Building Your Multi-Tiered Instructional Model

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Building RTI Infrastructure at the District Level

- Organized by a District PLAN
- Driven by Professional Development
- Supported by Coaching and Technical Assistance
- Informed by DATA

District Responsibilities

- Develop an RtI implementation plan. Plan should address:
  - How current resources will be used to implement RtI and identify additional resources needed
  - How stakeholders will be educated
  - How stakeholders will be involved

District Infrastructure

- District Plan Requirements
  - Consensus, Infrastructure, Implementation
  - District Policies
  - Professional Development and Technical Assistance
  - Implementation Monitoring
  - Implementation Fidelity
  - Evaluation Plan

Key Points

- Unit of implementation is the building level.
- Implementation process takes 4-6 years.
- Implementation progress must be monitored
- Must be guided by data indicating implementation level and integrity
- Must be supported by professional development and technical assistance
- Driven by a strategic plan
- This is an evolution not a revolution

Building RTI Infrastructure at the School Level

- Highly involved school-based leadership team (SBLT)
- School-based coach
  - Provide Technical Assistance
  - Interpretation and Use of Data
- Master Calendar and schedule
- Evaluation of Model

Principal's Role in Leading Implementation of RtI

- Models Problem-Solving Process
- Expectation for Data-Based Decision Making
- Scheduling "Data Days"
- Schedule driven by student needs
- Instructional/Intervention Support
- Maintain intervention "Sufficiency"
- Communicating Student Outcomes
- Celebrating and Communicating Success

School Based Coach

- Gathers and Organizes Tier 1 and Tier 2 Data
- Supports staff for small group and individual data
- Provides coaching for data interpretation
- Facilitates regular data meetings for building and grade levels

Effective Scheduling

An effective and efficient schedule allows for:

- An uninterrupted period of time for reading instruction (90 minutes or more)
- Specific times when interventions will be provided
- The most efficient use of instructional support staff to help provide interventions
- A common planning time to facilitate grade-level meetings

Effective Scheduling

- Intervention is provided in addition to Core instruction
- Increase intensity by decreasing group size
- When possible certified teachers provide intervention, noncertified teachers provide enrichment
- Less experienced teachers need more structured and scripted interventions
- Core block is untouchable

Effective Scheduling

- Core Reading Block
  - First thing in the morning across all grades?
    - Provide support by using intervention teachers, special area teachers, and parapros or move students to homogenous groupings

Effective Scheduling

- Core Reading Block
  - Staggered reading blocks across grades?
    - Intervention teachers, special area teachers, and parapros have more opportunities
    - Reading coaches observe and model lessons

Effective Scheduling

Grade	Reading	Writing	Math	Sci/SS	Specials	Lunch
K	8:45-10:30	10:30-11:30	1:35-2:35	12:15-12:50	12:50-1:35	11:30-12:15
1	8:45-10:30	12:00-1:00	1:00-2:00	2:00-2:30	11:15-12:00	10:30-11:15
2	10:30-12:15	9:45-10:30	8:45-9:45	1:15-1:40	1:40-2:25	12:30-1:15
3	10:30-12:15	9:30-10:30	1:00-2:00	2:00-2:30	8:45-9:30	12:15-1:00
4	12:45-2:30	8:45-9:35	10:20-11:20	11:20-11:55	9:35-10:20	11:55-12:40
5	12:45-2:30	9:45-10:25	8:45-9:45	11:50-12:35	10:25-11:10	11:10-11:50

Effective Scheduling

- Scheduling additional intervention time, three options:
  - Heterogeneous groups for tier 1 instruction with added differentiation time following the tier 1 class for homogenous targeted instruction
  - Homogeneous groups for tier 1 with differentiated instruction with added time for further differentiated instruction
  - Heterogeneous groups for tier 1with tier two instruction occurring during a different time of the day

Effective Scheduling

- Example of scheduling option one, Double Dose

Reading	Group	Need
9:00-9:30	Whole Group	Mixed
9:30-9:50	Group A	High Risk
9:50-10:10	Group B	Moderate Risk
10:10-10:30	Group C	Low Risk
10:30-11:00	Group A	High Risk

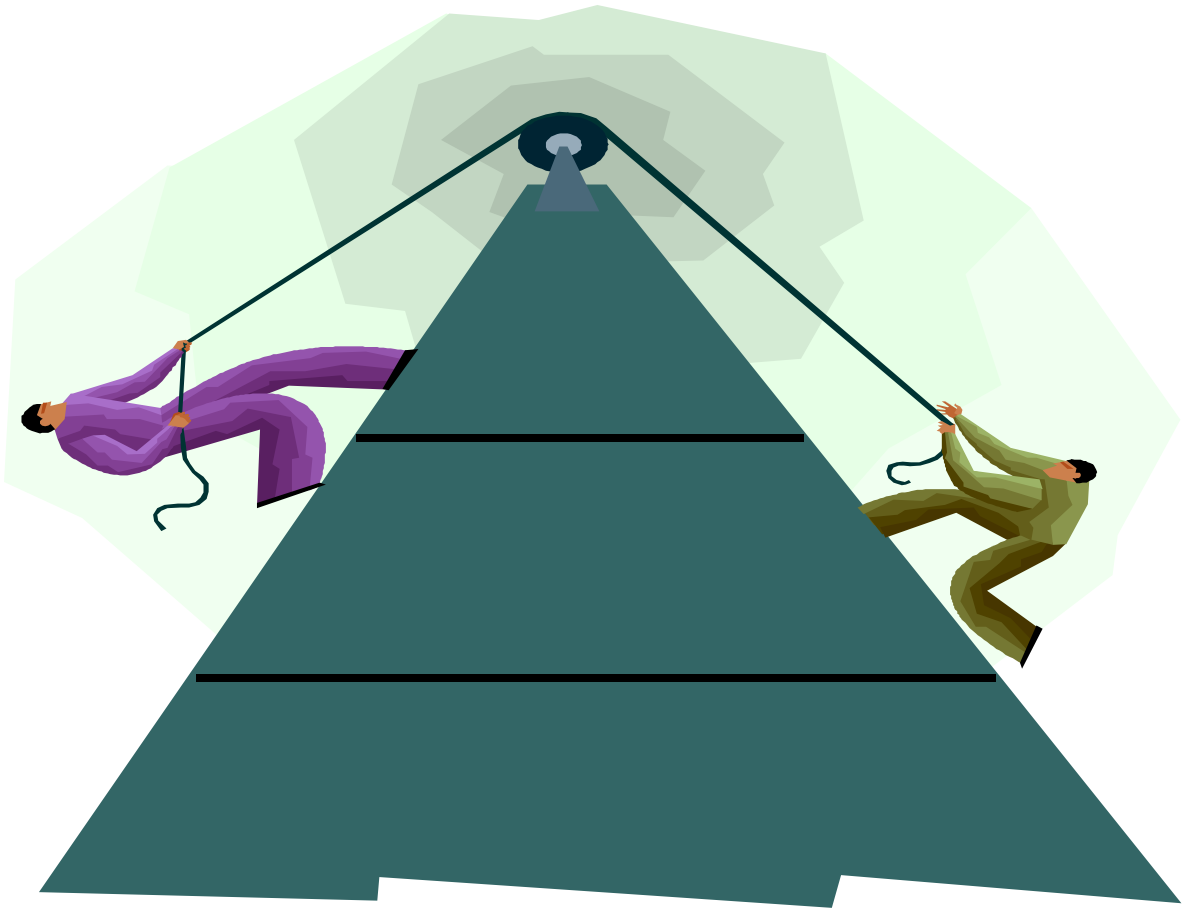
	Kindergarten	First	Second	Third	Fourth	Fifth
8:00-8:05						
8:05-8:10						
8:10-8:15						
8:15-8:20						
8:20-8:25						
8:25-8:30						
8:30-8:35	**READING**	**READING**	**READING**	**READING**	**Itinerant**	**POWER UP**
8:35-8:40						
8:40-8:45						
8:45-8:50						
8:50-8:55						
8:55-9:00						
9:00-9:05						
9:05-9:10						
9:10-9:15					**MATH**	
9:15-9:20				**POWER UP**		**Itinerant**
9:20-9:25						
9:25-9:30						
9:30-9:35						
9:35-9:40						
9:40-9:45						
9:45-9:50						
9:50-9:55						
9:55-10:00						**READING**
10:00-10:05	**Itinerant**	**MATH**		**MATH**	**POWER UP**	
10:05-10:10						
10:10-10:15						
10:15-10:20						
10:20-10:25						
10:25-10:30						

Building Your MTIM Infrastructure Continued

Resources to assist you in developing your schedule Found at www.fcrr.org/Interventions

- Teaching All Students to Read: Practices from Reading First Schools with Strong Intervention Outcomes: Summary and Complete Documents available
  - Principal's Action Plan Outline for Building a Successful School-Wide Intervention Program
- Intensive Reading Interventions for Struggling Readers in Early Elementary School: A Principal's Guide
  - A Principal's Guide to Intensive Reading Interventions for Struggling Readings in Reading First Schools: A Brochure

Building Your MTIM



Thoughts, fleshing out your pyramid, and action plan activity

- Read page 8 of Teaching All Students to Read: Practices from Reading First Schools with Strong Intervention Outcomes
  - Build your master schedule so that you have
    - 90 minute core reading block at each grade
    - 30-45 minute intervention block at each grade
    - Efficient and effective use of instructional staff
    - Common planning at each grade level
    - Where are the gaps in your pyramid?

Building RTI Infrastructure: District/School Evaluation of Model

- Data Systems
- Decision Rules
- Intervention Rules
- Instruction/Intervention Integrity
- Intervention Support and Sufficiency

Evaluation of Model

- Data are used to evaluate the effectiveness of core instruction
  - 80% of students receiving ONLY core instruction are proficient
- Supplemental Instruction/Intervention uses a “standard protocol” of instruction based on student needs, informed by data
  - 70% of students receiving Supplemental AND Core are proficient

Data For Each Tier - Where Do They Come From?

- Tier 1: Universal Screening, accountability assessments, grades, classroom assessments, referral patterns, discipline referrals

- Tier 2: Universal Screening - Group Level Diagnostics (maybe), systematic progress monitoring, formative assessment large-scale assessment data and classroom assessment

- Tier 3: Universal Screenings, Individual Diagnostics, intensive and systematic progress monitoring, formative assessment, other informal assessments

Middle/High School Data

- Skill or Content Assessment
- Skill
  - Use existing reading/math skill assessments
- Content
  - Use “Common Assessments”
  - Standards-based assessment

Common Assessments

- Based on State-Approved, Content Area Standards
- Syllabus expected to reflect those standards
- Common Syllabi
- Common assessment given every 3rd week
- Data aggregated and disaggregated

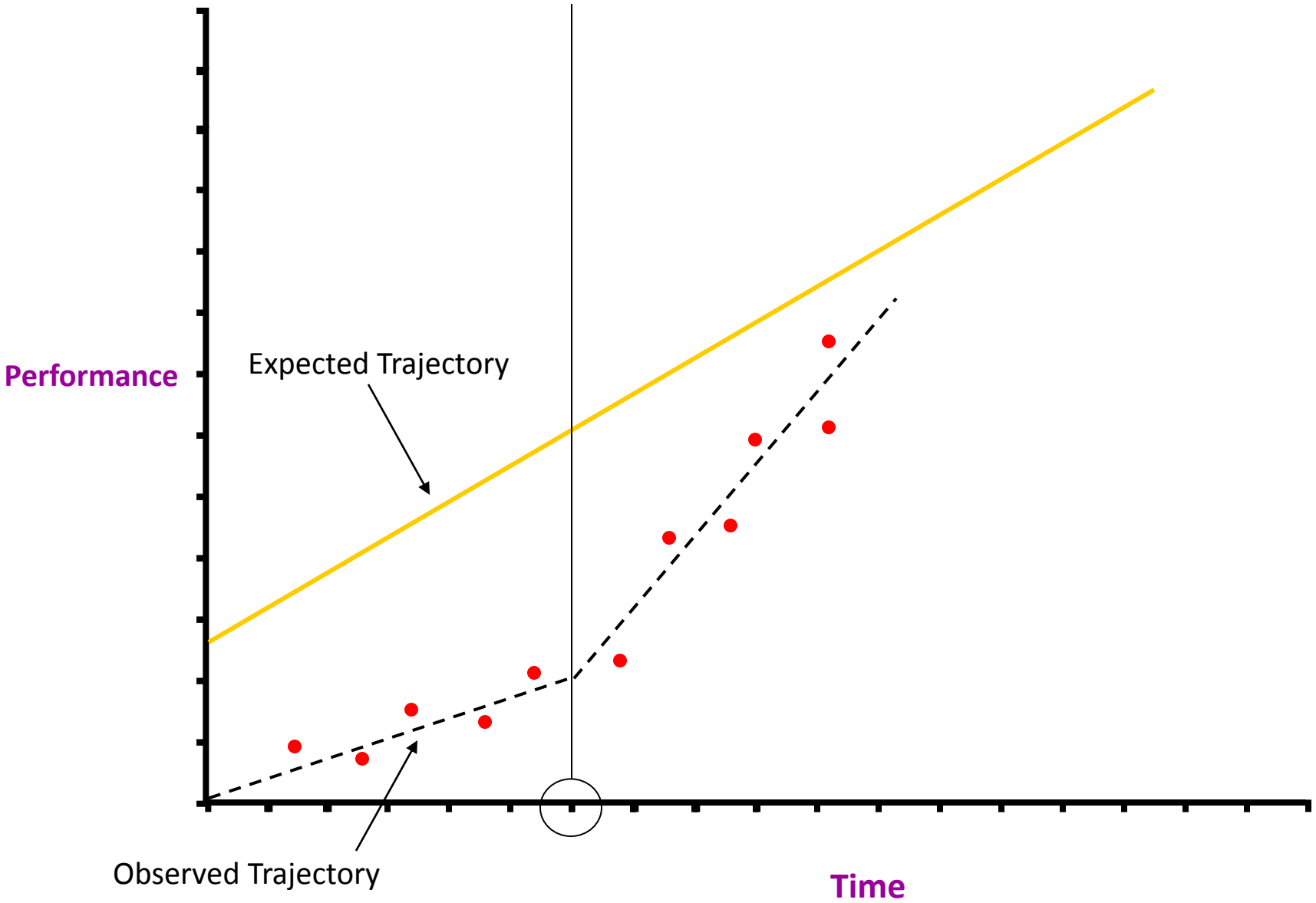
Common Assessments: Interpretation

- Mean level of performance of all students
  - Disaggregated by section
  - Disaggregated by demographics
  - Are 75-80% of students attaining 70% accuracy? If not, implications for core instruction--Problem Solving
  - Is syllabus implementation on track?
  - Are 70% of students receiving supplemental instruction meeting 70% accuracy levels?
- Compare individual student performance to group data.

Decision Rules: What is a "Good" Response to Intervention?

- ***Positive Response***
  - Gap is closing
  - Can extrapolate point at which target student(s) will "come in range" of target--even if this is long range
  - Level of "risk" lowers over time
- ***Questionable Response***
  - Rate at which gap is widening slows considerably, but gap is still widening
  - Gap stops widening but closure does not occur
- ***Poor Response***
  - Gap continues to widen with no change in rate.

