Student Success Through Collaboration: MTSS, RtI, and Special Education in Schools

STUDENT SUCCESS THROUGH COLLABORATION: MTSS, RTI, AND SPECIAL EDUCATION IN SCHOOLS

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by Dr. Kara Woodley

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MEET THE AUTHOR

Figure 0.1 | Dr. Kara Woodley, author

Dr. Kara Woodley is an Assistant Professor of Special Education at the University of Wisconsin-Superior. Prior to her work at UW-Superior, she worked as an elementary and middle school special education teacher, dyslexia interventionist, and IEP facilitator in urban schools for 18 years. She has research interests in multicultural special education, culturally responsive teaching and pedagogies, and improving educator, family, and community resources for students with disabilities in urban and rural communities. She has authored and presented work at conferences nationally and internationally. Dr. Woodley was named a Wisconsin Teaching Fellow & Scholar in 2024 through the Universities of Wisconsin.

GLOSSARY

At-risk student

generally defined as a student experiencing a variety of challenging circumstances that may contribute to a higher potential for dropping out of high school and experiencing academic difficulties or failure.

Behavior Action Plan

this plan provides a structured approach to addressing specific behavioral needs, ensuring that the support is tailored to the individual's needs

Culturally responsive

an instructional approach where the teacher recognizes, demonstrates understanding, and effectively responds to the diverse cultural backgrounds, experiences, and needs of their students.

Curriculum-Based Measurement (CBM)

a specific, standardized form of CBA characterized by brief, timed probes with standardized administration and scoring (words read correctly per minute; digits correct per minute).

Data-Driven Decision-Making

an important part of the Multi-Tiered System of Supports and Response to Intervention processes that uses a systematic process of collecting, analyzing, and interpreting data from universal screening, benchmarks, assessments, and progress monitoring to make decisions about student intervention placement.

Developmentally appropriate

the content and activities in the lessons or interventions are tailored to the student's specific age and grade level, and it considers the developmental stage and content learning required by state standards

Evidence-Based Intervention (EBI)

an instructional strategy, practice, or intervention that is based in research to improve academic or behavioral outcomes for students; Evidence-based Interventions address specific skills and needs

Multi-Tiered System of Supports (MTSS)

a tiered system of support, with increasing levels of intensity to match student needs.

Piaget's Theory of Cognitive Development

Theory that discusses that children are indeed active learners who construct their own understanding of the world.

Research-Based Curriculum

curriculum that is based on educational research that has sound principles, consistent structure, based on strong educational theories and is content-specific.

Response to Intervention

a data-driven approach that schools and districts use to support students with academic and/or behavioral needs.

Universal Screening

key aspects of universal screening include systematic assessment, identification of students at-risk, assessing with a broad curricular scope, and using data-driven decision making.

CASE STUDY: TIER 1 RTI BEHAVIOR INTERVENTION

Student Profile

Name: Jenny (pseudonym)
Pronouns: she/her
Grade Level: 3rd Grade
Student Information: Jenny is an engaged student. She performs at or above grade level academically in most subjects. She lives with both parents and a younger sibling. There are no known significant family stressors or medical conditions impacting her behavior.

Behavioral Issue

Over the past two months, Jenny has begun showing an increasing pattern of disruptive behaviors during independent work times and transitions during math instruction. These behaviors include:

- Frequent off-task talking with peers.
- Leaving her seat without permission.
- Calling out answers or comments without raising her hand
- Fidgeting excessively and playing with small object
- Occasionally making distracting noises (tapping pencil, humming)

These behaviors are not aggressive or defiant, but they are disruptive to the classroom learning environment for Jenny and her classmates, particularly during periods requiring sustained focus in math. Jenny's classroom teacher, Mr. Sanchez, has observed that these behaviors often escalate when Jenny perceives the task as boring or challenging.

Tier 1 Interventions in Place

Mr. Sanchez classroom already has a set of Tier 1 universal behavior interventions that includes their school-wide PBIS system, which are taught explicitly and reinforced consistently for all students. These include:

1. Clear and Consistent Classroom Rules: Five positively stated classroom rules are displayed prominently and reviewed daily to remind students of expectations.
2. Visual Schedules and Routines: A daily visual schedule helps all students anticipate transitions and activities.
3. PBIS Positive Reinforcement System: Students earn points or following rules and demonstrating expected behaviors, which can be exchanged for school or class rewards.
4. Behavioral Expectations Are Explicitly Taught: Specific expectations for independent work, group work, and transitions in math are modeled and practiced regularly.
5. Proximity Control and Non-Verbal Cues: Mr. Sanchez frequently uses proximity and eye contact to redirect off-task behavior.
6. "Take a Break" Area: A designated quiet area is available for students to self-regulate when students are feeling overwhelmed. Mr. Sanchez has taught his class clear procedures for its use.
7. Teaching with a Research-Based Curriculum: Mr. Sanchez strives to make lessons interactive and differentiate instruction to meet the diverse learning needs of his class.

