Ch. 4: Four-Step Problem Solving Model

MDCPS
Office of Academics, Accountability & School Improvement
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The Problem-Solving Team

Each school is expected to create and support an RtI/MTSS leadership team that utilizes the Problem-Solving (PS) process to meet the academic and behavioral needs of all students. RtI/MTSS is a process or framework that is used for all team based educational decision making.

The PS process requires full collaboration among a team of professionals to identify a specific measurable outcome and design research-based interventions to address concerns.

The RtI/MTSS Leadership team is identified in each school's School Improvement Plan (SIP).

The school-based leadership team should be composed of various stakeholders at the school level such as administrators, teachers and specialists. Team membership should include individuals with an array of expertise. PS teams should identify a *facilitator* who guides the process and ensures a supportive atmosphere, a *recorder* of the minutes of the meeting and a *timekeeper*.

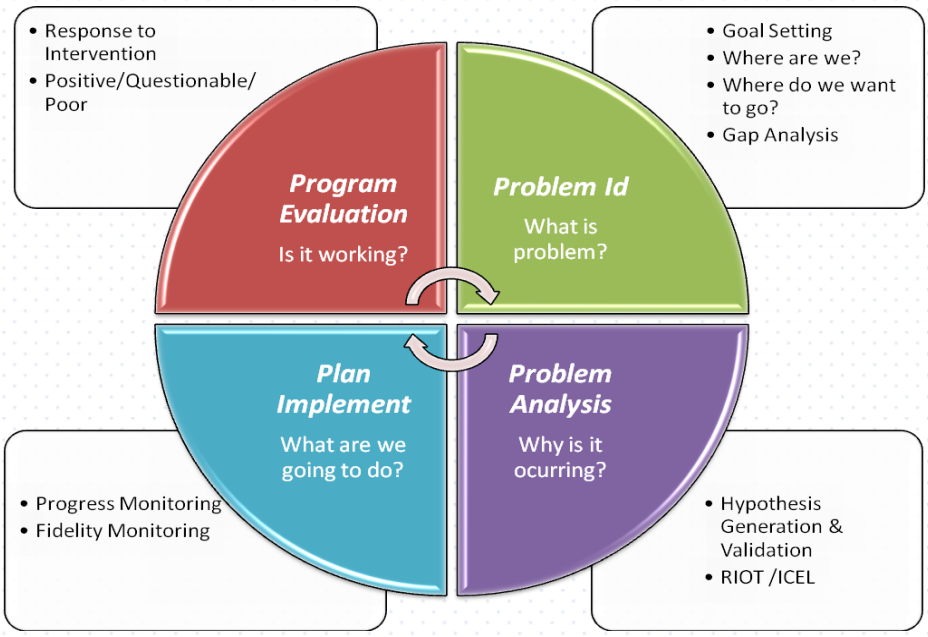
Problem Solving Team Meetings

Problem-solving team meetings should be scheduled 3 times a year in Tier I, minimally monthly for Tier II, and highly recommended in between these periods to yield formative data to guide instruction/intervention. Tier III problem solving meetings are much more frequent, and conducted by the SST Team. By providing a strong PS process with ongoing progress monitoring (OPM) for assessing the success of research based interventions at the different tiered levels, more students will have the opportunity to be successful both academically and behaviorally.

Because time and resources are critical, following a structured approach to PS will maximize opportunities for success.

The Problem Solving Process

The PS process is used to plan, evaluate, and revise all tiers of instruction. The four step PS process includes a structured format that is used when analyzing possible reasons for lack of progress in a student or group of students' academic or behavioral achievement in order to plan and deliver interventions. Utilizing a structured PS approach when exploring, defining, and prioritizing concerns helps the team make efficient use of time and increase the probability that the appropriate interventions are selected.



Step 1: Problem Identification

The goal of problem identification is to answer the question "what is the problem?" The problem should be stated in objective, measurable, terms using direct measures of academics or behavior. The definition of the problem must focus on teachable skills (i.e. phoneme blending, letter/sound correspondence, etc.) that can be measured and changed through the process of research based instruction/intervention.

