system (e.g., transportation, finances, mental health issues), so the team identifies the barriers and/or needs and provides more intensive level of supports.

Research has shown that traditional family engagement events and activities have small effect sizes on student achievement (Henderson & Mapp, 2002). Family, school and community engagement that has been shown to have a greater impact on student achievement is "collaborative, culturally competent and focused on improving student learning" (The National Association for Family, School and Community Engagement [NAFSE]; n/d).

Some examples of high-impact strategies recommended by NAFSE that can be implemented to support all families include:

- Building personal relationships, respect and mutual understanding with families through home visits, community walks and class meetings;
- Sharing data with families about student skill levels;
- Modeling effective teaching practices so families can use them at home;
- Listening to families about their children's interests and challenges, and then using this information to differentiate instruction;
- Incorporating content from families' home cultures into classroom lessons; and
- Aligning family engagement activities with school improvement goals.

Utilizing high-impact practices at Tier 1 ensures conditions for engaged positive partnerships among families, educators and community agencies are in place. Through the organizational framework of KyMTSS, districts and schools can build the systems, data and practices that bring about more engaged partnerships between families, schools and community groups and organizations. Effective systems that support family, school and community partnerships include:

- KyMTSS leadership teams that include representation of all key stakeholders, including staff members who directly engage with family, students and community members and reflect the diversity of the school and community.
- A multi-tiered continuum of proactive and responsive supports for families to increase active engagement and participation. Each tier of the KyMTSS continuum represents greater intensity of services and problem-solving as well as more frequent data collection. When family, school and community partners are included in the process, each tier also represents greater frequency of communication and joint problem-solving.
- Data-based decision-making that includes teacher, student, family and community voice. KyMTSS leadership teams gather, analyze and act on multiple sources of data, including demographic data, student outcome data and perception data (teacher, staff, student and family perceptions gathered through surveys, interviews and/or focus groups). Family and community partners are given an opportunity to contribute, participate in data-based decision-making and give feedback on action plans, programs and policies.
- Data sharing is a two-way process – from school to home and from home to school. Educators share student performance data (academic, behavioral and social-emotional) and families share information about their children's interests, strengths and challenges. Communication is ongoing and carefully planned so families can understand and use the data to support learning at home (Garcia et al., 2016). Families are continually informed of their child's progress or any lack of progress.
- Assessment data and progress monitoring information and results are explained to the student's family as part of conferencing and families are part of the problem-solving process and intervention planning at Tier 2 and Tier 3.

Beyond the Bake Sale: The Essential Guide to Family-School Partnerships (Henderson, Mapp, Johnson & Davies, 2007) emphasizes that strong family-school partnerships lead to improved student outcomes and a more supportive school environment. Within the guide is the *Four Versions of Family-School Partnerships* framework (Henderson et al., 2007, pp. 42–43). This may serve as a guide for schools and districts to consider their current approach to family engagement and identify opportunities to strengthen collaboration. By reflecting on key areas such as relationship-building, linking engagement to learning, addressing cultural differences, supporting advocacy and sharing power, MTSS teams can determine their current operation level and how they might further develop the partnership. This self-assessment can guide schools in transitioning to a more collaborative model, where families are valued as active partners in student success.

Resource: Four Versions of Family Partnerships

Commitment to strong family, school and community partnerships is essential to maximizing student success. The KyMTSS framework promotes a supportive, welcoming and collaborative environment that addresses barriers and increases two-way engagement. Through intentional family, school and community partnership engagement, schools can ensure that all students receive the comprehensive support needed to maximize academic outcomes and social-behavioral competencies. These collaborative partnerships build stronger relationships, promote access and opportunities for all and equip students with the needed resources to thrive.

Resources: Dual Capacity-Building Framework 2.0 and Family Engagement Digital Playbook

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