Data Collection (Prior to Targeted Intervention)

Mr. Sanchez informally tracked Jenny's off-task behaviors for two weeks using anecdotal notes and tally marks during two key periods: 15-minute independent math work and 10-minute small group math work.

- Week 1 (Math Whole Group): 8-12 instances of off-task behavior per session.
- Week 1 (Math Small Group): 5-9 instances of off-task behavior per session.
- Week 2 (Math Whole Group): 10-15 instances of off-task behavior per session.
- Week 2 (Math Small Group): 7-11 instances of off-task behavior per session.

This data indicated a consistent, slightly increasing pattern of disruptive behavior despite the existing Tier 1 universal support.

Collaborative Team Discussion and Hypothesis

Mr. Sanchez met with the school's student support team (SST), or RtI team. Team members included a school psychologist, a special education teacher, and the assistant principal to discuss Jenny's behavior. Based on his observations, the SST team hypothesized that Jenny's behaviors might be serving a function of:

- Attention-seeking (from peers or teacher): Her off-task talking and calling out often gained attention/ reactions.

- Escape/Avoidance (of perceived difficult or boring tasks): Her behaviors increased during independent work in math, in both whole and small group time.
- Sensory/Fidget Needs: Excessive fidgeting suggested a possible need for movement or sensory input.

Tier 1 Intervention Implementation (Adjustments and Intensification)

Mr. Sanchez recognized that Jenny's behaviors were happening within the general education setting and were not yet severe enough for Tier 2 intervention. The SST team decided to intensify and individualize existing Tier 1 strategies within the classroom, focusing on proactive support and skill-building.

These are the following interventions that were implemented by Mr. Sanchez:

1. **Proximity Seating:** Jenny was moved to a seat closer to Mr. Sanchez' desk, allowing for more frequent positive reinforcement and less opportunity for peer interaction during independent work.
2. **Pre-Correction/Reminders:** Before independent work times, Mr. Sanchez began explicitly reminding Jenny (and subtly the entire class) of the classroom expectations: "Remember, during independent math time, we are working quietly at our desks. If you have a question, raise your hand." Mr. Sanchez would often make eye contact with Jenny during this verbal reminder.
3. **Increased Opportunities for Appropriate Attention:** Mr. Sanchez made a conscious effort to "catch Jenny being good" and provide immediate, specific praise for on-task behavior ("Jenny, I noticed you've been working diligently on your math for the last five minutes, great focus!"). He also assigned Jenny small, positive "jobs" during transitions (handing out papers, collecting materials) to provide appropriate opportunities for movement and positive attention.
4. **Scheduled Movement Breaks/Fidgets:**
   Recognizing the potential sensory need, Mr. Sanchez implemented:
   Desk Fidget Tool: Provided a discrete, quiet fidget tool (a stress ball or tangle toy) for Jenny to use during independent work, with clear guidelines for appropriate use.
   Short, Structured Movement Breaks: After 15-20 minutes of seated work, Jenny was allowed a quick, pre-approved movement break (sharpen pencil, deliver a note to the office, stretch at her desk for 30 seconds). This break was provided to the whole class as a "brain break" but with a subtle cue to Jenny specifically.
5. **Choice and Task Engagement:** Mr. Sanchez increased opportunities for Jenny to have choice within academic math tasks when appropriate ("Would you like to start with problem A or problem B first?"). He also made an effort to connect tasks to her interests where possible.
6. **Reinforcement of Self-Monitoring:** Mr. Sanchez briefly introduced a simple self-monitoring check-in

for Jenny (a quick thumbs up/down after a short work period to indicate if she felt she was on task).
Note: This was not a formal chart but a quick, private check-in.

Data Collection (Tier 1 Post-Intervention)

After two weeks of implementing these intensified Tier 1 strategies, Mr. Sanchez continued to track Jenny's off-task behaviors using the same informal methods.