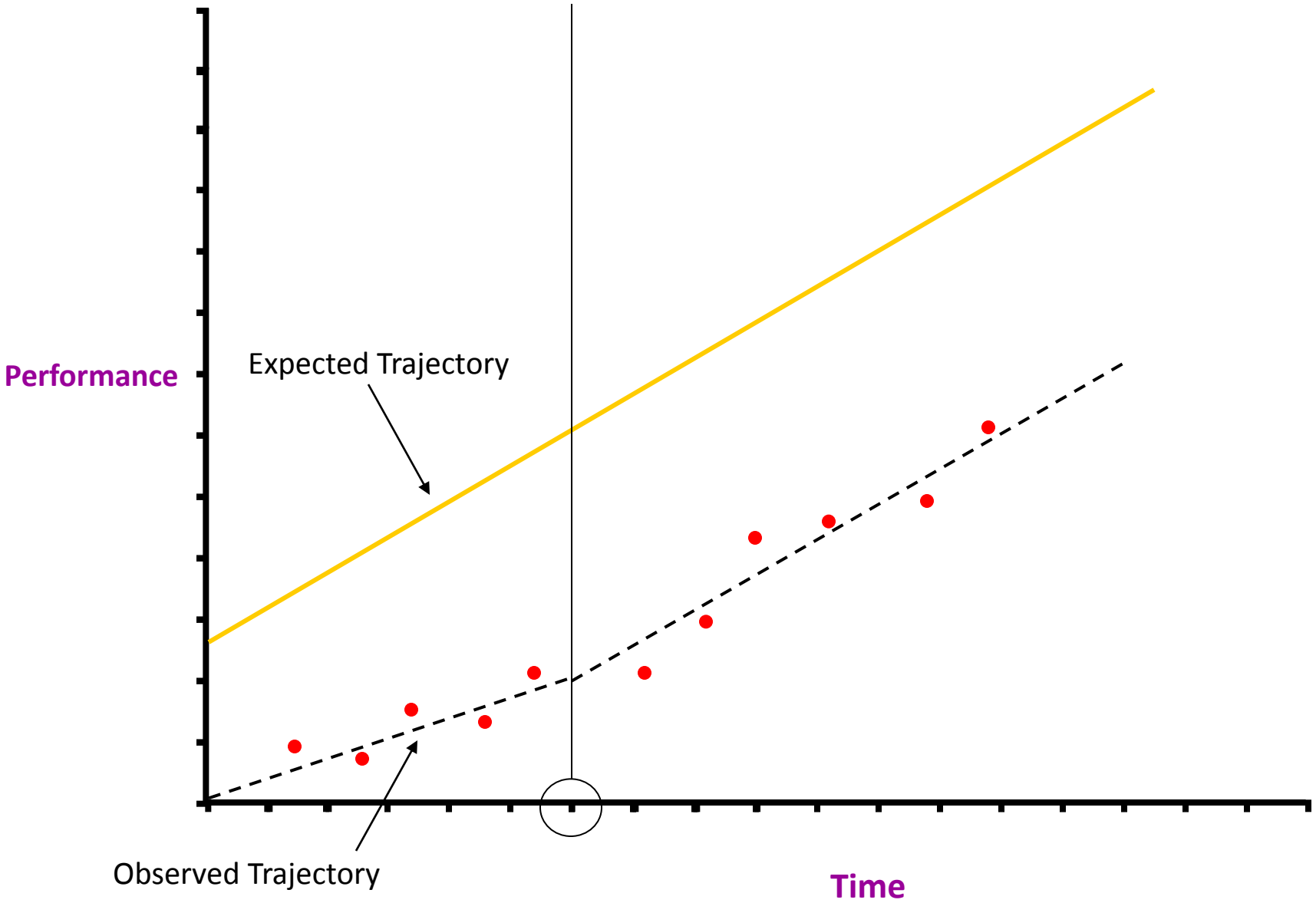
Positive Response to Intervention



Decision Rules: What is a "Questionable" Response to Intervention?

- ***Positive Response***
  - Gap is closing
  - Can extrapolate point at which target student(s) will "come in range" of target--even if this is long range
- ***Questionable Response***
  - Rate at which gap is widening slows considerably, but gap is still widening
  - Gap stops widening but closure does not occur
  - Level of "risk" remains the same over time
- ***Poor Response***
  - Gap continues to widen with no change in rate.

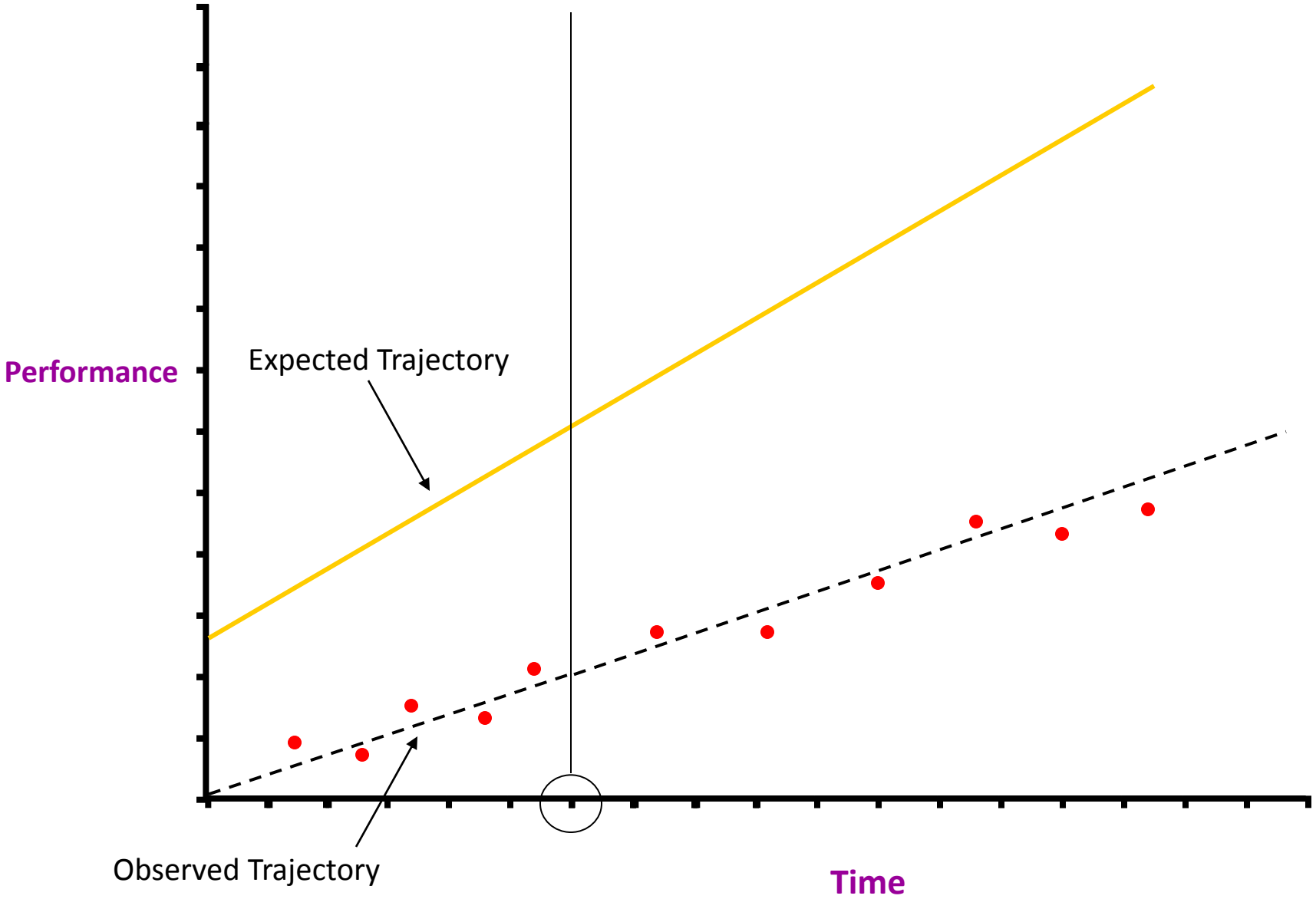
Questionable Response to Intervention



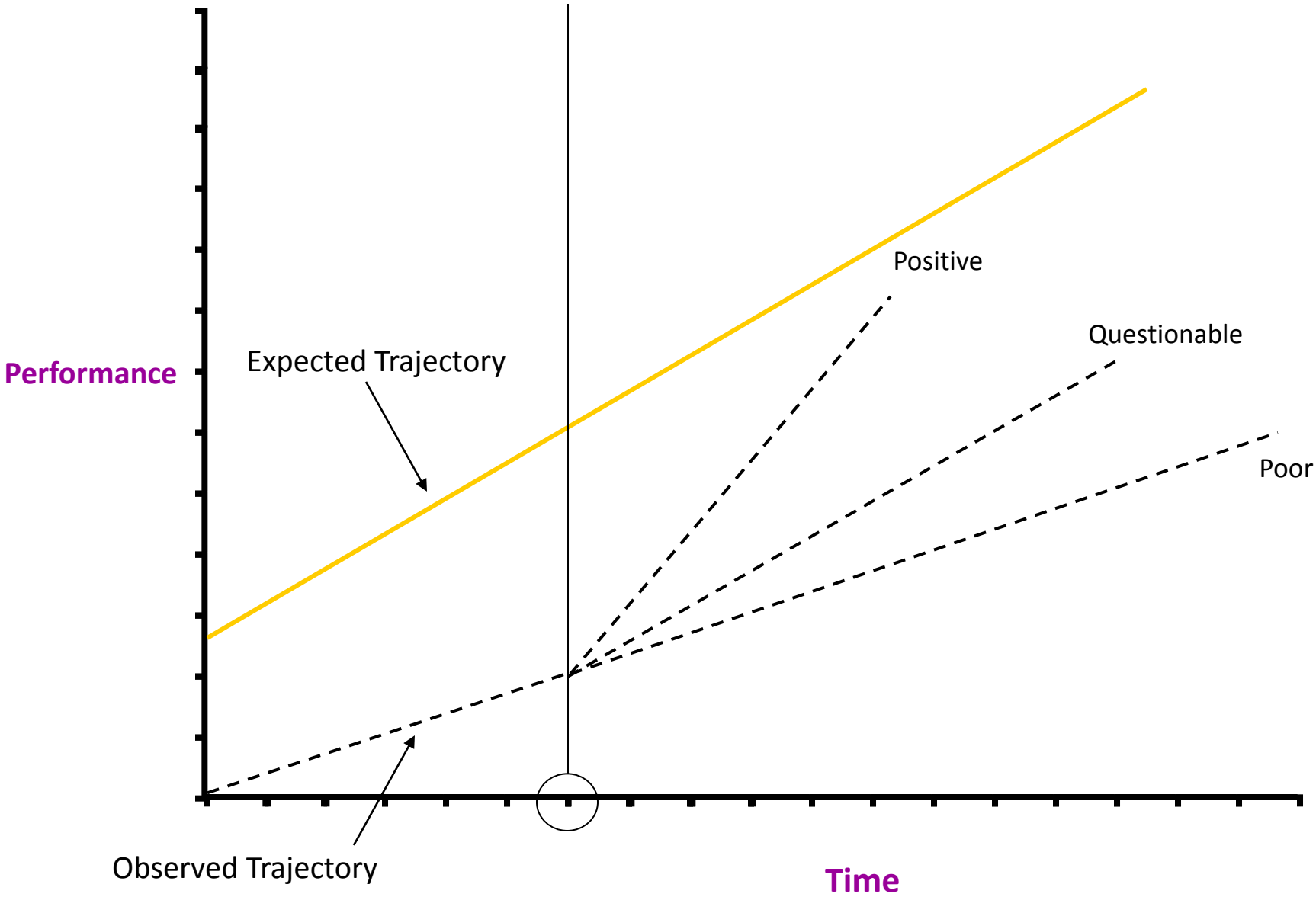
Decision Rules: What is a "Poor" Response to Intervention?

- ***Positive Response***
  - Gap is closing
  - Can extrapolate point at which target student(s) will "come in range" of target--even if this is long range
- ***Questionable Response***
  - Rate at which gap is widening slows considerably, but gap is still widening
  - Gap stops widening but closure does not occur
- ***Poor Response***
  - Gap continues to widen with no change in rate.
  - Level of "risk" worsens over time

Poor Response to Intervention



Response to Intervention



Decision Rules: Linking RtI to Intervention Decisions

- ***Positive***
  - Continue intervention with current goal
  - Continue intervention with goal increased
  - Fade intervention to determine if student(s) have acquired functional independence.

Decision Rules: Linking RtI to Intervention Decisions

- ***Questionable***
  - Was intervention implemented as intended?
    - If no - employ strategies to increase implementation integrity
    - If yes -
      - Increase intensity of current intervention for a short period of time and assess impact. If rate improves, continue. If rate does not improve, return to problem solving.

Decision Rules: Linking RtI to Intervention Decisions

- ***Poor***
  - Was intervention implemented as intended?
    - If no - employ strategies in increase implementation integrity
    - If yes -
      - Is intervention aligned with the verified hypothesis? (Intervention Design)
      - Are there other hypotheses to consider? (Problem Analysis)
      - Was the problem identified correctly? (Problem Identification)

Staff Development Points

- Building competency in your people
  - Key concepts

RtI: Key Concepts

- Academic Engaged Time (AET) is the best predictor of student achievement
  - 330 minutes in a day, 1650 in a week and 56,700 in a year
  - This is the “currency” of instruction/intervention
  - Its what we have to spend on students
  - How we use it determines student outcomes.
- MOST students who are behind will respond positively to additional CORE instruction.
  - Schools have more staff qualified to deliver core instruction than specialized instruction.
  - Issue is how to schedule in such a way as to provide more exposure to core.

RtI: Key Concepts

- Rate is growth per week (month) necessary to close the GAP
- Rate becomes the statistic we need to define evidence-based intervention (EBI)
- EBI is any intervention that results in the desired RATE

RtI: 4 Priorities

1. High Performing: Identify students at or above benchmark
    1. Where do we want them to be?
    2. Set high performing goals
    3. Analyze strategies to achieve goals
    4. Determine authentic assessments
    5. Student involvement in goal setting and self-monitoring

RtI: 4 Priorities

2. Prevention: Identify students at-risk for literacy failure BEFORE they actually fail.
   - Kindergarten screening, intervention and progress monitoring is key.
   - No excuse for not identifying ALL at-risk students by November of the kindergarten year.
   - This strategy *prevents* the GAP.

