

A Comprehensive MTSS Model: Integrating Behavioral and Academic Interventions

Cara Shores, Ed. S.
Wesley Educational Services
www.wesleyeducational.com

Vision of MTSS

- MTSS is a **SCHOOL IMPROVEMENT PROCESS** carried out predominately through general education. It requires that ALL teachers take responsibility for ALL students.
- MTSS is a **TOOL FOR EARLY INTERVENTION** so that students do not have to wait to receive the intensity of instruction needed for each to progress.
- MTSS is a **TOOL FOR PREVENTION** so that students do not have to struggle prior to receiving intervention.

Why Early Intervention?

- A child who completes **second grade** without being able to read has only a **25%** chance of reading at grade level (*Gettinger & Stoiber, 2007*).
- The majority of **4th grade** children with reading problems will have them in high school and have a higher probability of dropping out of school (*Scarborough, 2001*).

Why Early Intervention?

- During the 2003-04 school year, 81% of schools reported one or more violent incidents.
 - 27% reported daily or weekly student bullying
 - 11% reported verbal abuse of teachers
 - 17% reported gang activities

(Dinkes, Cataldi, Kena, & Baum, 2006)

- In 2005-06, the overall rate of violent incidents for all public schools was 31 incidents per 1,000 students
 - primary schools (25 incidents per 1,000 students)
 - middle schools (52 incidents per 1,000 students)
 - high schools (26 incidents per 1,000 students)
- The rate of student bullying reported at school daily or weekly was
 - Middle schools (43 percent)
 - high schools (22 percent)
 - primary schools (21 percent)
- Source: US Dept. of Education Crime, Violence, Discipline, and Safety in U.S. Public Schools: Findings From the School Survey on Crime and Safety: 2005–06; National Center for Education Statistics

School-wide Positive Behavior Supports

- National Technical Assistance Center on Positive Behavior Supports www.pbis.org
- Tiered continuum of interventions and progress monitoring to address student needs
- Ten + years of implementation
- Over 5,000 schools in US tracked by Center (*Horner & Sugai, 2007*)

MTSS and PBIS Together

- MTSS serves as an effective *framework* for implementation of Positive Behavior Interventions and Supports
- Academic *and* behavioral functioning are inseparable (*Scott, 2001; Sugai et.al., 2000*)
- Most significant gains occur with ***integrated*** academic and behavioral model (*Stewart, Benner, Martella, & Marchand-Martella, 2007*)

What structure do you need in place to have an effective Multi-tier System of Supports?

Essential system components

- 1) Research-based interventions
- 2) Assessment and Data-based decision making
- 3) Measures to assure fidelity of instruction

Scientific Research-based Interventions

- **Instructional**

- Rigorous research design that shows intervention is effective with large numbers of students
- Explicitly teaches the deficit skill

- **Behavioral**

- Rigorous research design, but may also include case studies
- Explicitly teaches expectations
- Proactively prevents behavior problems

NCLB Requirements

- School-wide programs operate according to a plan that contains proven, research-based strategies designed to facilitate school-wide reform and improvement.
- Any strategies the school considers should be research-based and likely to produce the desired results.

U.S. Department of Education (2006)

Scientifically Based Research Defined by NCLB

- means research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs and
- includes research that-
 - employs systematic, empirical methods that draw on observation or experiment;
 - involves rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;
 - relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators;

- is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;
- ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to build systematically on their findings, and
- has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review.” (NCLB, 2001).

Frameworks for Interventions

- **Standard Protocol**

- Standard interventions *pre-established* in school for *immediate access* to students experiencing difficulties
- Schools can develop based on school-wide needs assessment, progress monitoring results, standardized test results, etc.
- Small group format

Frameworks for Interventions

- **Problem-solving**

- *Team based approach* for making decisions for individual students
- Used in addition to *or* instead of Standard Protocol
- *Define the Problem*
- *Plan an Intervention*
- *Implement the Plan*
- *Evaluate the response*

Frameworks for Interventions

- **Hybrid Model**

- Using a combination of Problem-solving and Standard Protocol
- Standard interventions *pre-established* in school for *immediate access* to students experiencing difficulties
- *Problem solving approach* for making decisions for groups of students with like needs and individual students for designing intensive interventions.