- Week 3 (Math whole group): 3-7 instances of off-task behavior per session
- Week 3 (Math small group): 2-5 instances of off-task behavior per session
- Week 4 (Math whole group): 2-5 instances of off-task behavior per session
- Week 4 (Math small group): 1-3 instances of off-task behavior per session

CASE STUDY: TIER 2 RTI MATH INTERVENTION

Student Profile

Name: David
Grade Level: 4th Grade
Background: David is a generally quiet and well-behaved student who participates in classroom activities. He understands concepts when taught explicitly but struggles with retaining mathematical procedures and applying them independently. He frequently makes computational errors, particularly in subtraction with regrouping and basic multiplication facts. His parents have noted that he finds math homework frustrating and often needs significant help.

Initial Assessment Data

- **Universal Screener (Fall):** David scored in the 25th percentile for math computation and 30th percentile for problem-solving for his grade level. This indicates he is at some risk and requires targeted intervention.
- **Previous Year's State Assessment:** Met expectations but scored in the lower end of the "meets expectations" range in mathematics, with identified weaknesses in operations.
- **Classroom Performance:** Scores consistently around 70% on chapter tests. Frequently makes errors in multi-digit subtraction with regrouping. Shows a slow recall of basic multiplication facts (e.g., 7×8, 9×4). Struggles when asked to complete word problems that require multiple steps.
- **Teacher Observation:** David often uses finger counting or drawing tally marks for basic facts, which slows him down considerably. He understands the concept of regrouping but makes procedural errors.

Problem Identification

David's math difficulties appear to stem from a lack of automaticity with basic facts and procedural fluency in multi-digit operations, specifically subtraction regrouping. These foundational gaps hinder his ability to complete grade-level tasks efficiently and impact his confidence in tackling more complex problems.

Specific Needs Identified

1. Inconsistent and slow recall of multiplication facts (up to 9×9).
2. Errors in multi-digit subtraction with regrouping across multiple places.
3. Difficulty executing multi-step word problems involving basic operations.

Tier 2 Intervention Plan

Goal: By the end of 8 weeks, David will accurately solve multi-digit subtraction problems with regrouping at 85% accuracy and recall multiplication facts (up to 9×9) with 20 correct answers per minute on weekly progress monitoring probes.

Intervention Strategy

- Name of Intervention: Targeted Computation and Fluency Boost (TCFB)
- Frequency: 3 sessions per week.
- Duration: 25 minutes per session.
- Group Size: Small group (3-4 students, including David) with similar skill deficits.
- Materials:
- Manipulatives: Base-ten blocks, place value charts.
- Curriculum: Supplemental worksheets focusing on conceptual understanding and procedural practice for subtraction with regrouping, multiplication flashcards, timed fact sheets.
- Technology: Educational math games for fact fluency practice (e.g., specific apps for multiplication drills).
- Key Instructional Components:
  Fact Fluency Warm-up (5 minutes): Daily structured practice on multiplication facts using flashcards, small group games, and short timed drills. Emphasis on building automaticity and using known facts to derive unknown facts (e.g., if you know 4×7=28, then 8×7=56).
  Explicit Instruction & Practice – Subtraction with Regrouping (15 minutes):

- Review place value using base-ten blocks.
- Model subtraction with regrouping step-by-step, first with manipulatives, then transitioning to pictorial representations, and finally to the standard algorithm.
- Emphasize the concept of "borrowing" from the next higher place value (e.g., exchanging one ten for ten ones).

- Provide guided practice where the interventionist works through problems with the students, offering immediate feedback.
- Include error analysis: Students identify common errors in sample problems.

- 1. Application/Review (5 minutes): Quick practice problems that incorporate both fact fluency and subtraction with regrouping. Introduce simple two-step word problems that apply the skills learned, using graphic organizers to help break down the problem.

- Data Collection (Progress Monitoring) Bi-Weekly Probes

Multiplication Fluency: 1-minute probe of mixed multiplication facts (up to 9×9), scored on correct answers per minute (CAPM).

- Multi-Digit Subtraction: 5-problem probe of 3-digit subtraction with two or more regroups, scored on accuracy.
- Charting: Data will be charted every two weeks to monitor progress against goals.
- Formative Assessments: Anecdotal notes during sessions regarding David's participation, understanding of concepts, and application of strategies.

Intervention Personnel

- Classroom Teacher or Paraeducator (trained in delivering the specific Tier 2 intervention).
- Regular consultation with the school's math specialist to review progress and adjust strategies as needed.