RtI: 4 Priorities

3. Early Intervention
   - Students who are more that 2 years behind have a 10% chance, or less, of catching up.
   - Benchmark, progress monitoring data, district-wide assessments are used to identify students that have a gap.
   - Students receive strategic and/or intensive intervention.
   - More intense intervention is more costly and requires more specialized instruction/personnel

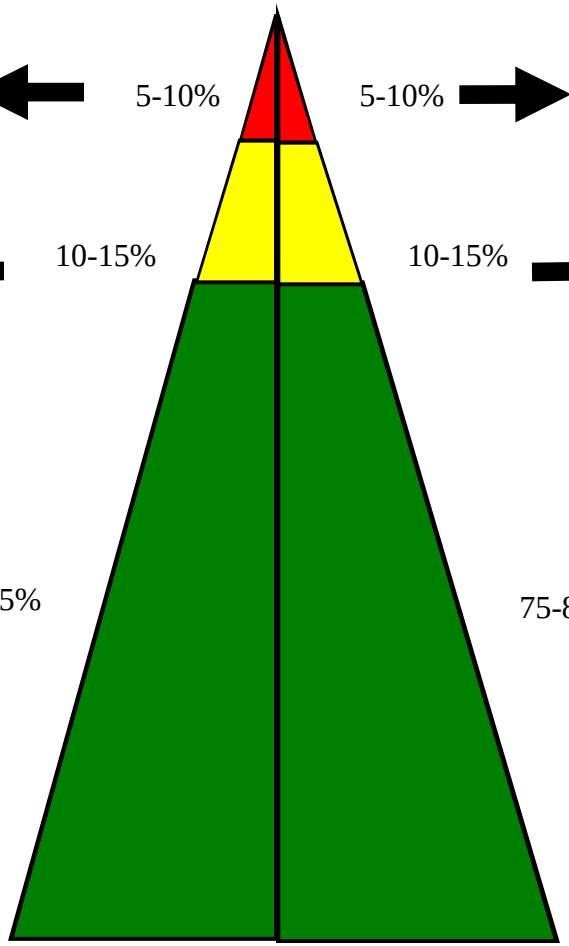
RtI: 4 Priorities

4. Intensive Intervention
   - Reserved for those students who have a significant GAP and the rate of growth to close the GAP is high. Too much growth—too little time remaining.
   - Problem-solving is used to develop instructional priorities.
   - This is the most costly, staff intensive

Tiered Instruction/Intervention Model (TIM)

Academic Systems

Behavioral Systems



Intensive, Individual Interventions
- Individual Students
- Assessment-based
- High Intensity
- Of longer duration

5-10%

Targeted Group Interventions
- Some students (at-risk)
- High efficiency
- Rapid response

10-15%

Universal Interventions
- All students
- Preventive, proactive

75-85%

5-10%

Intensive, Individual Interventions
- Individual Students
- Assessment-based
- Intense, durable procedures

10-15%

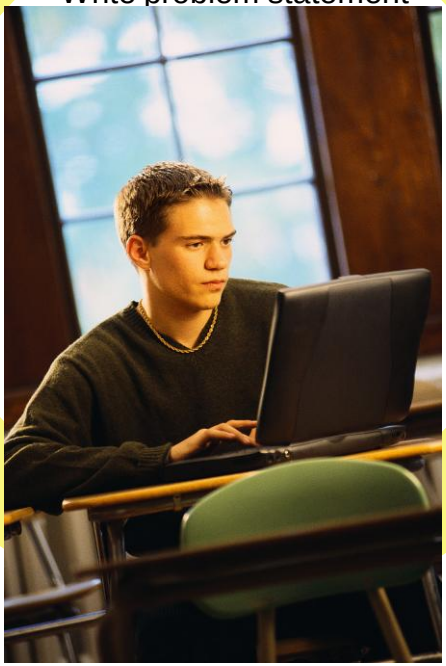
Targeted Group Interventions
- Some students (at-risk)
- High efficiency
- Rapid response

75-85%

Universal Interventions
- All settings, all students
- Preventive, proactive

1) Define the Problem
Develop the Assessment Plan

Identify Concern
Define behavior or concern
Problem validation
Problem analysis
Functional assessment
Write problem statement



2) Analysis of Assessment Plan
Develop an Intervention Plan

Generate Problem Solutions
Evaluate Solutions
Select a Solution
Collect Baseline Data
Set a Goal
Write Action Plan
Select Measurement Strategy
Develop plan to Evaluate Effectiveness

3) Implement the Plan

Implement according to written plan
Ongoing systematic data collection
Follow-up as needed

4) Analysis of Intervention Plan

Data analyzed to determine effectiveness
Success determined by rate of progress
and size of discrepancy

Critical Components of TIM

- Multi-tiered instructional model
- 80-15-5 – How is your fidelity?
- Instruction based on sound research
- Educators being educated consumers
- Collaboration between general and special education – an educational initiative
- Change in role and function of various educators

Critical Components of TIM

- Improve results in academic and behavioral domains through
  - High quality instruction/interventions
  - Formative evaluation
- Student results drive decisions about needs and intensity of interventions
- Improve, eliminate disproportionate representation
- Identification of disabilities through procedures that are valid and connected to effective special ed interventions
- Improve special education results and increase exit from special education
- Prevention and early identification-intervention

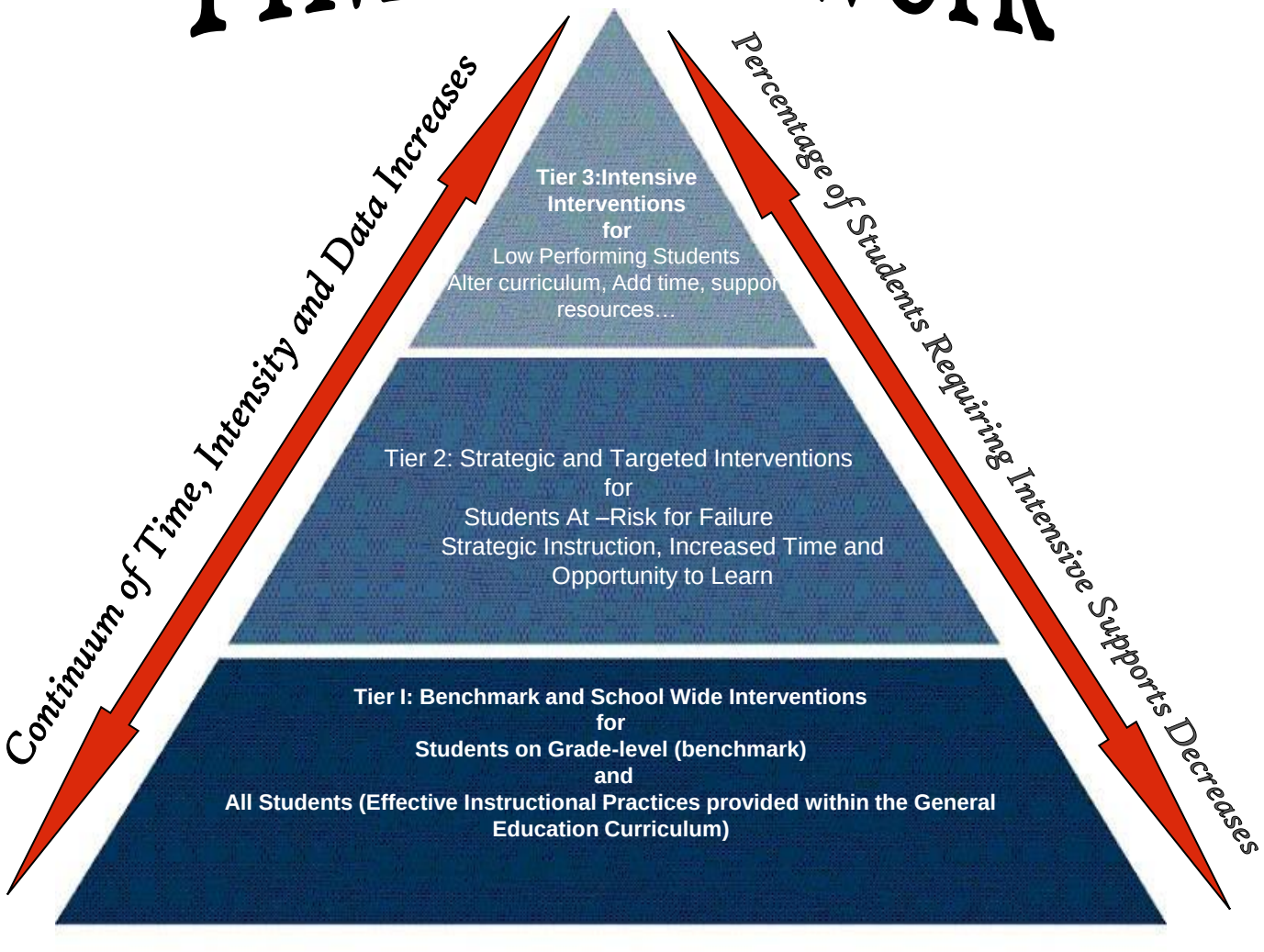
Critical Components of TIM

- System Change that features:
  - Scientifically-based instruction/interventions matched to student needs
  - Analysis of fidelity of implementation
  - Formative evaluation including frequent progress monitoring in relation to goals, with decision rules applied
  - Decisions driven by student RTI, including gen'l ed instruction/intervention, remedial services/individual interventions, sp ed eligibility, placement, annual review and exit
- Broadly, data-based decision making at multiple levels

Critical Components of TIM

- Incomplete Models:
  - Tier I, Tier II, Traditional Tests, Sp Ed
  - Tier II, Tier III, Tier IV
  - Tier II, Traditional Tests, Special Education
  - Behavior or Academics only
  - K-2 only
- Complete Models
  - Minimum of 3 tiers, including general education
  - Tiers differ by degree of children's needs, instructional intensity, and measurement precision and frequency

TIM Framework



Tier I – Core/Benchmark

- **Definition:** Students who are making expected progress in the general education curriculum and who demonstrate social competence
- Benchmark <u>also</u> describes those schoolwide interventions that are available to **all students**
  - Effective instruction
  - Clear expectations
  - Effective student support
  - Periodic benchmark assessments
  - Universal prevention

Tier I – Core/Benckmark

- Universal screening
- Data analysis teaming
- School-wide behavior supports (PBS)
- Whole group teaching with ***Differentiation***

Tier I – Core/Benchmark

- High quality instructional and behavioral supports are provided for all students in general education
- School personnel conduct universal screening of literacy skills, academics, and behavior.
- Teachers implement a variety of scientifically research-based teaching strategies and approaches - “Scientifically-based” appeared 181 times in NCLB
- Students receive differentiated instruction based on data from ongoing assessments.

Adapted from: Kovaleski (2005). Special Education Decision Making [ppt.]

Tier I – Core/Benchmark

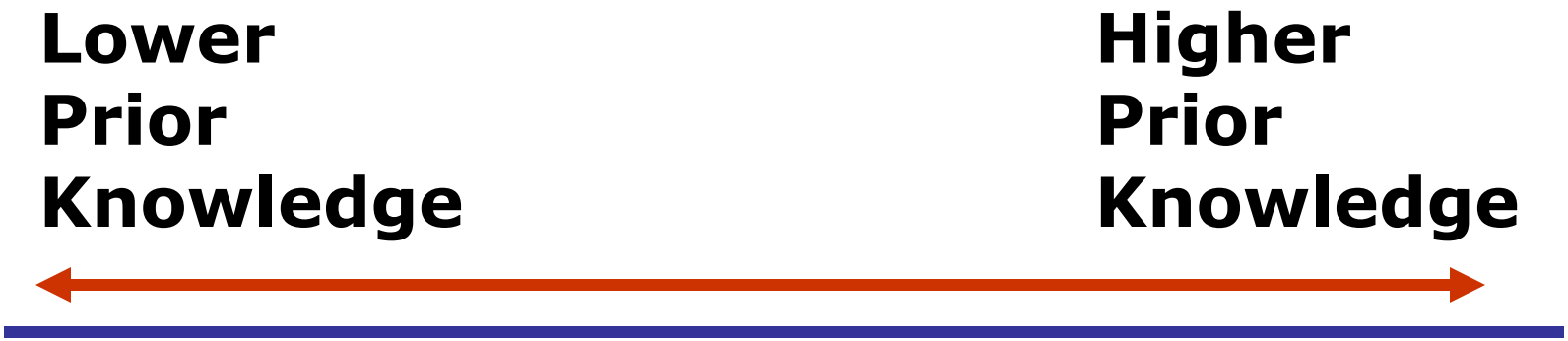
- Universal Screening
  - **Academics: Screen all students, begin in kindergarten; 3 times per year with appropriate early literacy and math measures**
  - More intense instruction and monitoring **within classroom** for students below cut scores
  - See worksheet

What Makes Sense

- One: Instruction at the child's skill level
- Two: Explicit, systematic, teacher directed, skills based
- Three: Strong curriculum: scope and sequence defined; skill hierarchy
- Four: Formative evaluation rules and instructional changes

One: Instruction at Student's Level

- Instruction at student's knowledge/skill level
- Principle of Prior Knowledge and Completeness of Instruction



Two: Direct, Explicit, Systematic, Teacher Directed

- Varies with student prior learning
- **Explicit instruction** (Vaughn & Linan-Thompson)
  - provide clear instructions and modeling
  - include multiple examples (and non-examples when appropriate)
- **Systematic instruction** (Vaughn & Linan-Thompson)
  - break tasks into sequential, manageable steps
  - progress from simple to more complex concepts and skills
  - ensure students have prerequisite knowledge and skills

Two: Direct, Explicit Teacher Directed Instruction, cont.

- Teach all elements of the task
- Break task into components—as far as needed
- How explicit? Explicit enough for the student to make good progress
- Teacher Models Skill, using multiple examples and non-examples
- Teacher and student perform task together
- Student performs task with feedback
- Student independently practices task to automaticity
- Integrate skills with prior skills and competencies

Two: Direct, Explicit Teacher Directed Instruction, cont.

- Example
  - Telling students that they're going to be working on improving their comprehension through attending to key ideas
  - Then modeling reading for key ideas, suggesting specific questions to guide attention, summarizing an idea as one is reading through notes
  - Student practice with feedback
- Non-example
  - Telling the students that they need to read a story to determine the main ideas

Two: Direct, Explicit Teacher Directed Instruction, cont.

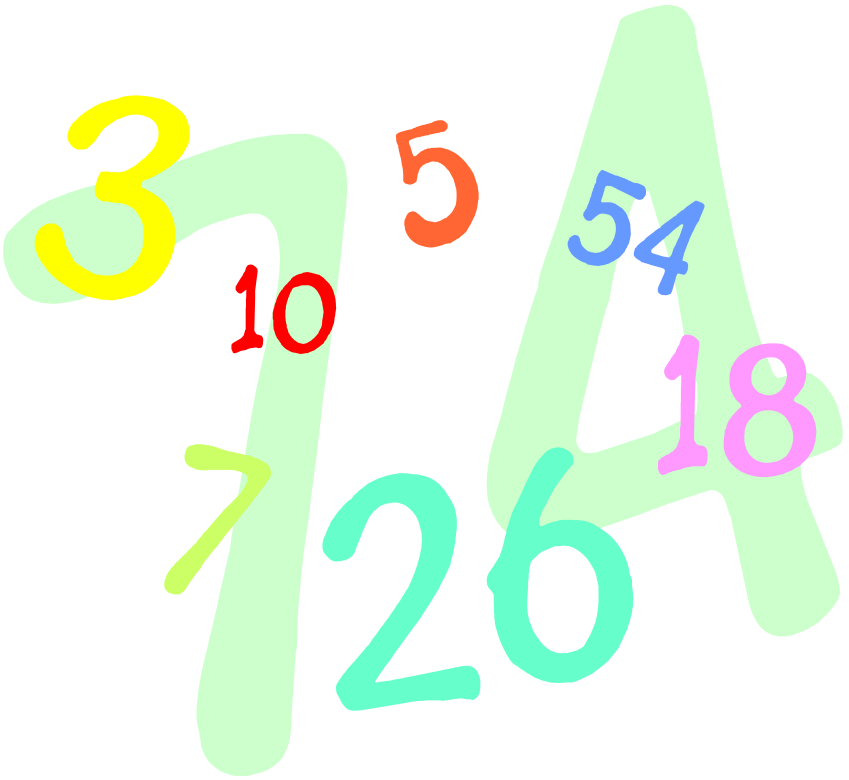
Treatment	Effect Size
• Explicit Instruction and Problem Solving	+ .70 to 1.50

Kavale (2005), *Learning Disabilities, 13,* 127-138 and other sources

Three: Strong curriculum: scope and sequence defined; skill hierarchy

- Houghton Mifflin Math Expressions, Harcourt Achieve's Saxon Math, Pearson Scott Foresman's Investigations in Number, Data, and Space, and Scott Foresman-Addison Wesley Mathematics