MTSS is a hybrid model!!

Data-based Decision-making

- **Assessment is used to determine:**
 - Where *all* students are functioning
 - Which students are *at risk*
 - How much *progress* students are making
- Assessment is useful only when it is ***used*** to *adjust instruction*

Assessment

- Universal screening/benchmark assessment
- Progress monitoring
- Diagnostic assessment
 - *Assessing individual student deficits*
 - *Specialized assessment*

Fidelity of Implementation

- Assuring that *curriculum* is being taught correctly and consistently
- Assuring that *behavioral* management and supports are being implemented correctly and consistently
- Assuring that interventions are being implemented the way they were designed

**TIER ONE: CORE INSTRUCTION/
PRIMARY SUPPORTS**

The success or failure of the process will rely heavily on the quality of Core instruction and supports.

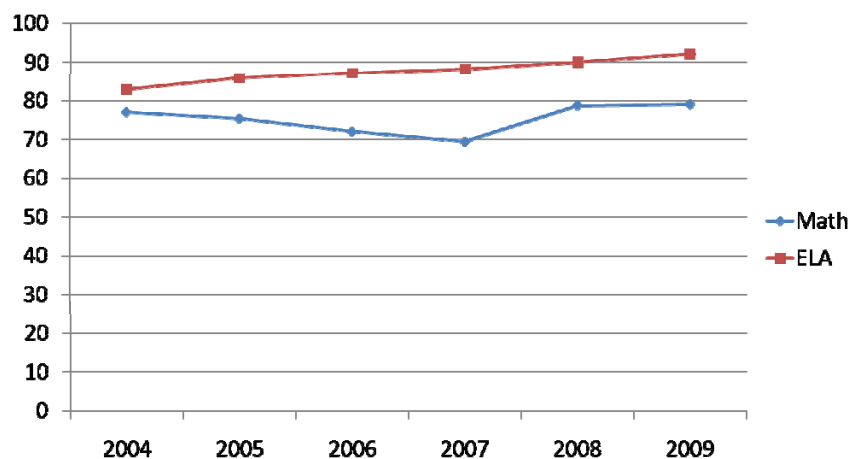
Effective Instruction for All Students

- **What percentage of students are making appropriate progress with Core instruction?**
- **How do you know?**
- **Outcome Data**
 - Academic data analysis
 - Gap analysis
- **Trends**

What does your data tell you about the quality of instruction?

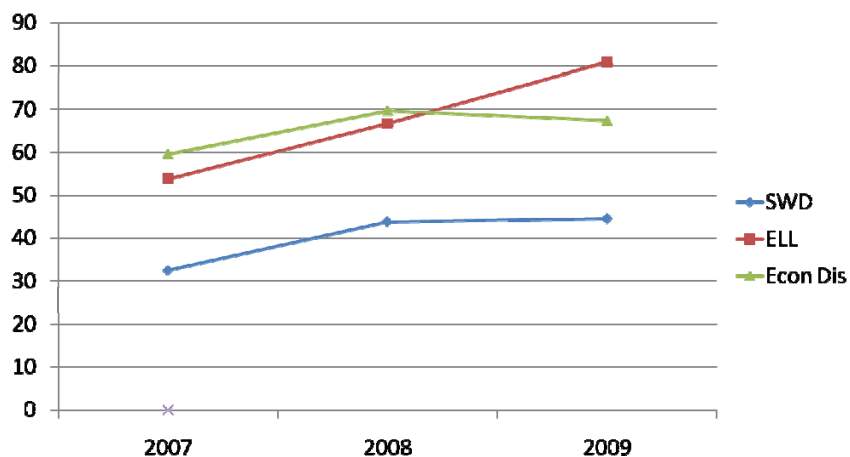
- Examine school-wide data from a variety of sources.
- Analyze student proficiency in Reading, English/Language Arts and Math
- Determine what areas of curriculum need to be enhanced.
- Determine if there are subgroups who need specific interventions developed (econ dis)