Implementation and Progress Monitoring

Weeks 1-2: Initial Focus on Facts and Subtraction Introduction

- Observation: David was initially hesitant with timed fact drills but showed improvement with peer encouragement in the small group. He responded well to the concrete modeling of subtraction with base-ten blocks.
- Data:
- Multiplication Fluency (CAPM): Improved from 10 to 14.
- Multi-Digit Subtraction Accuracy: Improved from 50% to 70%.

Weeks 3-4: Continued Practice and Procedural Refinement

- Observation: David began to internalize the subtraction regrouping steps, making fewer procedural errors. His fact recall became slightly quicker. He was more willing to explain his thinking.
- Data:
- Multiplication Fluency (CAPM): Reached 17.
- Multi-Digit Subtraction Accuracy: Reached 80%.

Weeks 5-6: Building Fluency and Independent Application

- Observation: David demonstrated greater confidence. He still occasionally paused on certain multiplication facts but showed consistent progress. Subtraction accuracy was high, and he completed problems more independently.
- Data:
- Multiplication Fluency (CAPM): Reached 19.
- Multi-Digit Subtraction Accuracy: Consistently at 85%. (Goal Met for Subtraction!)

Weeks 7-8: Reinforcement and Generalization

- Observation: David was consistently meeting the subtraction accuracy goal. His multiplication fluency showed slight fluctuations but remained close to the goal. He was more successful with breaking down simple word problems.
- Data:
- Multiplication Fluency (CAPM): Reached 21. (Goal Met for Multiplication Fluency!)
- Multi-Digit Subtraction Accuracy: Consistently at 90%
- Continue Light Review/Practice: The classroom teacher will integrate brief, consistent opportunities for review of multiplication facts (e.g., daily warm-ups, quick games) to maintain fluency.

1. Scaffolding for Word Problems: The classroom teacher will continue to provide scaffolding for multi-step word problems (e.g., graphic organizers, highlighting key information) to help David generalize his improved computational skills to problem-solving contexts.

1. Open Communication: Continued open communication with David's parents to reinforce positive math attitudes and share strategies for supporting him at home.

CASE STUDY: TIER 3 RTI READING INTERVENTION

Student Profile

Name: Olivia
Pronouns: she/her
Grade Level: 3rd Grade
Background: Olivia is a highly motivated and cooperative student who enjoys learning, particularly hands-on activities and science. However, she has consistently demonstrated significant challenges with reading since late 1st grade. Her teachers observe that she reads slowly and often mispronounces words, especially multi-syllabic ones. She frequently rereads sentences to gain meaning, which further slows her pace. Olivia expresses frustration during independent reading tasks, often stating, "I can't read this fast enough." Her parents are concerned about reading development and her declining confidence in school.

Initial Assessment Data

- **Universal Screener (Fall)**: Olivia scored in the 8th percentile for oral reading fluency (ORF) and 15th percentile for reading comprehension for her grade level, indicating substantial deficits.
- **Previous Year's State Assessment (ELA)**: Olivia did not meet grade-level expectations in reading.
- **Classroom Performance**: Struggles with decoding new words in texts at grade level. Comprehension is low when reading independently; requires read-alouds or significant scaffolding to understand grade-level texts. Olivia avoids reading aloud in class.
- **Diagnostic Assessment (Woodcock-Johnson IV Tests of Achievement – Reading Cluster)**: Revealed specific weaknesses in:
    - Basic Reading Skills (Word Attack, Letter-Word Identification) – particularly with vowel teams, consonant blends, and decoding multi-syllabic words.
    - Reading Fluency (Oral Reading) – slow rate, frequent errors (substitutions, omissions).
    - Reading Comprehension (Passage Comprehension) – difficulty identifying main idea, recalling details, and making inferences.

Reading Difficulties

Olivia's primary reading difficulties stem from underlying needs in phonics and phonological awareness, which directly impact her decoding skills and, subsequently, her reading fluency. Her slower and inaccurate decoding prevents her from reading at a rate that supports comprehension. This leads to Olivia's decreased reading motivation.

Skills Identified for Intervention

1. Phonics: Inconsistent application of phonics rules, particularly with complex vowel patterns (e.g., ou, ea, igh), diphthongs, and common affixes. Difficulty breaking down multi-syllabic words.
2. Phonological Awareness: Weakness in phoneme segmentation and blending, especially with longer words.
3. Reading Fluency: Significantly below grade-level norms in words correct per minute (WCPM) and accuracy.
4. Reading Comprehension: Difficulty with explicit recall of information and inferential thinking when reading independently.