Our goal is for students to learn a year's content in an instructional year and for those who are behind to be on track to catch up (gap is closing at a reasonable time).

The first step in problem identification is to conduct a *gap analysis*. This is simply the difference between the students' measured/observed performance and goal or expectations. Expectations can be developed based on local norms, normative standards, criterion-based measures, peer performance, instructional standards, developmental standards, district or state assessments and/or teacher expectations.

Step 1: What is the problem?

Goal Setting

- *Where are we?*
- *Where do we want to go?*

Gap Analysis

- *Difference between student performance and goal*

Focus on teachable skills that can be measured and changed through the process

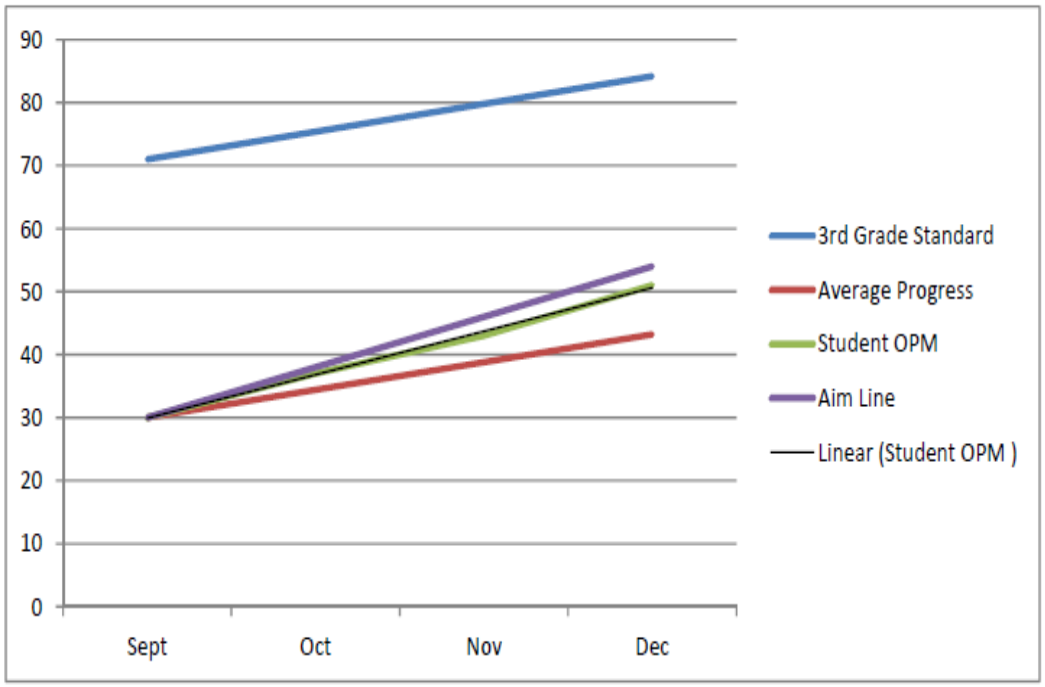


Figure 1. Sample RtI Graph. 3rd grade students 60 day OPM using FAIR ORF passages once every 20 days. Scores in words read correct per minute (WCPM.)

It is also important to consider whether the identified problem exists for only one student, a small group of students, or a large group of students since this knowledge will lead to different types of interventions. For large group problems, changes in overall curriculum at the Tier I level may be necessary and PS is then conducted on a larger scale. On the other hand, if a problem is present for only one or very few students, individual PS at the student level can take place.

Step 2: Why is the problem occurring?

Generate hypothesis and validate using ICEL by RIOT to answer the question:

Why are students not attaining benchmarks?

Step 2: Problem Analysis

The goal of problem analysis is to answer the question, "Why is this problem occurring?" During this step, relevant information about the problem is gathered as to why student(s) are not attaining benchmarks.