State-mandated Assessment School-wide Meets/Exceeds

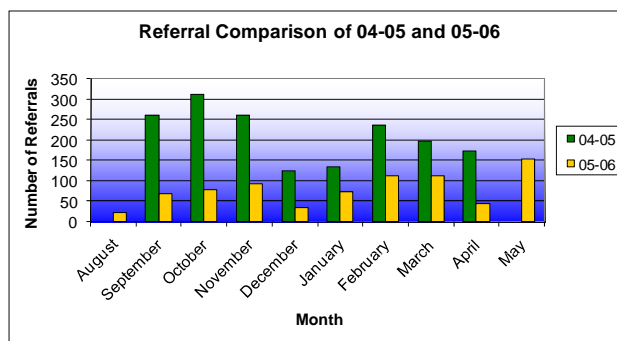


Grades 6-8

State-mandated Assessment Subgroups Meet/Exceed Math



Office Discipline Referrals School-wide



What Does This Say About This School?

- Strong Core (Tier 1)
 - ELA
 - Math -
- Distinct need for targeted interventions
 - 7.8% overall in ELA
 - 21% overall in Math
- Specific subgroups need targeted and/or intensive instruction
 - SWD 55.5%
 - ELL 19%
 - Econ Dis 32.6%
- Implementation of school-wide behavioral supports brought drastic reduction in number of office discipline referrals.

What do we already have in place?

- After analyzing data, determine what your school already has in place to address the identified needs.
- Determine how well the programs are working (are you seeing gain?).
- Identify the gaps in services.
- Identify interventions, programs, and resources to address those areas of need.

Tier One: Core Instruction/Primary Supports

- Quality *curriculum* available to *all* students
- Differentiated instruction
- Formative and Summative assessment
- Flexible groupings
- Behavioral Curriculum
- Classroom Management
- School-wide Behavioral Supports
- Universal Screening
- Should enable 80% of students to be successful

Think/Pair/Share

- How well are these best practices being applied in your school?
 - Quality curriculum available to all students
 - Differentiated instruction
 - Backward design
 - Formative and Summative assessment
 - Flexible groupings
 - School-wide and classroom behavior management

Is your Tier 1 support adequate? Not if...

- Less than 80% of students meeting standards
 - Reading
 - Math
- More than 2.5 ODRs per student
- More than 45% of students receive one or more ODRs in a school year

**TIER TWO: SUPPLEMENTAL
SUPPORTS**

Steps in Process

1. Identify intervention that specifically addresses *deficit area*
 - a) *Standard protocol*
 - b) *Problem solving*
2. Assess for student's *baseline* in deficit area
3. Set *goal* for improvement
4. *Teach* intervention per established plan
5. *Monitor progress*
6. *Monitor fidelity* of implementation
7. *Use data* to make instructional decisions

Establishing the Process – Tier Two

Standard Protocol

- ▶ Determine needs
- ▶ Establish intervention structure
- ▶ Schedule
- ▶ Allocate resources
- ▶ Define interventions
- ▶ Train staff in interventions
- ▶ Establish progress monitoring tools and procedures

Problem Solving

- ▶ Establish team
- ▶ Train staff in decision making model
- ▶ Establish logistics
- ▶ Allocate resources
- ▶ Establish bank of interventions
- ▶ Train staff in interventions
- ▶ Establish progress monitoring tools and procedures

- Use appropriate *grouping formats* (3-5 students).
- Use appropriate *amounts of time* for instruction.
- Assure additional instruction *aligns with core* program.
- Provide *ongoing and systematic corrective feedback* to students.
- Provide *extended practice* in the critical components of instruction based on students' needs.
- Use systematic classroom-based instructional *assessment* to document student *growth* and *inform instruction*.