Tier 3 Intervention Plan

Goal: By the end of 12 weeks, Olivia will increase her oral reading fluency to 85 WCPM (from 50 WCPM) with 95% accuracy on grade-level passages and demonstrate 70% accuracy on reading comprehension questions (main idea, key details) on weekly probes.

Intervention Strategy

- Name of Intervention: Structured Literacy for Fluency and Comprehension (SLFC) – An intensive, explicit, systematic, and cumulative approach focusing on foundational reading skills.
- Frequency: 5 sessions per week.
- Duration: 40 minutes per session.
- Group Size: Individual (one-on-one with the reading specialist).
- Materials:
- Phonological Awareness: Elkonin boxes, manipulatives for blending/segmenting.
- Phonics: High-quality, decodable texts aligned with phonics instruction, word lists, flashcards for

common patterns.

- Fluency: Repeated reading passages (fiction and non-fiction), reader's theater scripts, word-per-minute timers.
- Comprehension: Graphic organizers, comprehension strategy cards (e.g., visualizing, questioning), short informational and narrative texts.

Key Instructional Components

1. Phonological Awareness & Phonics (15 minutes):

- Daily focus on advanced phonological awareness skills (e.g., segmenting multi-syllabic words, manipulating phonemes).
- Explicit instruction of specific phonics patterns (e.g., vowel teams, common prefixes/suffixes) using a structured literacy scope and sequence. Practice blending and decoding words containing these patterns.

1. Fluency Building (15 minutes):

- Repeated Reading: Olivia reads a short, decodable passage aloud multiple times (typically 3-4 times) with corrective feedback and modeling from the specialist, aiming for increased speed and accuracy.
- Phrase-Cued Reading: Passages marked with slashes to encourage fluent phrasing and intonation.
- High-Frequency Word Practice: Targeted practice with irregular high-frequency words.

1. Comprehension Strategies (10 minutes):

- Explicit instruction and practice of comprehension strategies (e.g., identifying main idea, summarizing, asking questions, making predictions) using graphic organizers.
- Discussion of texts, relating content to Olivia's background knowledge and the real world
- Progress Monitoring: Weekly fluency probes to monitor progress
- Oral Reading Fluency (ORF): 1-minute timed reading of grade-level passages (different passages each week), scored on WCPM and accuracy.
- Reading Comprehension: 5 multiple-choice or short-answer questions related to the weekly ORF passage, scored on accuracy.
- Charting: Data will be charted weekly to visualize progress and determine responsiveness to the intervention.
- Formative Assessments: Ongoing anecdotal notes regarding Olivia's decoding strategies, engagement during repeated readings, and ability to apply comprehension strategies
- Intervention Personnel (part of the collaborative team)

- Reading Specialist (certified and trained in structured literacy/dyslexia interventions).
- Regular collaboration between the reading specialist and Olivia's classroom teacher to ensure consistency and facilitate transfer of skills. is essential.

Implementation and Progress Monitoring

Weeks 1-4: Focus on Foundational Phonics and Fluency Basics

- Observation: Olivia struggled initially with decoding complex vowel teams but showed improvement with consistent, explicit instruction. Repeated reading practice was slow for Olivia, but accuracy gradually increased.
    - Data:
        - ORF (WCPM): Improved from 50 to 65 WCPM (accuracy 88%).
        - Comprehension Accuracy: Improved from 30% to 45%.

Weeks 5-8: Focus on Multi-Syllabic Words and Fluency Strategies

- Observation: Olivia began to apply strategies for breaking down longer words. Her reading rate showed more noticeable gains as decoding became less of an effort. She started self-correcting more frequently.
    - Data:
        - ORF (WCPM): Reached 75 WCPM (accuracy 92%).
        - Comprehension Accuracy: Reached 60%.

Weeks 9-12: Application and Comprehension Deepening

- Observation: Olivia's confidence in reading increased significantly. She was more willing to read aloud and actively participated in comprehension discussions. She still needed prompts for inferential questions but could independently identify main ideas and key details.
    - Data:
        - ORF (WCPM): Reached 90 WCPM (accuracy 96%). (Goal Met for Fluency!)
        - Comprehension Accuracy: Reached 72%.