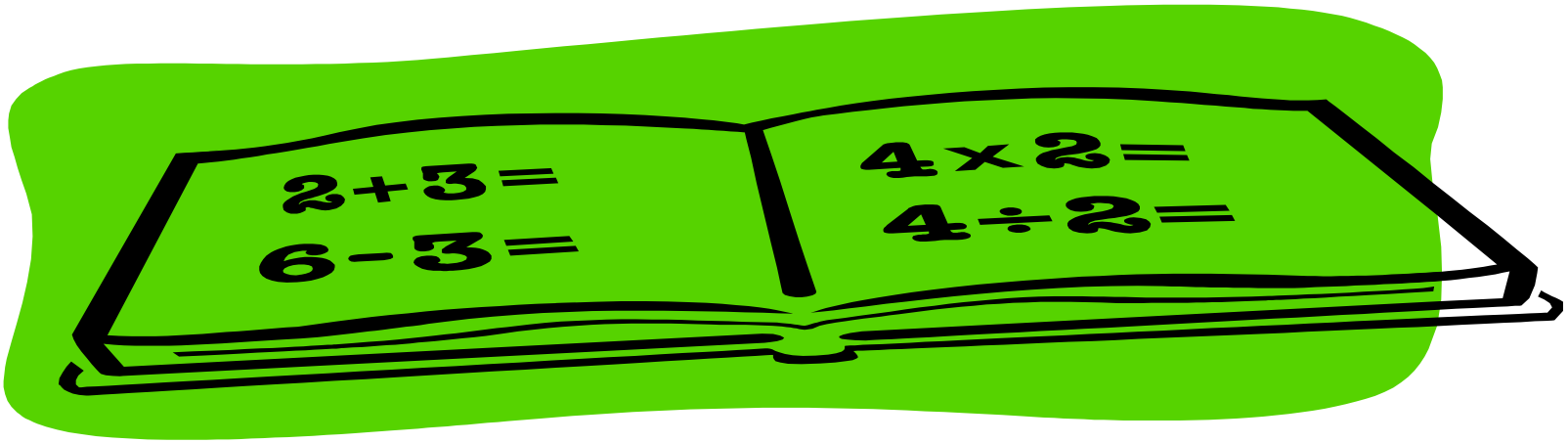
Three: Strong curriculum: scope and sequence defined; skill hierarchy



- All four improved student performance but student achievement was significantly higher with Math Expressions and Saxon Math

Three: Strong curriculum: scope and sequence defined; skill hierarchy

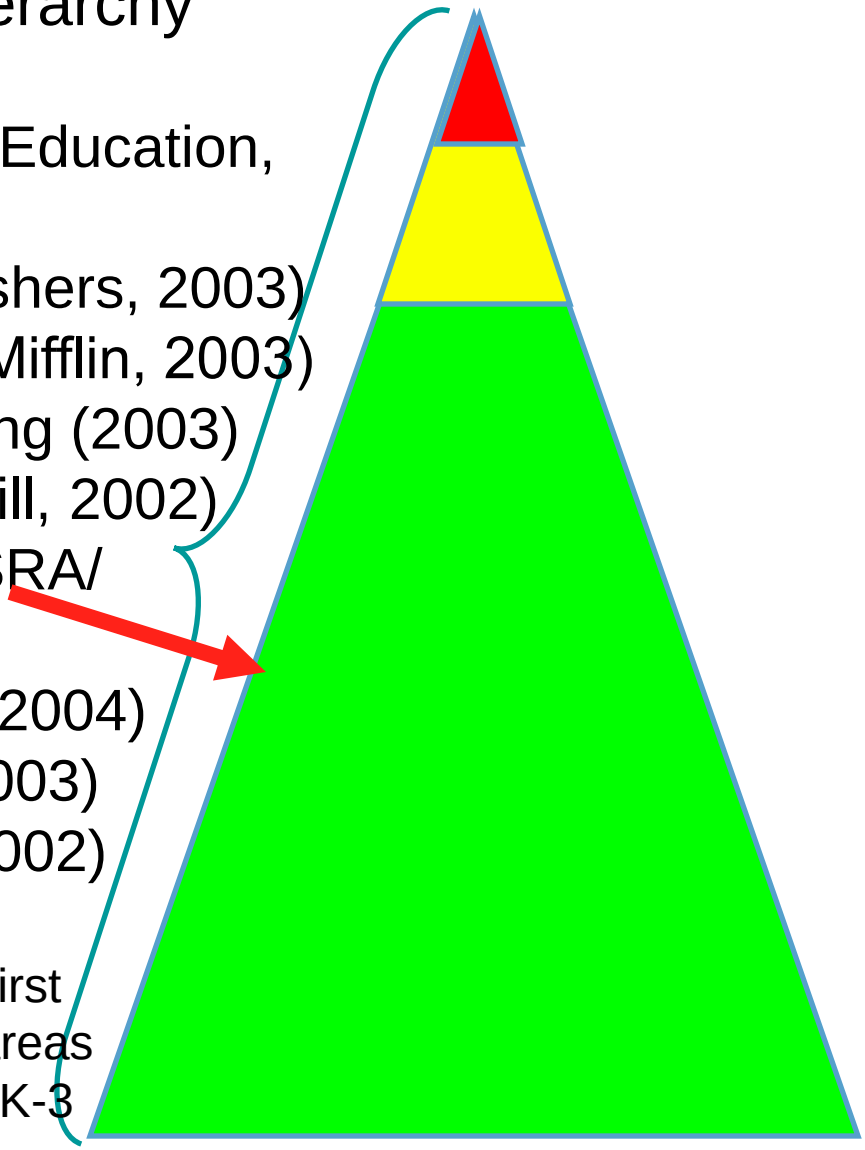
- When using Math Expressions and Saxon Math students' percentile rank improved by 9-12 points
- This was particularly true for schools with low math scores and students in low SES areas



Three: Strong curriculum: scope and sequence defined; skill hierarchy

1. Rigby Literacy (Harcourt Rigby Education, 2000)
2. Trophies (Harcourt School Publishers, 2003)
3. The Nation's Choice (Houghton Mifflin, 2003)
4. Macmillan/McGraw-Hill Reading (2003)
5. Open Court (SRA/McGraw-Hill, 2002)
6. Reading Mastery Plus (SRA/ McGraw-Hill, 2002)
7. Scott Foresman Reading (2004)
8. Success For All (1998-2003)
9. Wright Group Literacy (2002)

Reviewed by: Oregon Reading First
Comprehensive: Addressed all 5 areas and included at least grades K-3



Three: Strong curriculum: scope and sequence defined; skill hierarchy

- Reading Curricula content-Snow et al, 1998
  - Phonemic Awareness
  - Fluency
  - Comprehension PLUS
  - Direct, systematic instruction
  - Universal screening and formative evaluation

Phonics

Vocabulary

Four: Formative evaluation rules and instructional changes

- **The effectiveness of any educational strategy can only be determined through its implementation and analysis.**

Four: Formative evaluation rules and instructional changes

- Progress monitoring and charting are components of formative evaluation
  - Allows you to “determine the effectiveness of an intervention during implementation so that it can be modified or changed to increase the likelihood that intended results will be achieved.” (Deno, 2002)

Four: Formative evaluation rules and instructional changes

Treatment/Intervention	Effect Size
Special Education Placement	-.14 to .29
Modality Matched Instruction (Auditory)	+.03
Modality Matched Instruction (Visual)	+.04
Curriculum-Based Instruction/ Graphing and Formative Evaluation	+.70
Curriculum-Based Instruction, Graphing, Formative Evaluation and Systematic use of Reinforcement	+1.00

Four: Formative evaluation rules and instructional changes

Treatment	Effect Size
• Applied Behavior Analysis.	+ 1.00
• Beh. Assessment+Graphing+Formative Evaluation + reinforcement	+ 1.00
• Reinforcement	+.7 to 1.50
• Group Contingencies	+.1.00
• Reinforcement + Response Cost	+1.00

Four: Formative evaluation rules and instructional changes

- Changing teaching from an art to a science
- Set Ambitious goals
- High rate of student response/feedback
- Time on task or engaged time
- Reinforcement, matched to group or child
- Effective school/classroom organization and behavior management – Catch them being good!

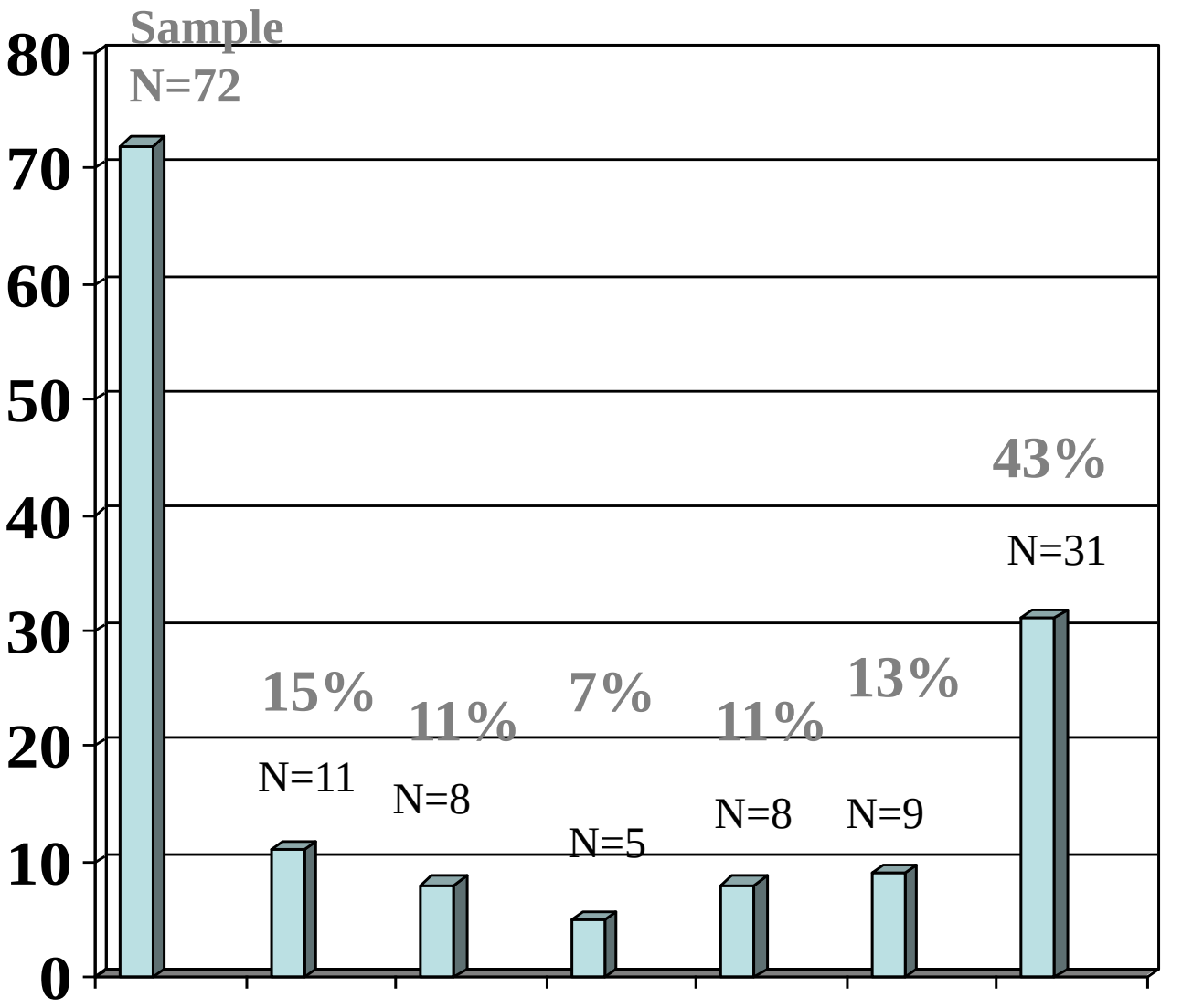
Communication Breakdown!

IHE – Teacher Training Programs

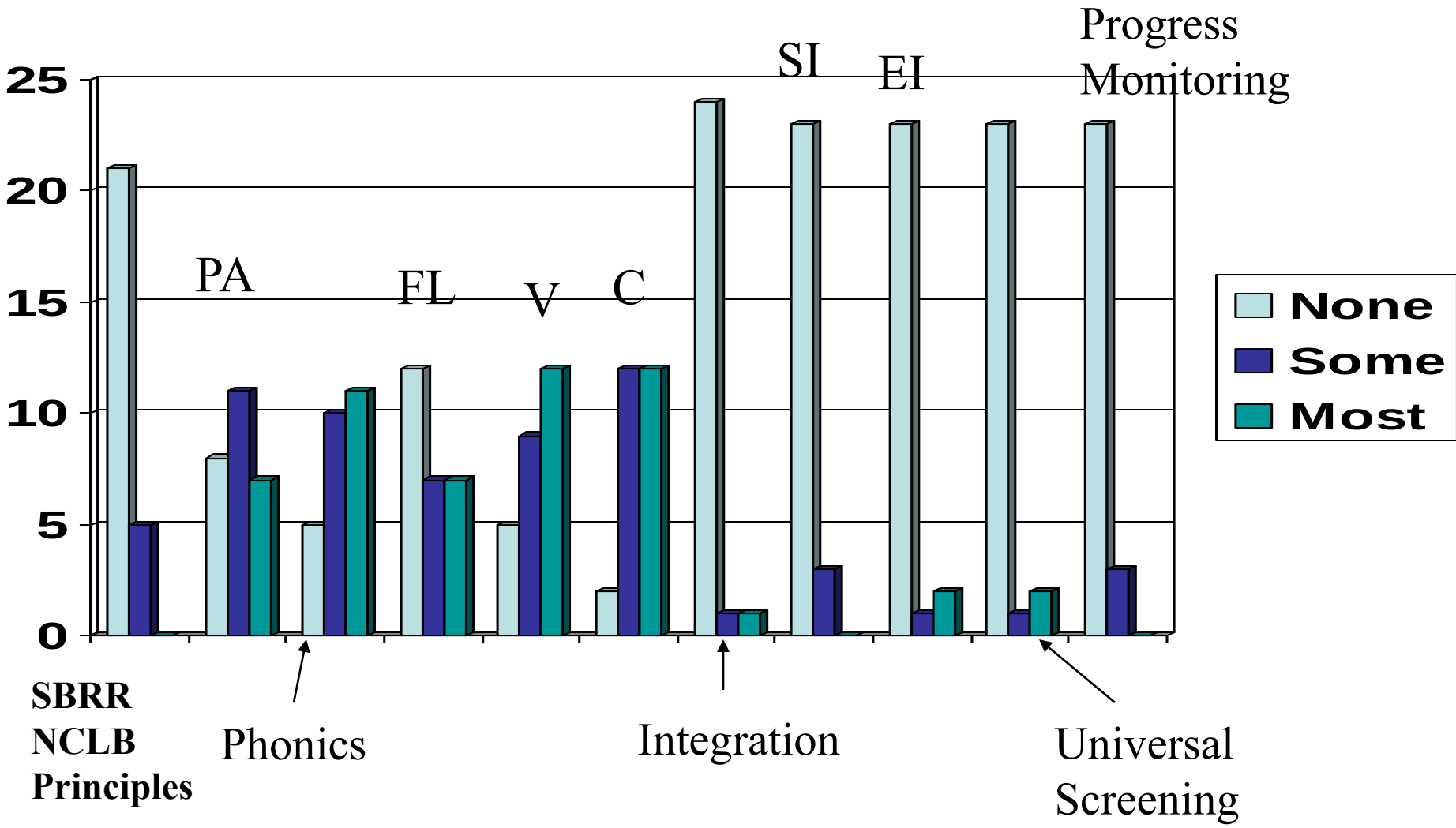
Source National Council on Teacher Quality
http://www.nctq.org/nctq