(Vaughn & Roberts, 2007, p. 44)

How effective should Tier 2 Supplemental Support be?

- Tiers 2 is judged to be *effective* if **75 – 80%** of students who receive interventions *return to Tier 1*.

Types of Academic Interventions for Tier 2

- **Supplemental materials**
- **Research-based learning strategies**
 - *Multiple grade levels*
 - *Multiple content areas*

Examples of Tier 2 Interventions

- Reading Mastery
- Making Connections Intervention
- Road to the Code
- Aha!Math – www.learning.com
 - K-6 skills include most major concepts
- Language!
- Read 180 and System 44
- Read Naturally
- Success Maker (Computer Assisted Instruction)

Examples of Tier 2 Interventions

- Content Enhancement Routines – www.kucrl.org
- Classroom Instruction That Works – Robert Marzano
- Cognitive Strategy Instruction – many strategies for reading and math
- Peer Assisted Learning Strategies – Vanderbilt University
- Schema-based Instruction - Jitendra

Explicit Instruction

- 27) **Explicit instruction** with students who have mathematical difficulties has shown **consistently positive effects** on performance with word problems and computation. Results are consistent for students with learning disabilities, as well as other students who perform in the lowest third of a typical class.

– National Math Advisory Panel (2008)

- 27) By the term *explicit instruction*, the Panel means that teachers provide **clear models** for solving a problem type using an **array of examples**, that students receive **extensive practice in use of newly learned strategies and skills**, that students are **provided with opportunities to think aloud** (i.e., talk through the decisions they make and the steps they take), and that students are provided with **extensive feedback**. The Panel recommends that **struggling students receive some explicit mathematics instruction regularly**. Some of this time should be dedicated to ensuring that these students possess the **foundational skills and conceptual knowledge** necessary for understanding the mathematics they are learning at their grade level.

Examples of Behavioral Interventions for Tier 2

- Behavior Education Program
- First Step to Success
- Responsibility Strategies
- Rainbows International

Behavior Education Program (Check in/Check out)

- Standard Protocol intervention appropriate for Tiers 2 and 3
- Highly structured
- May serve up to 30 students in average school
- *Responding to Problem Behavior in Schools* – Crone, Horner, & Hawken
- Dr. Leanne Hawken - www.ed.utah.edu/~hawken_l/bepresource.htm

First Step to Success

- Designed for k-2 students at risk for significant behavioral problems
- Materials available from Sopris West www.sopriswest.com

Other Standard Protocol Research-based Interventions

- Responsibility Strategies
 - Self-monitoring (Marzano et al, 2003)
 - Cognitively-based strategies (Marzano et al, 2003)
 - Self-determination (Janney & Snell, 2008; <http://www.alaskachd.org/toolkit>)
- Rainbows International
 - Grief and loss counseling program
 - www.rainbows.org

Individual Behavioral Interventions

- Individualized based on student need
 - Individual assessment may include Functional Behavioral Assessment

Resources for Research-Based Interventions

- **National Center on Response to Intervention**
 - www.rti4success.org
- Center on Instruction
 - www.centeroninstruction.org
- The Florida Center for Reading Research
 - www.fcrr.org
- University of Nebraska Lincoln
 - www.unl.edu/csi/index.shtml
- Doing What Works
 - <http://dww.ed.gov/>
- Effective School Interventions by Rathvon (1st and 2nd edition)
- Classroom Instruction that Works by Marzano

Resources for Research-based Interventions

- www.pbis.org
- www.casel.org
- www.boystownpress.org

Fidelity of Implementation

- **Determine if intervention has been implemented as prescribed**
- **Evaluation tools**
 - *School-wide Evaluation Tool*
 - *Benchmarks of Quality*
- **Fidelity Checklist**
- **Contextual fit**
 - *Self-Assessment of Contextual Fit in Schools*
 - *Checklist for Individual Student Systems (pbis.org)*