Consider domains of influence in PS such as ICEL (Instruction, Curriculum, Environment and Learner.) Begin generating hypotheses for possible barriers. Collect data using RIOT (ICEL by RIOT see pg. 8 of this chapter) procedures for hypothesis validation.

Instruction: Accurately focused? Effectively delivered? Explicitly instructed? Appropriately scaffolded? Ample guidance opportunities provided? Limited used of repetitive low-interest activities?
Curriculum: Diagnostically appropriate? Are materials supporting learning?
Environment: High engagement? Organized routines? Higher frequency of positive to negative teacher directed feedback?
Learner: Level of engagement/belonging in school? Feelings of efficacy or competency?

Gathering information may involve further examination of classroom products, information provided by the parents, observations in the instructional setting, focused assessments, or examination of data from other district or state assessments.

*"What is it about the interaction of the **i**nstruction, **c**urriculum, **l**earners and learning **e**nvironment that should be altered so that students can learn?"*

Step 3: What are we going to do about the problem?

*Implementation plan includes **W**ho, **W**hat, **W**hen, **W**here & progress monitoring*

- *Support personnel*
- *Fidelity Monitoring*

Step 3: Intervention Design

As stated on the "*Response to Intervention (RtI) A Practitioner's Guide to Implementation*" by the Colorado Department of Education, "the goal of the PS team is to develop a research-based instructional/intervention plan that matches the identified student(s) needs and has the most likelihood of success". A good intervention plan:

- explicitly defines the skills to be taught;
- focuses on measurable objectives;
- defines who will complete various tasks, when and how;
- describes a plan for measuring and monitoring the effectiveness of instructional efforts;
- reflects resources available

The plan must be monitored for fidelity of implementation. Therefore, the team must specify who will do this and how often.

If an intervention is not producing desired results, first step is to evaluate whether the intervention is being implemented as designed. If not, adjustments should be made to ensure treatment integrity.

Another fundamental component of the plan is data collection. This data should reflect how a student or groups of students are responding to the prescribed intervention. The PS team should determine how data collection (i.e. Ongoing Progress Monitoring-OPM) will occur, what measures will be used (e.g. oral reading fluency-ORF) and how data will be analyzed and disseminated (e.g. once a month). Data review timelines must be established by the team.

Teams should consider whether the intensity of an intervention needs to be increased by: reducing size of the group, increasing amount of time/frequency of intervention delivered or narrowing the focus of intervention.

Step 4: Program Evaluation

The PS process is not complete without evaluating the effectiveness of the instruction/intervention. There are three possible outcomes in relation to the stated goals.

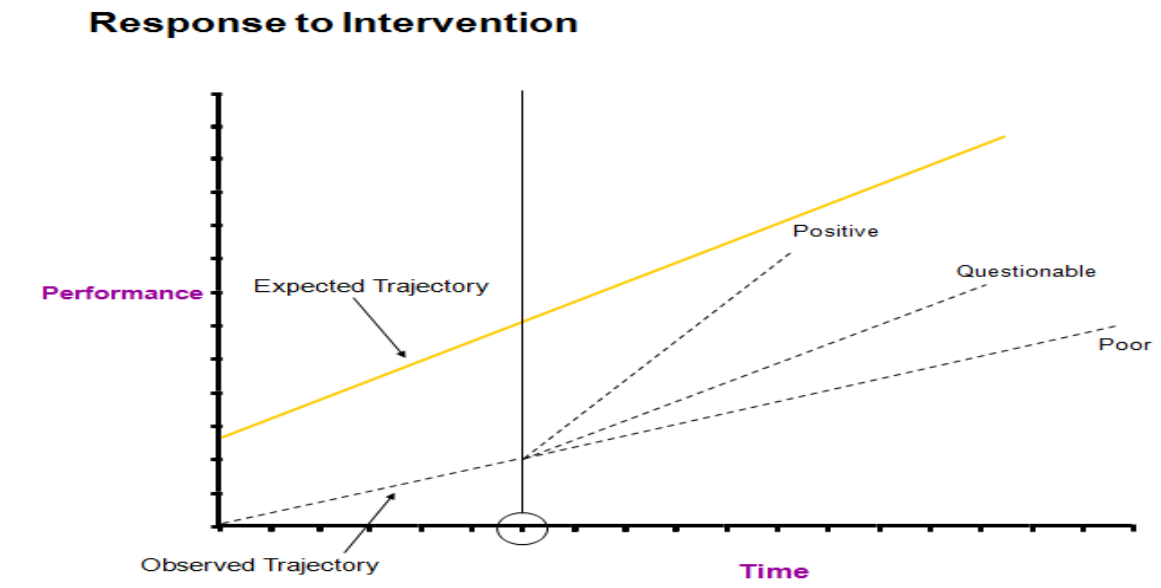
Step 4: What is the response to intervention?