5 Components

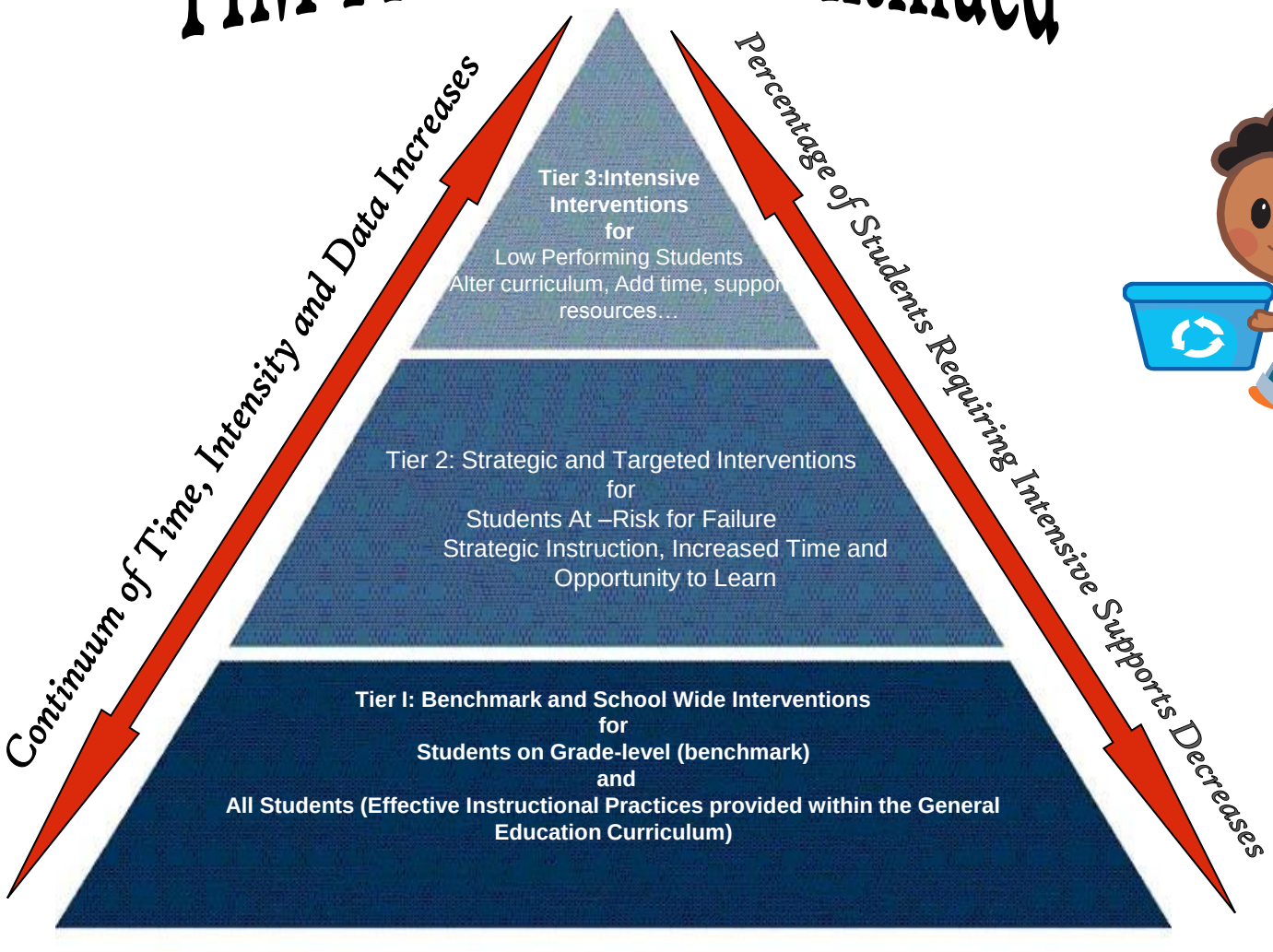
- Phonemic awareness
- Phonics
- Fluency
- Vocabulary
- Compre-hension



IHE – Special Education Teacher Training Programs (Reschly & Smartt, 2007)



TIM Framework Continued



Tier II - Strategic/Targeted

- **Definition**: Academic and behavioral strategies, methodologies and practices designed for students not making expected progress in the general education curriculum and/or have mild to moderate difficulties demonstrating social competence. These students are at risk for academic failure
- Standard protocol vs Problem solving approach

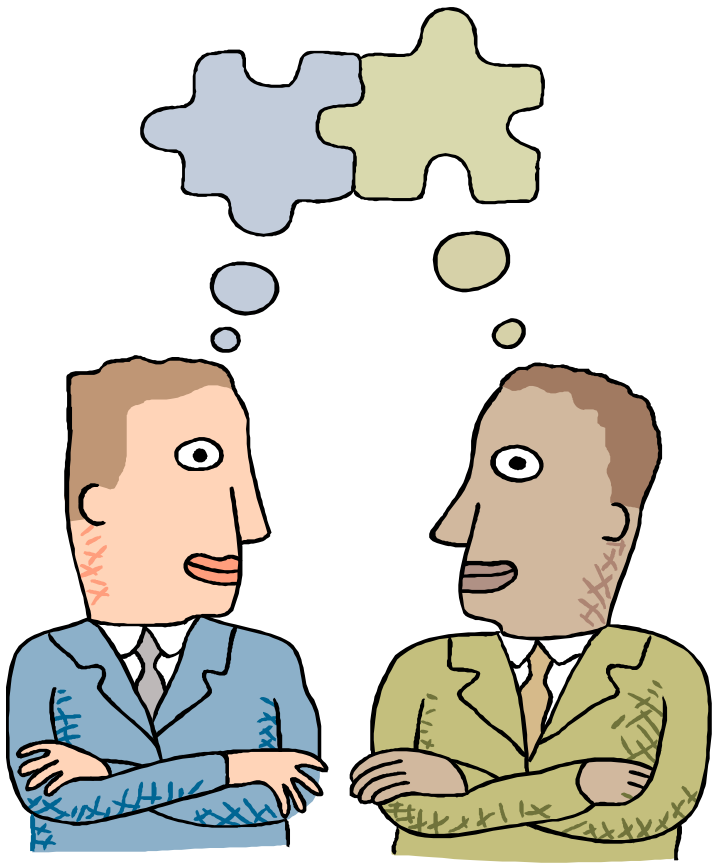
Tier II - Strategic/Targeted

- Increased opportunity to learn
- Increased instructional time
- Increased assessment
  - Data collection and analysis once per week
  - Data-based decision-making

Tier II – Strategic/Targeted

- Use of standard protocol interventions
  - Scientifically research-based interventions
  - Core instruction plus
  - Differentiated instruction in general education
  - Small homogenous with strategic instruction
  - is often scripted or very structured
  - has a high probability of producing change for large numbers of students
  - is designed to be used in a standard manner across students
  - is usually delivered in small groups
  - can be orchestrated by a problem-solving team

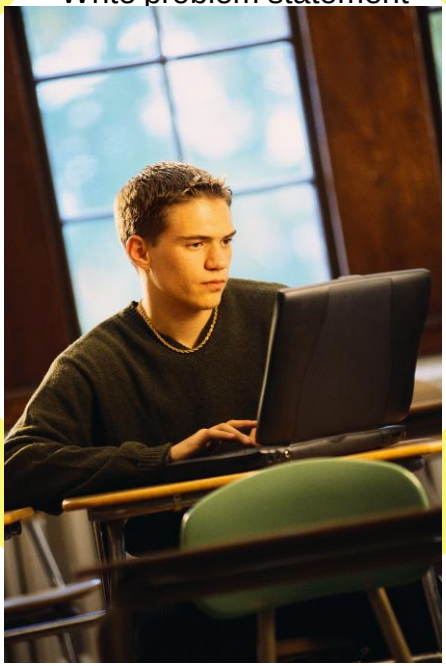
Tier II - Strategic/Targeted



- Problem Solving Approach
  - An approach to developing interventions and ensuring positive student outcomes, rather than determining failure or deviance (Deno, 1995).
  - Seven step cyclical process that is inductive, empirical, and rooted in behavioral analysis

1) Define the Problem
Develop the Assessment Plan

Identify Concern
Define behavior or concern
Problem validation
Problem analysis
Functional assessment
Write problem statement



2) Analysis of Assessment Plan
Develop an Intervention Plan

Generate Problem Solutions
Evaluate Solutions
Select a Solution
Collect Baseline Data
Set a Goal
Write Action Plan
Select Measurement Strategy
Develop plan to Evaluate Effectiveness

3) Implement the Plan

Implement according to written plan
Ongoing systematic data collection
Follow-up as needed

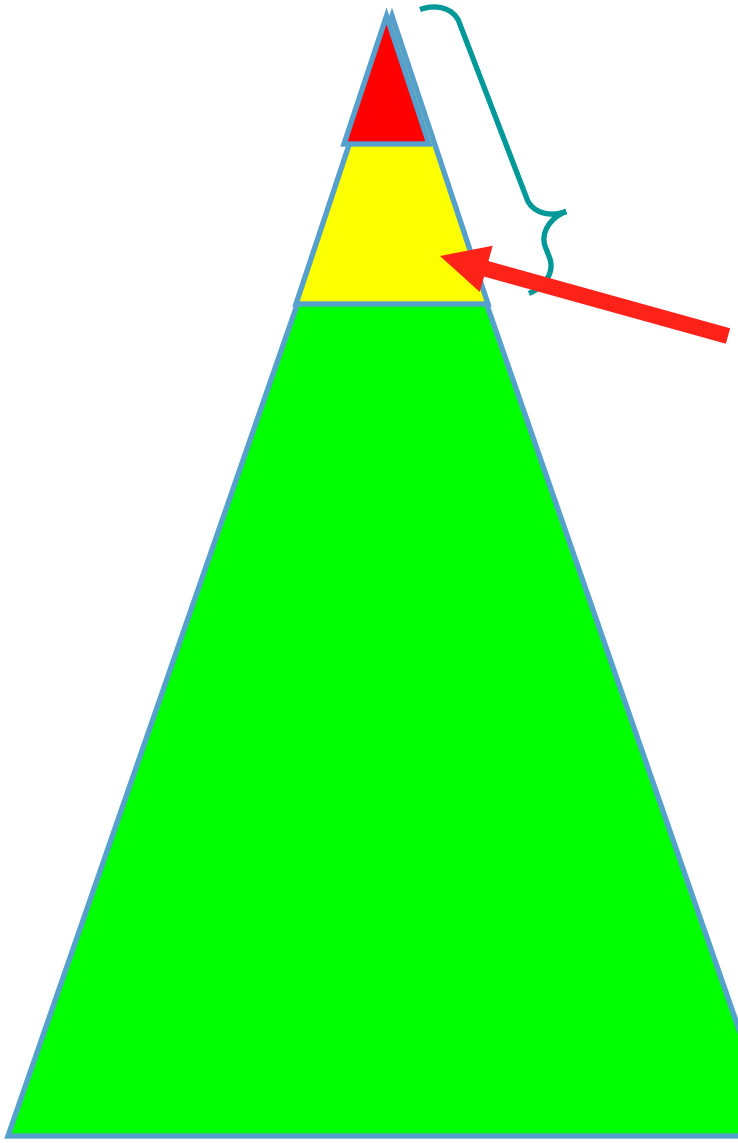
4) Analysis of Intervention Plan

Data analyzed to determine effectiveness
Success determined by rate of progress
and size of discrepancy

Tier II - Strategic/Targeted

- Team directed
  - Grade level team, case manager approach, PSM team, data analysis team, etc
  - Steps of cyclical problem-solving model occur but more school personnel are involved
  - Individualized intervention plan created

Tier II - Strategic/Targeted



Early (Soar to) Success (Houghton Mifflin)
Read Well (Sopris West)

Reading Mastery (SRA)

Early Reading Intervention (Scott Foresman)

Great Leaps (Diamuid, Inc.)
REWARDS (Sopris West)
Ladders to Literacy (Brookes)

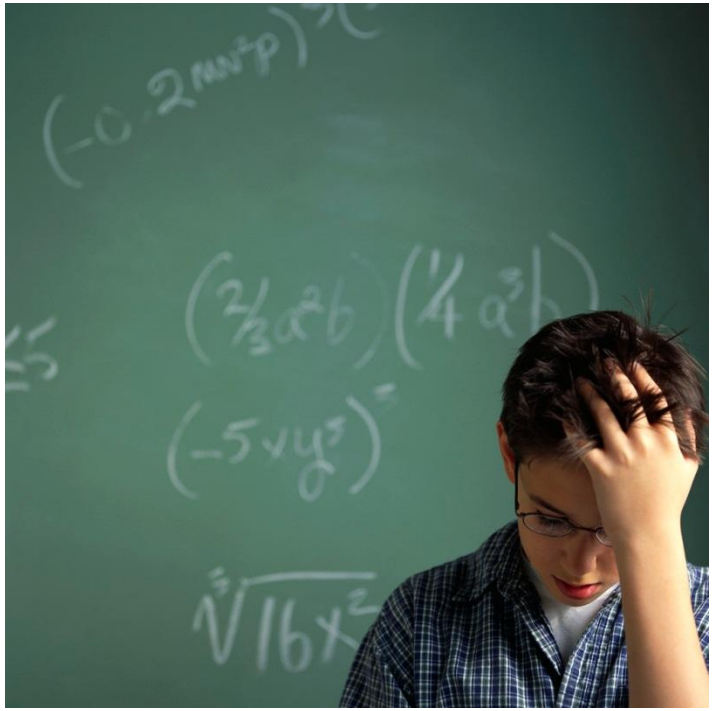
Read Naturally

Peer Assisted Learning Strategies (PALS)

Reviewed by: Oregon Reading First
Comprehensive: Addressed all 5 areas and included at least grades K-3

Tier II - Strategic/Targeted

- Strategic math intervention resources
  - V-Math
  - Number World
  - www.enumeracy.com
  - www.whatworks.ed.gov
  - www.interventioncentral.org



TIM Framework Continued

Tier III - Intensive

- Definition: Academic and behavioral strategies, methodologies and practices designed for students significantly lagging behind established grade-level benchmarks in the general education curriculum or who demonstrate significant difficulties with behavioral and social competence.

