

Response to Intervention/Multi-Tiered Systems of Support Problem-Solving in an RtI/MTSS Model

New York RtI Technical Assistance Center Webinar Series

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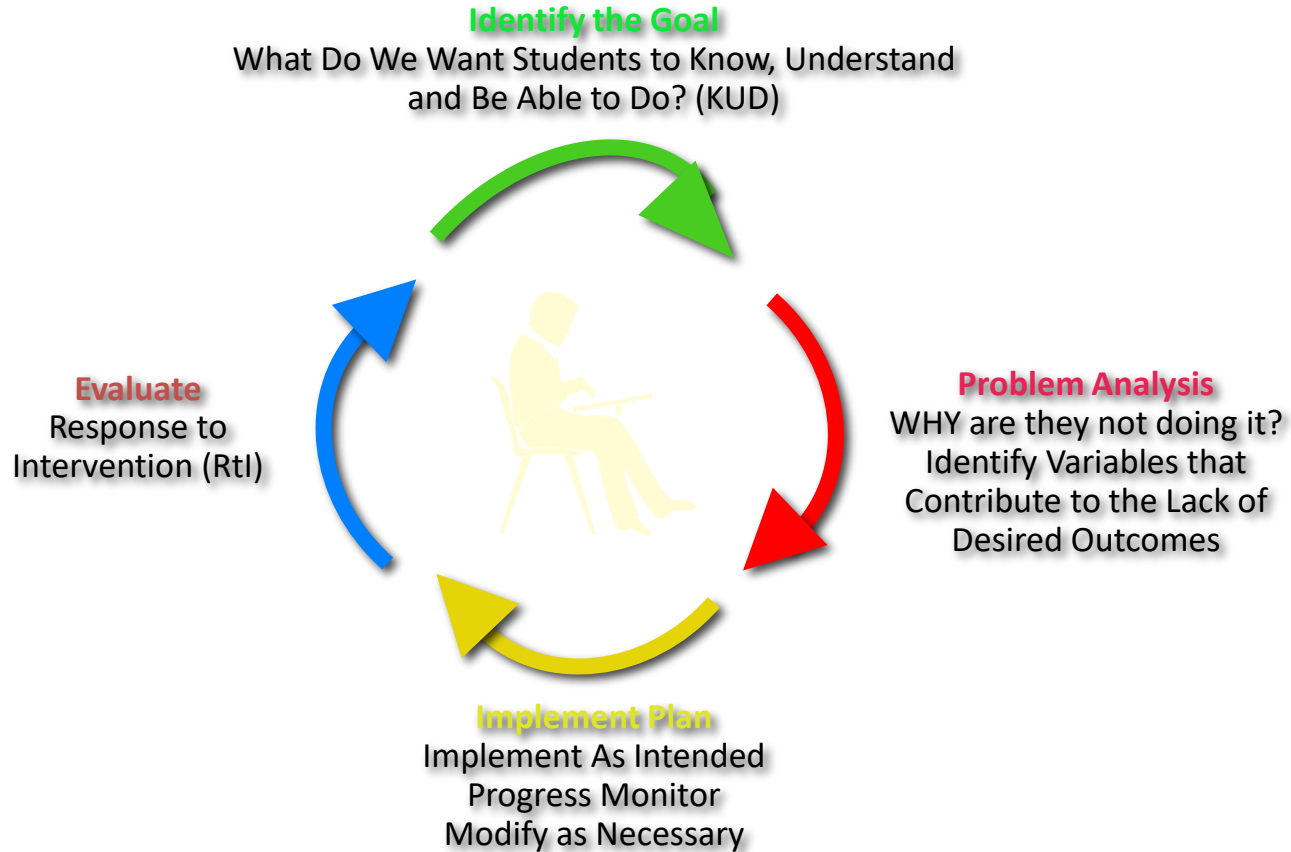


- Apply the problem-solving process to a high school case example
- Reflect on how my school/district is using the problem-solving process to improve student outcomes

Problem-Solving Process Training

High School Case Example

Problem Solving Process



Steps in the Problem-Solving Process

1. Problem Identification

- Identify replacement behavior
- Data- current level of performance
- Data- benchmark level(s)
- Data- peer performance
- Data- GAP analysis