- *Positive Response: Gap closing*
- *Questionable Response: Gap not closing or widening*
- *Poor Response: Gap continues to widen with no change in rate*

A ***positive response*** is when the gap is closing and the student is making progress toward benchmark/goal.

A ***questionable response*** is when the student is not closing the gap but the gap is not widening either. In other words, it's not worse or better. At this point, the first step should be to evaluate whether the intervention is being implemented as designed (fidelity). Teams should consider increasing the intensity of the current intervention for a period of time to assess impact. If the response rate does not improve, the team must return to PS. The intensity can be increased by reducing the size of the group, increasing the amount of time/frequency that the intervention is delivered or narrowing the focus of the intervention.

A ***poor response*** is when the gap widens and therefore the student falls further behind. At this point, the first step should be to evaluate whether the intervention is being implemented as designed (fidelity). If a poor response is not due to lack of fidelity, return to PS.



Irrespective of the skill being monitored by plotting data points collected from OPM on a graph, trends in student performance can be visualized. The trajectory will reveal the type of response obtained.

In summary, PS is a self-corrective, decision-making model focused on academic and/or behavioral intervention development and monitoring using frequently collected, measurable data on student performance.

For additional information please refer to Ch. 8 School-Site Year at a Glance/MDCPS RtI/MTSS Guide 2013-2014.

References:

Response to Intervention (RtI) A practitioner's Guide, The Colorado Department of Education
http://www.cde.state.co.us/rti/downloads/PDF/RtIGuide.pdf

The Florida Project: Problem Solving & Response to Intervention
http://floridarti.usf.edu/resources/topic/overview_of_rti/about_ps_rti/index.html

The PS process should be rich in data collected and can be repeated as necessary.

DOMAINS	**R**eview	**I**nterview	**O**bserve	**T**est
Instruction	Permanent Products (e.g. written pieces, tests, worksheets, projects)	Teacher's thoughts about their use of effective teaching and evaluation practices (e.g. checklists)	Effective teaching practices, teacher expectations, antecedent conditions, consequences	Classroom, environment scales, checklists & questionnaires. Student opinions about instruction and teacher
Curriculum	Permanent Products (e.g. books, worksheets, materials, curriculum guides, scope & sequence)	Teacher & relevant personnel regarding philosophy (generative vs. supplementive), district implementation an expectations. Methods for supplementing district core curriculum	Classroom work, alignment of assignments (curriculum materials) with goals & objectives (benchmarks). Alignment of teacher test with curriculum.	Level of assignment and curriculum material. Difficulty; cognitive complexity; opportunity to learn. A student's opinions, attitudes about what is being taught (disposition)
Environment	School rules & policies	Ask relevant personnel students & parents about behavior management plans, class rules, class routines	Student, peers, instruction. Interactions & causal relationships. Distractions; health/safety violations.	Classroom environment scales, checklists and questionnaires. Student opinions about instruction, peers & teacher.
Learner	District records, health records, error analysis, educational history, onset and duration of problem, teacher perceptions of the problem, pattern of behavior problems, etc.	Relevant personnel, parents, peers & student (what do they think they are supposed to do? how do they perceive their problem?)	Target behaviors- Dimension & nature of the problem (e.g. ABC's)	Student performance; find the discrepancy between setting demands (instruction, curriculum, environment & student performances)