Tier III - Intensive

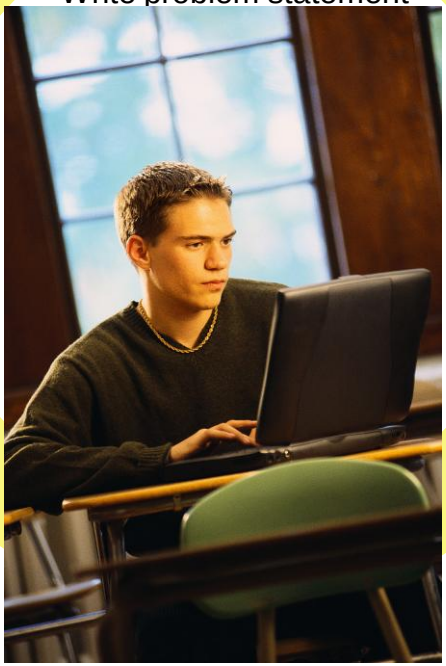
- Increased direct instruction time
- More time on task
- More immediate and corrective feedback
- More opportunity to respond
- Functional behavior analysis (FBA), Behavior Intervention Plan (BIP)
- More frequent progress monitoring (two to three times per week)
- Core curriculum and intensive intervention

Tier III - Intensive

- Supplemental instructional materials
- Small intensive groups
- Usually outside the general ed. classroom
- Tutoring by remedial educators

1) Define the Problem
Develop the Assessment Plan

Identify Concern
Define behavior or concern
Problem validation
Problem analysis
Functional assessment
Write problem statement



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Set a Goal
Write Action Plan
Select Measurement Strategy
Develop plan to Evaluate Effectiveness

3) Implement the Plan

Implement according to written plan
Ongoing systematic data collection
Follow-up as needed

4) Analysis of Intervention Plan

Data analyzed to determine effectiveness
Success determined by rate of progress
and size of discrepancy

PSM Procedures

- Activities at Level/Tier III
  - Steps of cyclical problem-solving model repeat but in a more formal and systematic way and with the school-based problem solving team
  - Team consists of referring teacher, parent, administrator, psychologist, EC staff member, counselor, regular education representative, anyone else needed

Tier III - Intensive

- School Based Team works through the PSM process systematically
  - Problem is behaviorally defined
  - Baseline, goal setting, and progress monitoring data are systematically collected and charted to provide visual representation of skill acquisition

Tier III - Intensive

- School Based Team works through the PSM process systematically
  - Research based interventions are implemented
  - Data is provided as evidence to the effectiveness of the instruction/intervention provided and the need of intervention with highest level of intensity – special education services

Principles of PSM Implementation

- Principle #1
  - Should involve seven steps
    - Develop behavioral definition of the problem
    - Generate hypothesis and assessment questions related to problem
    - Functional and multi-dimensional assessments to test hypotheses and respond to questions
    - Generation of goal statements
    - Develop and implement research based interventions
    - Progress monitoring
    - Decision-making about effectiveness of intervention

Principles of PSM Implementation

- Principle #2
  - Collaborative consultation is the means by which PSM is conducted
    - Team work
    - No longer does one “expert” make determinations
    - Each member of team provides their expertise from their perspective

Principles of PSM Implementation

- What is collaborative consultation?
  - Process by which two or more persons work together as a **team** to solve a student's school performance problem

Principles of PSM Implementation

- Each team member
  - Active participant in the process
  - Contributes a unique set of knowledge and expertise
  - Has relationships with other team members that are non-hierarchical and collegial
  - Share responsibility for intervention planning and outcome

Principles of PSM Implementation

- Research study conducted by Drs. Bob Audette, Richard White, and Drew Polly at UNC-C
- Pitts Road Elementary School, Cabarrus Couty, NC
- Interviewed various key district office level personnel and the entire school based RTI team

Principles of PSM Implementation

- Several interesting findings about why RTI implementation at Pitts Road Elementary is successful, some of which were:
  - The commitment and dedication of faculty and staff
  - The formation and management of the school based RTI ***team*** with key members
    - Administrator
    - Reg ed teachers
    - Special ed teachers
    - Guidance counselor
    - Speech clinician
    - School Psych

Principles of PSM Implementation

- Empowerment of the school based RTI ***team*** and their ability to:
  - Think deeply and often out loud about issues
  - Openly discuss and propose ideas without fear
  - Challenge the ideas of others without fear
  - Disagree with others without personal animosity
  - Collect and analyze data for decision making
  - Taking time to reach consensus on decisions
  - Working to conclusion to ensure things are done correctly
  - Following the principle that all actions must be in the best interest of the child and the child's family

Principles of PSM Implementation

- Principle #3
  - Develop hypotheses as to why the problem is occurring
    - Hypotheses are tested through assessment questions and baseline data collection
    - Hypotheses are proposed collaboratively

Principles of PSM Implementation

- Principle #4
  - Functional assessment procedures are implemented
    - Assessment is performed relevant to the identified problem, rather than determination of disability
    - Data is collected to prove or disprove hypotheses, answer assessment questions, and provide basis for interventions
    - Data serves as baseline, comparison to peers, and progress monitoring

Principles of PSM Implementation

- Principal #5
  - Implementation of multi-dimensional assessment procedures – RIOT
    - Four domains are considered, environment, curriculum, instruction, and learner
    - It is erroneous to conceptualize problems as always belonging to the learner
    - Review, Interview, Observe, and Test in all four domains if relevant

Principles of PSM Implementation

- Principal #6
  - Goals identified that should occur as result of intervention
    - Performance described in concrete, measurable terms
    - Period of time for intervention identified
    - Exit criteria for intervention (if involving a program placement) identified

Principles of PSM Implementation

- Principle #7
  - Development of prescriptive interventions
    - Based on data collected and address changeable variables in the relevant domains
    - Intervention is a team effort, direct service, progress monitoring, on-going consultation and technical assistance
    - Effectiveness of intervention continuously tested and changes made when necessary

Principles of PSM Implementation

- Principle #8
  - Progress monitoring
    - Data collected regularly and frequently
    - Data graphed and analyzed
    - Effectiveness of intervention analyzed and changes made when needed

Principles of PSM Implementation

- Principle #9
  - Decision making based on progress monitoring data
    - Response to intervention evaluated based on progress monitoring data relative to goal
    - Continue intervention, change intervention, new intervention,
    - Evaluation of program, modify program, exit program

Define the Problem

- In general - Identify initial concern
  - General description of problem
  - Prioritize and select target behavior
  - Describe what is known about problem and generate questions
    - Environment
    - Instruction
    - Curriculum
    - Learner
  - Observable and measurable terms – stranger test?

Define the Problem

- The most difficult step of the model
- Done collaboratively
- However, if done correctly, solution ideas easily follow
- Describe the problem precisely, then formulate hypothesis, predictions, and assessment questions

Define the Problem

- Characteristics of a definition
  - Concrete, observable terms (understanding long division – accurate completion of long division problems) a stranger can determine if behavior has occurred
  - Measurable – difficult to count number of times student “understood division” easily to count digits completed correctly in a division problem
  - Specific – break things down into its smallest components – “appropriate classroom behavior” – attending to task, remaining in seat, etc
  - Leads to interventions – poor accuracy when applying phonological principles – leads to assessment and intervention ideas

Define the Problem

- Procedures for defining the problem
  - Select target behavior – teacher may have several concerns, prioritize according to significance of impact
  - Define in concrete, observable, and measurable terms, everyone should agree
  - Hypothesize an explanation for the problem based on the definition – consider modifiable factors – John is off task because he is distracted by noises in the classroom
  - Predict change in student behavior, use if/then wording – If classroom is quiet then bill will not be distracted
  - Develop assessment questions to be answered – questions stem from hypothesis and predictions – data collected supports or refutes hypothesis – consider setting, current level of performance, frequency, intensity, and duration of problem

Define the Problem

- Procedures for defining the problem continued
  - Hypothesis development
    - Traditionally hypotheses have been circular – student has problem because has disability, student has disability because has problem
    - This is not useful when planning interventions
    - Hypotheses should be stated in following manner – Tom's out of seat behavior in math because he lacks the computation skills necessary to complete the independent seatwork
    - Hypotheses are generated in a type of brainstorming session

Define the Problem

- Procedures for defining the problem continued
  - Hypothesis development
    - Five types of hypotheses
      - Curricular – is curriculum appropriate for student? Consider sequence of objectives, teaching methods, and practice materials provided
      - Instructional – manner in which teacher uses curriculum – consider instructional techniques, presentation style, questioning, feedback techniques
      - Environment – how environment effects learning – arrangement of classroom, material, media equipment
      - Student skill – necessary prerequisite skills
      - Student process – capacity to learn and problem solving techniques

Case Study Number One

- Natasha
- Third grade female, entered level/tier three in the spring
- Having difficulties with reading
- Changed schools twice this school year
- Good attendance

Natasha

- Receives whole group general education classroom instruction and differentiated instruction in the general education classroom
  - Attended summer school between second and third grade
  - Attends after school tutorial twice a week
  - Has preferential seating and receives individual “check-ins” from teacher during class
  - Receives speech/language services with language goals

Natasha

- She also receives tier two intervention via the schools Power Up model using Wilson Reading Program
- Latest STAR level – 1.1 – has displayed slow progress since the beginning of school
- Met standard on state standards based pre-testing in math, but not in reading
- Progress on speech/language IEP has helped her get promoted

Natasha

- Latest Dibels assessments identify her as being in the High Risk Level for oral reading fluency
- A very hard worker, with great attitude
- Mother reads with her at home and is willing to do whatever to help
- Natasha has some difficulties with attention in the home and classroom environment
- Mom wonders if she has ADD

Natasha

- Define the problem
  - Identify Natasha's areas of difficulty and prioritize the one to attack first
  - Document things in concrete, observable, measurable, specific terms
  - Develop Hypotheses within the domains – 5 types
  - Develop assessment questions to test hypotheses

Tier III - Intensive

- Development of Assessment Plan
- In general - develop assessment plan to answer questions generated – validate target behavior
- Data across four domains should be gathered from multiple sources – RIOT
  - Reviews
  - Interviews
  - Observations
  - Tests (CBM)

Tier III - Intensive

- RIOT
- Review, Interview, Observe, Test
  - Review records and work samples, interview staff and parents, testing involves CBM
  - Specific assessment aimed at answering assessment questions – specific strengths and weaknesses in academic portfolio – curricular, instructional, and environmental factors affecting performance

Tier III - Intensive

- Data are collected regarding
  - Environmental variables – class size, physical arrangement of classroom, equipment and materials, etc
  - Instructional variables – behaviors and techniques used by teacher – questioning techniques, feedback, behavior management, prompts
  - Curricular variables – pacing, sequence, scope, opportunities for practice, leveling of students
  - Student variables – academic portfolio of student and consideration of a skill deficit or a performance deficit

Natasha

- Develop an Assessment Plan
  - Questions drive assessments
  - Test hypotheses
  - RIOT
  - Four domains

Analysis of Assessment Plan

- In general……
- Review data – can't do or won't do?
- Calculate discrepancy between baseline and acceptable level of performance
- Baseline is median of three measures
- Indicate standard
- Make an informed statement as to why the problem is occurring
- Make a prediction regarding intervention
- Chart and set goal

Analysis of Assessment Plan

- Definition
  - Goal statement specific description of change you expect to see in student's behavior as a result of the intervention
    - Includes behavior to change
    - Conditions that will bring about change
    - Level of behavior that is expected
  - Short-term goals describe progress student is expected to make in a short period of time – during and intervention phase
  - Long term goals describe progress student is expected to make in a year – often associated with a program, sometimes with intervention phases

Analysis of Assessment Plan

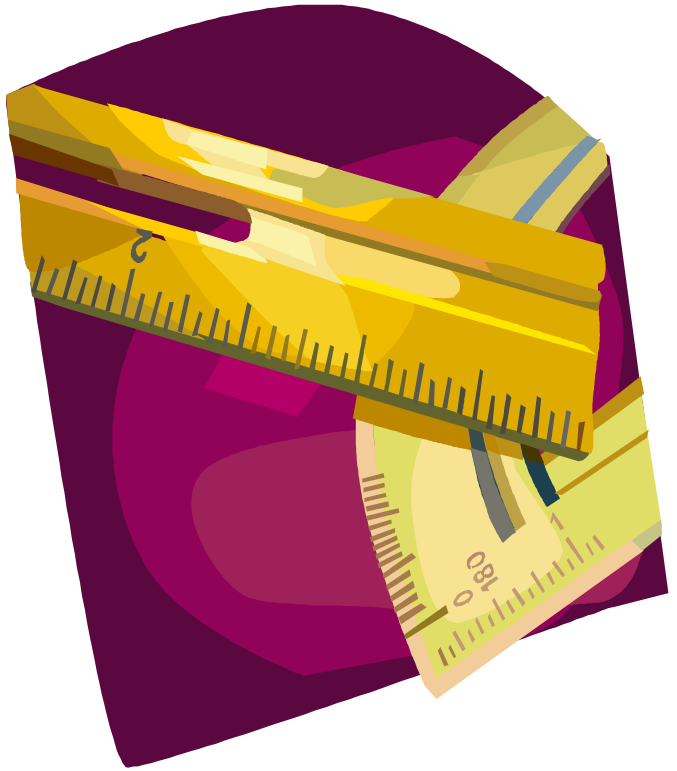
- Prediction and goal setting
  - Without goal setting impossible to judge progress and determine effectiveness of intervention
  - Goal statements are based on baseline data
  - Written in specific and measurable terms

Tier III - Intensive

- Analysis of Assessment Plan
  - Goal setting options
    - Benchmark scores
    - Behavioral expectations
    - Realistic/ambitious growth rates

Tier III - Intensive

- With normative data goals can be extracted by using
  - Local norm
  - 25th percentile (Shinn)
- Benchmark data can also be used as goals



Tier III - Intensive

- Research on “meeting standard for behavior” indicates that a 75% level of performance can be used for non threatening behaviors
- For behaviors that are threatening or dangerous a 100% level of performance should be used

Tier III - Intensive

- For example a student that is exhibiting difficult maintaining attention to task, the intervention plan should be aimed at increasing his on task behavior to 75% of the time
- A student that displays dangerous behaviors should have an intervention plan that aims at increasing appropriate replacement behavior 100% of the time

Tier III - Intensive

- Growth Rate Calculations local norm data
  - Seasonal norm, subtract the earlier seasonal norm, and divide by ten (there are ten weeks between norming periods)
  - Gives you a growth expectancy for each week of school year
  - Multiply growth rate by accelerator (1.5 or 2.0) to obtain Targeted Growth Rate
  - Multiply TGR by number of intervention weeks and add to baseline to obtain goal
- Growth rate calculations benchmark data
  - Benchmark, subtract the earlier benchmark, and divide by 18 (there are 18 weeks between benchmark periods)
  - Gives you a growth expectancy for each week of school year
  - Multiply growth rate by accelerator (1.5 or 2.0) to obtain Targeted Growth Rate
  - Multiply TGR by number of intervention weeks and add to baseline to obtain goal

Natasha

- What are the significant findings?
  - Structured observations performed in the classroom during various times of the day and during different types of instruction revealed that Natasha was on task 85% of the time
  - A Conner's Rating Scale completed by the mother indicated no significant ratings in the home environment
  - Student interview revealed that Natasha realizes that she does not read as well as her peers
  - She reported that she can not complete assignments as quickly as her peers and that her AR books are not on same grade level

Natasha

- She also does not score as high on her AR tests
- She likes it when her mother reads to her because she understands things better, she wishes the teacher would do that too
- She likes math, it makes sense
- She does not like reading, science, or social studies – but if she is read to it is easier

Natasha

Skill	Nat's Score	WBP Score	Prof Score	Mean Score
Phonemes	92	43	50	64
Blends	17	13	20	38
Sight Words	80	74	84	99
Flu Pass	90	111	130	166

Natasha

- Analysis of Assessment Plan
  - Document baseline (median)
  - Document discrepancy between baseline and acceptable level of performance
  - Identify what hypothesis is supported
  - Make a goal/prediction statement
    - Specific change you expect to see
    - What is the goal – how was it established?
    - Short-term
    - Conditions to be met
  - What does it look like?