2. Problem Analysis

- Develop hypotheses (brainstorming)
- Develop predictions/assessment

3. Intervention Development

- Develop interventions in those areas for which data are available and hypotheses verified
- Proximal/Distal
- Implementation support

4. Response to Intervention (RtI)

- Frequently collected data
- Type of Response- good, questionable, poor

Problem Solving Fidelity Protocol

Tier III Critical Components Checklist

School Name: _____ FL or District Student ID: _____

School Year: ☐ 2007-08 ☐ 2008-09 ☐ 2009-10 ☐ 2010-11 ☐ 2011-12

Date Initial Meeting Occurred: _____ Grade Level: _____

Area(s) of Concern (Check all that apply): ☐ Reading ☐ Math ☐ Behavior

Directions: For each selected student, please use the scale provided to indicate the extent to which each critical component of problem-solving is present in the Problem-Solving Team (i.e., Intervention Assistance Team, School-Based Intervention Team, Student Success Team, Child Study Team) paperwork. See the attached rubric for the criteria for determining the extent to which each critical component is present.

Component	0 = Absent 1 = Partially Present 2 = Present	Evidence/Comments
Problem Identification		
1. Replacement behavior (i.e., target skill) was identified	0 1 2	
2. Data were collected to determine the target student's current level of performance, the expected level, and peer performance	0 1 2	
3. A gap analysis between the student's current level of performance and the benchmark, and the peers' current level of performance (or adequate representation of peer performance) and the benchmark was conducted	0 1 2	
Problem Analysis		
4. Hypotheses were developed across multiple domains (e.g., curriculum, classroom, home/family, child, teacher, peers) or a functional analysis of behavior was completed	0 1 2	
5. Data were used to determine viable or active hypotheses for why students were not attaining benchmarks	0 1 2	
Intervention Development and Implementation		
6. A complete intervention plan (i.e., who, what, when) was developed in areas for which data were available and hypotheses were verified	0 1 2	
7. An intervention support plan was developed (including actions to be taken, who is responsible, and when the actions will occur)	0 1 2	
8. A plan for assessing intervention integrity (i.e., fidelity) was agreed upon	0 1 2	
9. Frequency, focus, dates of progress monitoring, and responsibilities for collecting the data were agreed upon	0 1 2	

Component	0 = Absent 1 = Partially Present 2 = Present	Evidence/Comments
10. Criteria for positive response to intervention were agreed upon prior to implementing the intervention plan	0 1 2	
11. A follow-up meeting was scheduled at the initial meeting	0 1 2	
Program Evaluation/RtI		
12. Progress monitoring data were collected and presented graphically	0 1 2	
13. Documentation of implementation of the intervention plan was presented	0 1 2	
14. A decision regarding good, questionable, or poor RtI was made	0 1 2	
15. A decision to continue, modify, or terminate the intervention plan was made	0 1 2	
16. An additional follow-up meeting was scheduled to re-address student progress at the follow-up meeting	0 1 2	

Additional Comments:

Using Data to Identify the Area of Concern

Mathematics

Total	925	742 80%	89 10%	94 10%
09	220	170 77%	23 10%	27 12%
10	248	209 84%	21 8%	18 7%
11	228	169 74%	34 15%	25 11%
12	229	194 85%	11 5%	24 10%

Problem Identification

27 students become off-track in 9th grade due to Math failures. The mathematics content area resulted in the greatest percent of course failures for 9th grade students.