Tier 3 - Specially Designed Learning

- Individualized to student needs – problem solving approach
- Based on extensive assessment
- Some students may require immediate access without progressing through lower tiers

Tier 3/Intensive **Academic** Interventions

- Different from Tier 2
- May be same but more concentrated
- Specific to deficit
- More intensive than Tier 2
- Based on individualized assessment

Tier 3/Intensive **Behavioral** Interventions

- Different from Tier 2
- More intensive
- Individualized plan
- Based on individualized assessment

Specifics for Intervention

- Person responsible for implementation and progress monitoring
- Time frame
- Reward system
- Progress monitoring tool
- Frequency of progress monitoring
- Frequency of progress review
- Definition of responsiveness

Reading Interventions

- Wilson Reading
- Reading Mastery
- S.P.I.R.E.
- SRA Corrective Decoding & Corrective Comprehension

Behavioral Interventions

- Adapted Behavior Education Program
- Individualized Behavior Intervention Plan
 - Systematic reduction in problem behaviors
 - Individualized proactive positive behavior supports
 - Systematic teaching of replacement behaviors
 - Includes altering variables to decrease likelihood of problem behaviors

Behavioral Interventions

- Based on thorough Functional Behavioral Assessment
- May involve community support in addition to school support
 - Wrap-around Process (Eber & Hawken, 2008)

Immediate Access to Intensive Interventions

- **Risk factors**

- Poverty (7% serious emotional or behavioral difficulties vs. 4%)
- Parental abuse
 - Alcohol related – 20%
 - Significant factor in 81% of child abuse cases
- Premature birth
- Low birth weight
- Prenatal substance abuse
- Birth injury
- Isolation or deprivation

Immediate Access to Intensive Interventions

- Depression (8% of children)
- Bi-polar
- Other disorders
 - (90% of suicides)
- Self-destructive behaviors

Wraparound Planning Framework

- Involves community support for student and family
- Designed to increase parental involvement
- Facilitated by specially trained personnel

What about your school?

- Gap analysis.

Where are the gaps in instructional and behavioral support?

What steps should be taken to address them?

Gap Analysis Form

Leadership teams may use this form to examine existing programs and determine gaps in instructional and behavioral supports. Results may be used in establishing the need for a Comprehensive RTI model and in developing an Action Plan.

Area of need	Program, resource or process that addresses that need	Effectiveness of program, resource or process 1 – Excellent 2 – Good 3 - Poor	Changes needed	Goal	Timeline
Tier 1					
Core curriculum implemented with fidelity					
Instruction is differentiated to allow all students access to curriculum					
Formative assessment is used to guide instruction					
School-wide behavioral plan is in place					
Classroom management is effective throughout school					
Universal screening tool available					

Universal screening data is reviewed by data team					
RTI process is implemented with fidelity					
Tier 2					
Research-based interventions are available for the five areas of reading					
Research-based interventions are available for math computation and problem solving					
Research-based interventions are available for behavior problems					
Time is allocated for interventions					
Interventions are implemented with fidelity					
Diagnostic assessment tools are used for the five areas of reading					

Diagnostic assessment tools are used for math computation and problem solving					
Functional behavioral assessment and/or checklists are used					
Curriculum based measurement tools are used in reading					
Curriculum based measurement tools are used in math					
Individual progress monitoring is used for behavior					
Every student receiving interventions has incremental and long term goals					
Student progress is reviewed frequently					
Problem solving process is used in Tier 2 when needed					

Interventions are implemented with fidelity					
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Tier 3					
Research-based interventions are used with all students needing interventions					
Instruction in Tier 3 is more intensive than Tier 2					
Progress monitoring in Tier 3 is more intensive than in Tier 2					
Interventions are implemented with fidelity					
Interventions are in addition to core instruction					
Frequent progress monitoring and data review are used for student planning					
Diagnostic assessment is used in individual student planning					

Students receive individual assessment					
Student progress is monitored frequently					
Student goals are based on assessment data					