Development of the Intervention Plan

- In general, identify, based on data, interventions with highest likelihood of success
- Intervention involves explicit instruction and progress monitoring
- Intervention is not accommodations and modifications
- Decide roles, responsibilities, and timeline

Development of the Intervention Plan

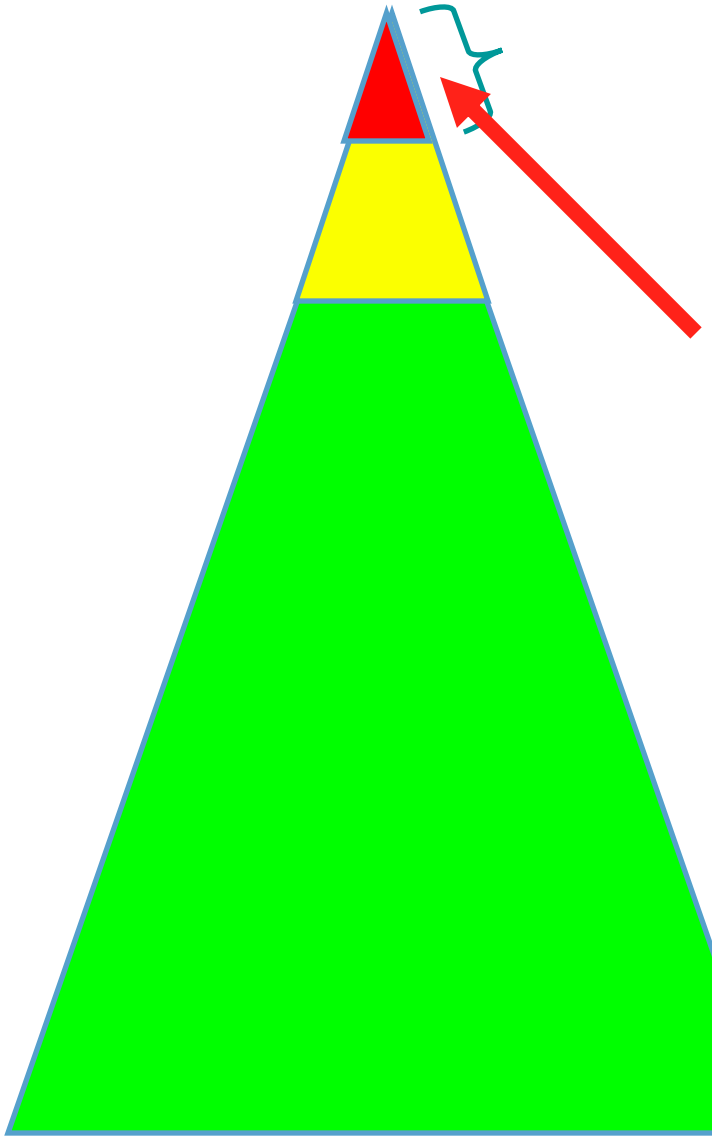
- Characteristics
  - Focus on modifying student's environment to improve performance – consider adjustments to time allocated to instruction, engagement time, questioning techniques, feedback, contingencies
  - Intervention and monitoring is continuation of hypothesis testing – there are no magic interventions, guaranteed to succeed – implement, monitor, adjust
  - Interventions need to be feasible – implementers must agree, understand, be committed, and possess the necessary skills
  - Team must share responsibility and accountability for outcome

Development of the Intervention Plan

- Develop intervention plan then consider
  - In what setting should the plan be implemented – what intensity does the student need?
  - Would it be best for this plan to be implemented on a differentiated instructional level, an entire classroom, an entire school building, power up, small group pullout, inclusion, etc

Development of Intervention Plan

- Procedures
  - Brainstorm interventions
  - Evaluate ideas – potential to succeed, ease of use, compatibility with existing programs and school schedule
  - Select intervention – focus on increasing positives, rather than decreasing negatives
  - Write action plan – identify roles and responsibilities, when, where, how, need for programs, progress monitoring, goals as a result of intervention
  - Implement the intervention – support interventionist, progress monitor, evaluate integrity of intervention, make adjustments



Tier III - Intensive

Corrective Reading (SRA)

Language! (Sopris West)

Wilson Reading System Reading Mastery

Earobics (phonics/phonemic awareness; Cognitive Concepts)

Great Leaps/ Read Naturally (Fluency)

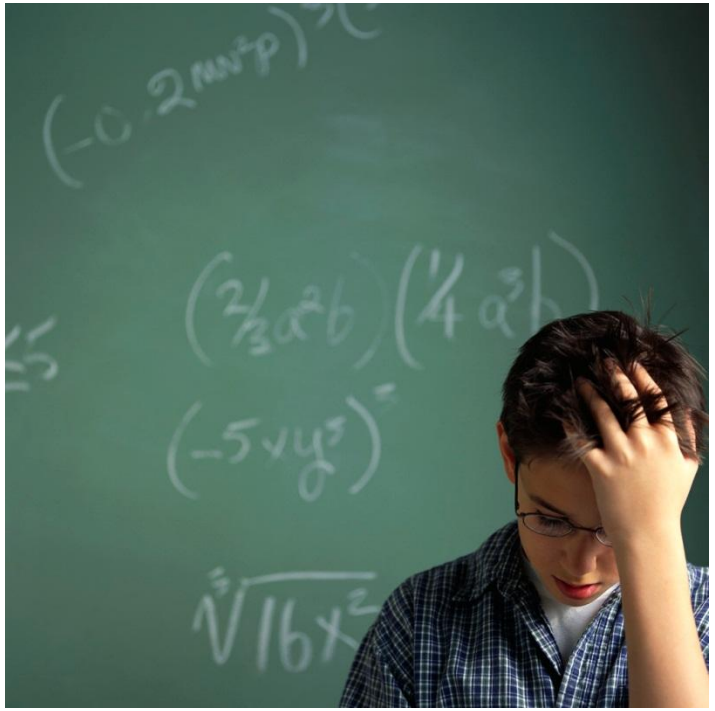
REWARDS (Fluency, Comp. and Vocab. in Plus Program)

Soar to Success (comp.)

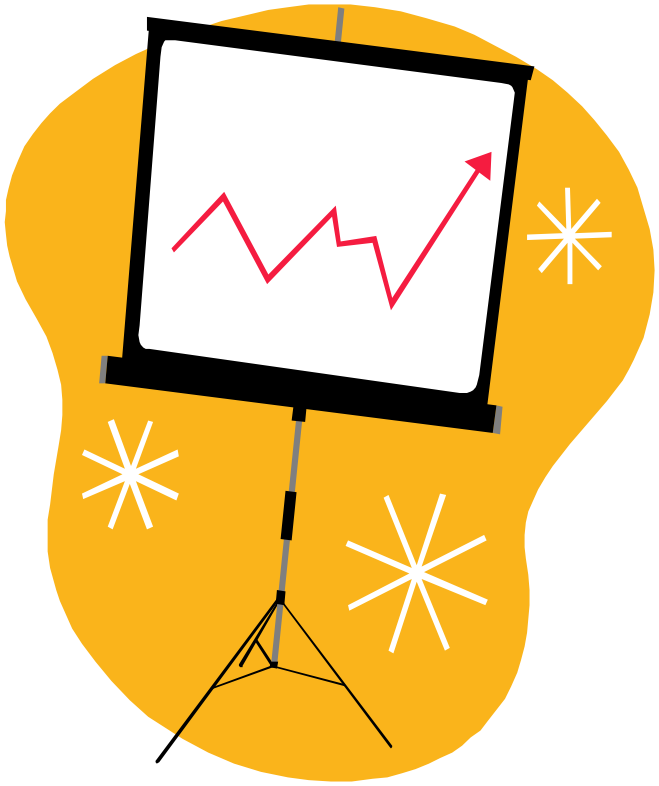
Reviewed by: Oregon Reading First
Comprehensive: Addressed all 5 areas and included at least grades K-3

Tier III - Intensive

- Intensive math intervention resources
  - V-Math
  - Number World
  - www.enumeracy.com
  - www.whatworks.ed.gov
  - www.interventioncentral.org



Tier III - Intensive



- Analysis of the Intervention Plan
  - Review progress monitoring data
  - Analyze progress towards goal as instruction occurs
  - Use decision making rules/trend lines to determine effectiveness of interventions
  - Make adjustments to interventions as needed

Tier IV – Special Education Services

- What is Tier IV?
- The concepts and principles of TIM and Formative Evaluation applied when providing special education services

Tier IV – Special Education Services

- Activities of Tier IV
  - Define the problem
    - Team identifies areas to be covered on IEP, intervention plan is the IEP
  - Progress monitoring data from previous Tier III becomes baseline data on IEP and/or additional data can be collected
  - IEP (intervention) is developed based on data collected
  - Progress monitoring occurs during implementation of specially designed instruction
  - Program modification or exit criteria are established
  - Short-term objectives, long-term objectives,

Tier IV – Special Education Services

- Keys questions that are asked to determine eligibility for specially designed instruction
  - Is student's educational progress (growth rate) less than what would be expected despite implementation of intensive research based intervention?
  - Is student's performance significantly less than that of his/her peers (local/state/national)?
  - Does student demonstrate a need for instruction at the highest level of intensity?
  - Is there an adverse impact on the educational performance?
  - What is the exit criteria for Tier IV?

Treatment Integrity

- Degree to which something is implemented as designed, intended, planned:
  - Delivery of instruction/intervention
  - Formative evaluation
- All involve multiple components
- Are they implemented with good fidelity?

Treatment Integrity

- Assessment Component One
  - Direct assessment of fidelity
    - Based on systematic observation of treatment implementation
    - Based on task analysis of *major* treatment components
    - Occurrence & nonoccurrence of each components implemented recorded

Treatment Integrity

- Assessment component two
  - Indirect assessment of treatment integrity
    - Self reports/self monitoring
    - Interviews
    - Behavior ratings by observers (Likert scales)
    - Permanent products
  - Performance feedback can be used to dramatically increase integrity (weekly/daily) (note Witt studies)

Treatment Integrity

- Assessment Component Two continued
  - Self-Reports/Self-Monitoring
    - Protocol defining components, activities
    - Checklist reflecting components, activities
    - Completed checklist
    - Gap analysis, comparing intended and actual

Treatment Integrity

- Assessment Component Two continued
  - Permanent products
    - Assessment results (CBM, behavior observation)
    - Videotapes of instructional sessions
    - Student work reflecting instructional elements
    - Graphs showing progress
    - Graphs showing application of formative evaluation rules

Integrity Computation

- Level of integrity calculated by computed percentage of components implemented
  - Using a variety of integrity measures each day
  - Trends can be analyzed by component, day of the week, staff member, etc

Example of Fidelity Monitoring Component and Daily Integrity (Reschly)

Component	Mon	Tues	Wed	Th	F	
1	X	X	X	0	X	80%
2	0	0	X	0	0	20%
3	X	X	X	X	X	100%
4	0	X	0	X	X	60%
5	X	X	0	X	0	60%
	60%	80%	60%	60%	60%	

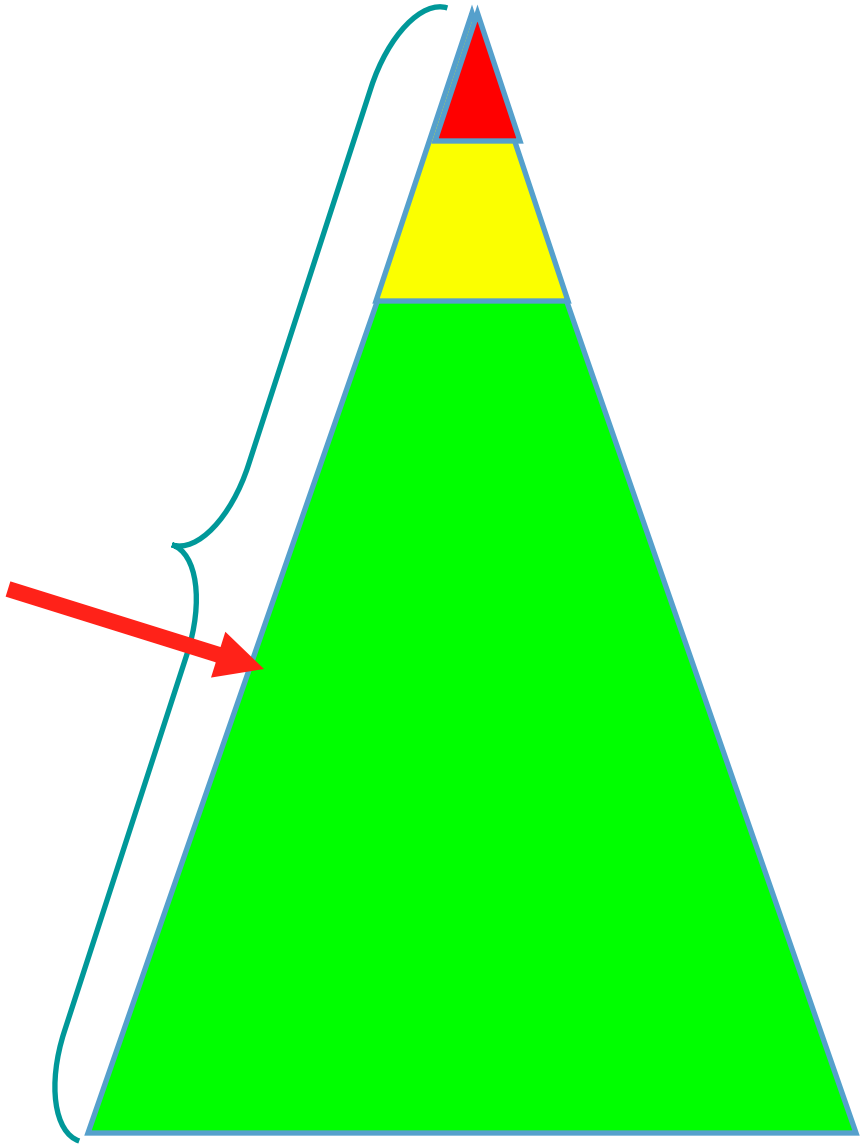
***M* = 64%**

Treatment Integrity

- District's treatment integrity system
  - Began RTI implementation in 2003
  - 37 schools total – 31 implementation sights (all elementary and middle schools)
  - Multidimensional integrity measurement system

Core Treatment Integrity Components

1. Definitive description of operations, techniques
2. Clear definitions of responsibilities by specific persons
3. Forms for documenting data indicative of fidelity of implementation
4. Systematic Observations – Fidelity checks with ratings
5. Performance feedback – formative evaluation, progress monitoring



Core Treatment Integrity Components

- Documentation of core intervention
  - Things to notice
    - Need for data
    - Components of PSM process
    - Log of intervention/differentiation
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Core Treatment Integrity Components

- Systematic Observations
  - Principal observations of intervention/ differentiation

- **Walk-through Checklist Observation**
- Date: _____
- Teacher: _____
- What are you learning? _____
- Why are you learning it? _____
- Lesson plans out? _____
- CITW technique used:
- Differentiation strategy used:

Effective Instruction

(Foorman et al., 2003; Foorman & Torgesen, 2001; Arrasmith, 2003; & Rosenshine, 1986)

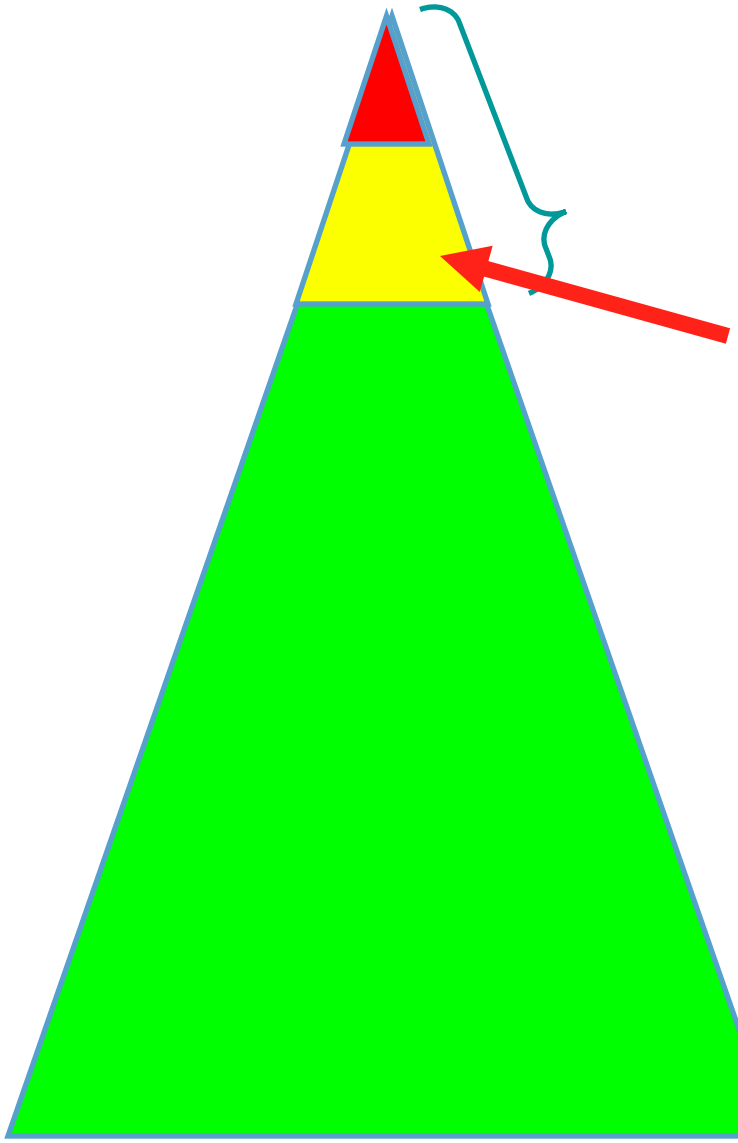
Characteristic	Guiding Questions	Well Met	Somewhat Met	Not Met
Goals and Objectives	Are the purpose and outcomes of instruction clearly evident in the lesson plans? Does the student understand the purpose for learning the skills and strategies taught?			
Explicit	Are directions clear, straightforward, unequivocal, without vagueness, need for implication, or ambiguity?			
Systematic	Are skills introduced in a specific and logical order, easier to more complex? Do the lesson activities support the sequence of instruction? Is there frequent and cumulative review?			
Scaffolding	Is there explicit use of prompts, cues, examples and encouragements to support the student? Are skills broken down into manageable steps when necessary?			
Corrective Feedback	Does the teacher provide students with corrective instruction offered during instruction and practice as necessary?			
Modeling	Are the skills and strategies included in instruction clearly demonstrated for the student?			
Guided Practice	Do students have sufficient opportunities to practice new skills and strategies with teacher present to provide support?			
Independent Application	Do students have sufficient opportunities to practice new skills independently?			
Pacing	Is the teacher familiar enough with the lesson to present it in an engaging manner? Does the pace allow for frequent student response? Does the pace maximize instructional time, leaving no down-time?			
Instructional Routine	Are the instructional formats consistent from lesson to lesson?			

Core Treatment Integrity Components

- Systematic Observations Continued
  - Problem Solving Model review team
    - ..\..\Desktop\RubricforFidelityinPSMImplementation.doc

Core Treatment Integrity Components

- Performance feedback, formative evaluation
  - DIBELS – MClass system



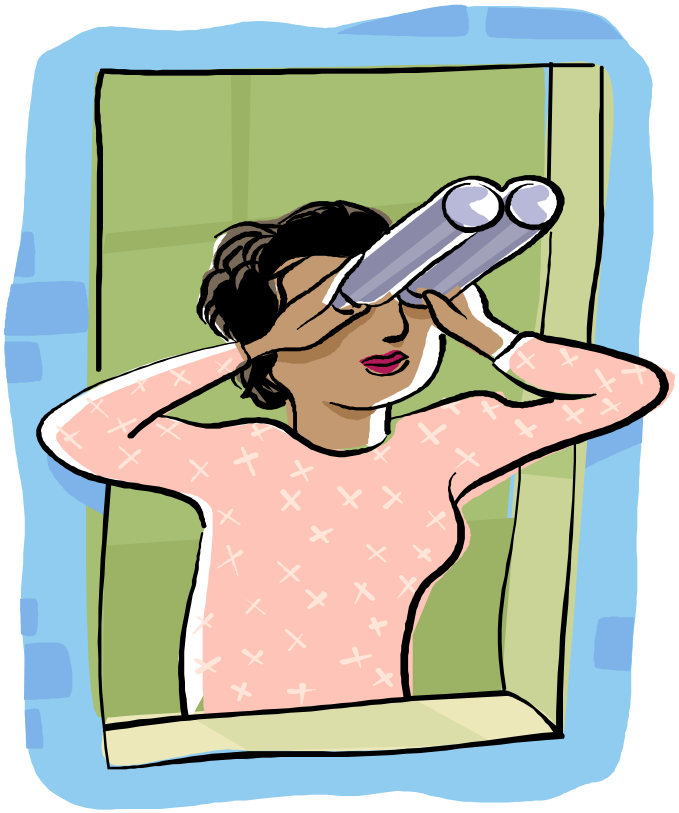
Strategic Treatment Integrity Components

1. Definitive description of operations, techniques
2. Clear definitions of responsibilities by specific persons
3. Forms for documenting data indicative of fidelity of implementation
4. Systematic Observations – Fidelity checks with ratings
5. Performance feedback – formative evaluation, progress monitoring
6. Intervention log
7. Progress monitoring log

Strategic Treatment Integrity Components

- Documentation of strategic intervention
  - Things to notice
    - Need for data
    - Log of intervention
- ..\..\Desktop\PSMpaperworkLevel1page1.pdf

Strategic Treatment Integrity Components



- Systematic Observations
  - Problem Solving Model review team
    - ..\..\Desktop\RubricforFidelityinPSMImplementation.doc

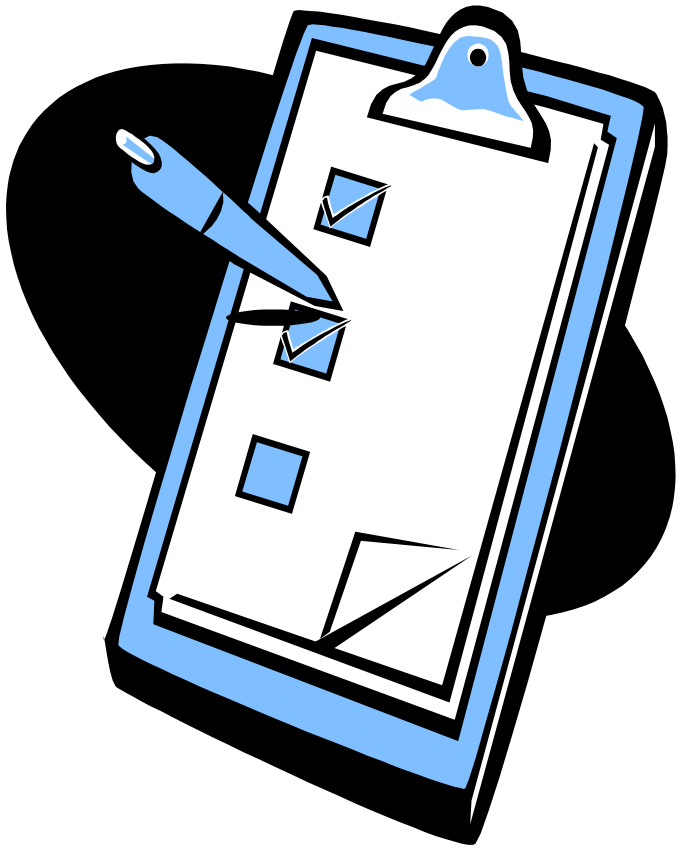
Strategic Treatment Integrity Components

- Systematic Observations Continued
  - Principal observations of intervention/ differentiation

- **Walk-through Checklist Observation**
- Date: _____
- Teacher: _____
- What are you learning? _____
- Why are you learning it? _____
- Lesson plans out? _____
- Explicit Instruction Components used
- Systematic Instruction Components used

Strategic Treatment Integrity Components

- Progress monitoring log (see next slide)
- Intervention log
  - Spectrum K-12 School Solutions – Exceed
  - Wireless Generation RTI
- Performance feedback, formative evaluation
  - DIBELS – MClass system



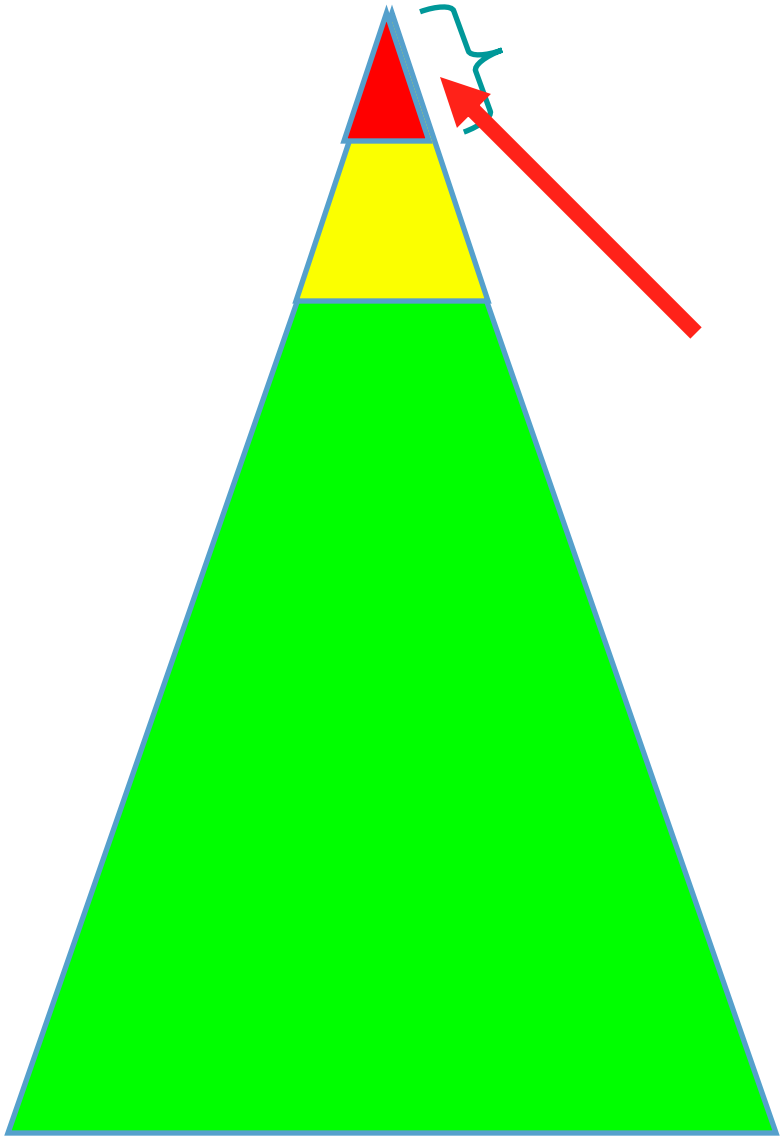
Progress Monitoring Sheet
Mary C. Williams Elementary

Student Name _____ **Grade** ____ **Teacher** _____ **Room** _____

Probe _____ Day 1 ____ Day 2 ____ Day 3 ____ Baseline ____

Time of Year _____ Mean ___ 25th % ___13th % ___ Goal _____ Goal Date _____

Date Completed	Completed By	# Correct	Comments



Intensive Treatment Integrity Components

1. Definitive description of operations, techniques
2. Clear definitions of responsibilities by specific persons
3. Forms for documenting data indicative of fidelity of implementation
4. Systematic Observations – Fidelity checks with ratings
5. Performance feedback – formative evaluation, progress monitoring
6. Intervention log
7. Progress monitoring log

Intensive Treatment Integrity Components

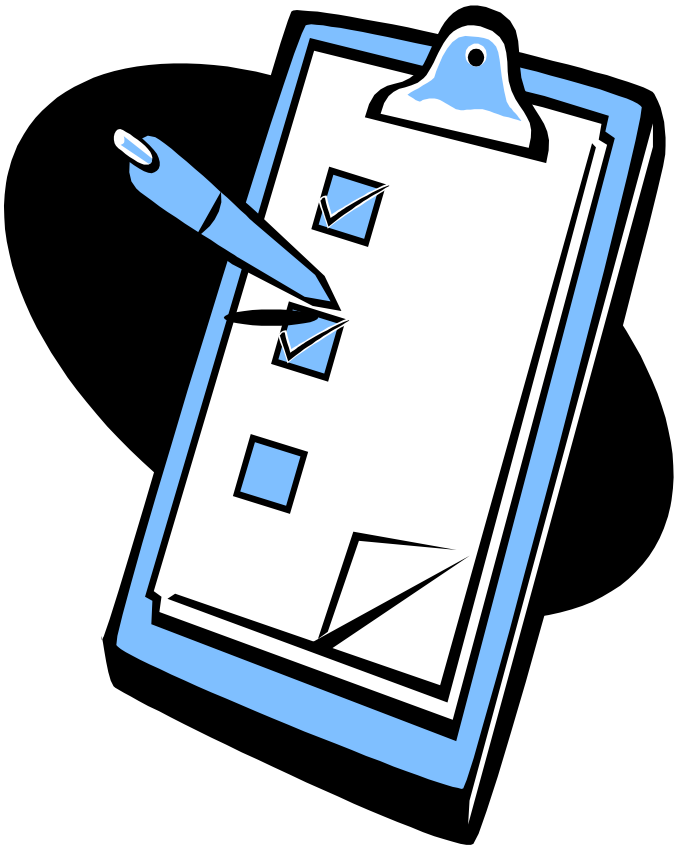
- Documentation of intensive intervention
  - Things to notice
    - Need for data
    - Documentation of PSM components
    - Documentation of roles and responsibilities
    - Log of intervention and intervention changes
    - E:\PSM Forms\PSM_level_III_Forms.doc

Intensive Treatment Integrity Components

- Systematic Observations
  - Principal observations of intervention
  - Entitlement Review Team
  - Problem Solving Model review team
    - ..\..\Desktop\RubricforFidelityinPSMImplementation.doc

Intensive Treatment Integrity Components

- Progress monitoring log (see next slide)
- Intervention log
  - Spectrum K-12 School Solutions – Exceed
  - Wireless Generation RTI
- Performance feedback, formative evaluation
  - Excel charting on school server
  - blankversion.xls



Progress Monitoring Sheet
Mary C. Williams Elementary

Student Name _____ **Grade** ____ **Teacher** _____ **Room** _____

Probe _____ Day 1 ____ Day 2 ____ Day 3 ____ Baseline ____

Time of Year _____ Mean ___ 25th % ___13th % ___ Goal _____ Goal Date _____

Date Completed	Completed By	# Correct	Comments

Fidelity Monitoring Component and Daily Integrity

	Mon	Tues	Wed	Th	F	
Paper work	X	X	X	X	X	100%
Principal observations	0	X	X	X	0	60%
Intervention log	0	X	X	X	0	60%
PM log	X	X	X	X	X	100%
Review Team	0	X	X	X	0	60%
	40%	100%	100%	100%	40%	

***M* = 76%**

Critical Components of Intervention Support

- Support for Intervention Integrity
- Documentation of Intervention Implementation
- Intervention and Eligibility decisions and outcomes cannot be supported in an RtI model without these two critical components

Questions?

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