Steps in the Problem Solving Process

Step 1

Goal Identification

Estimating Goal Attainment

Steps in the Problem-Solving Process

1. Goal Identification

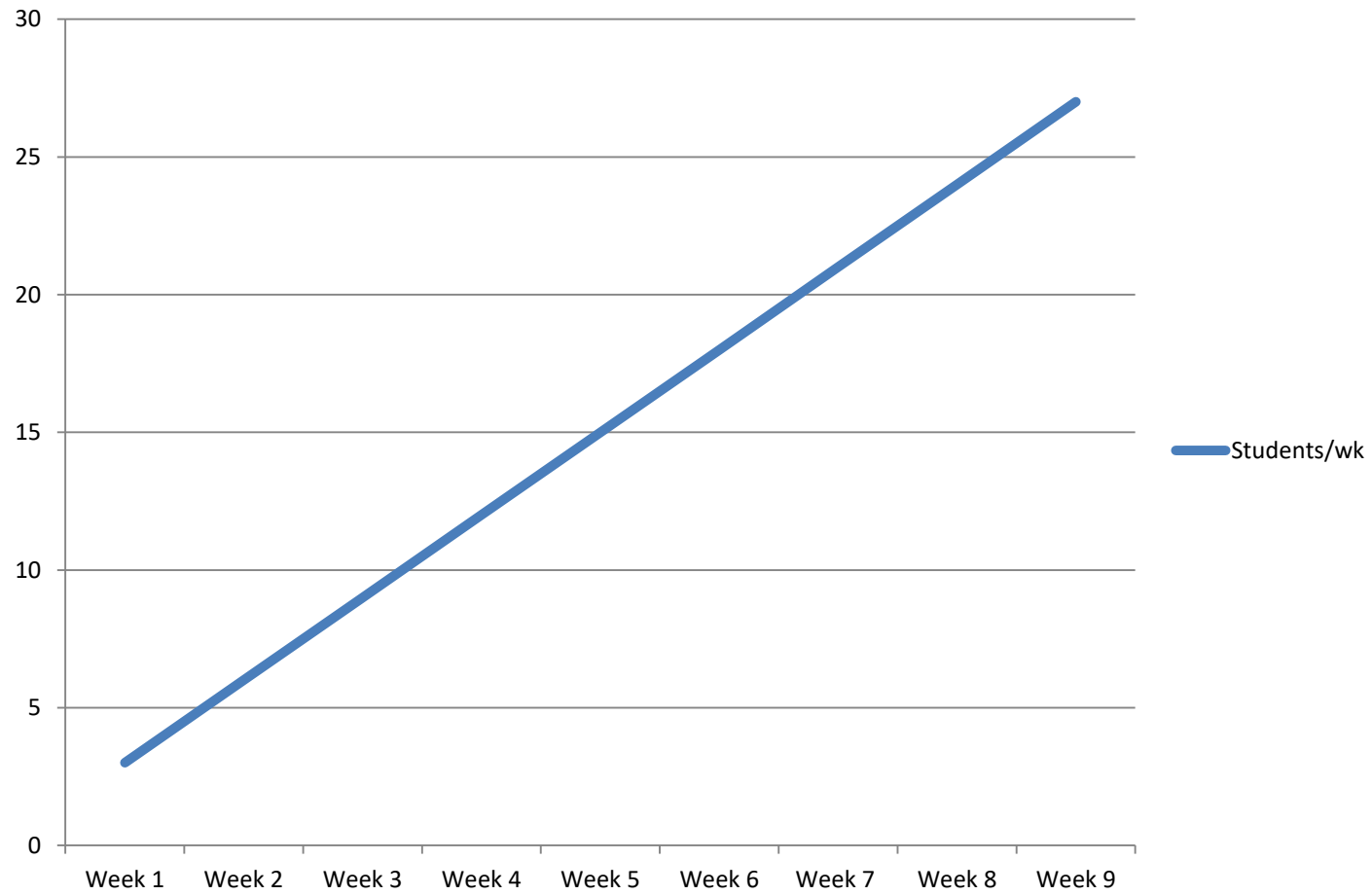
- Identify replacement behavior
 - Pass math in 9th grade
- Data- current level of performance
 - 193 are passing math 27 are not passing
- Data- benchmark (desired) level(s)
 - 220
- Data- peer performance
 - 193/220 passing
- Data- GAP analysis
 - 27 students

Data-Based Determination of Expectations

Math 9

- Current- 27 Students Failing
- Benchmark Level- 0 Failing
- Date- Want all passing within 9 weeks.
- Calculate-
 - Difference between current and benchmark level-
 $220-193=27$
 - Divide by # Weeks- 9
 - Result: # of student increased passing - 3 per week
in order to hit the goal of 27 in 9 weeks.

Students Passing Per Week Starting with 0/27 Total/9th Math



MASHPEE PUBLIC SCHOOLS—Problem-Solving Protocol 9/2016

School: _____	Grade-Level: _____	Date: _____
FOCUS(Group/Student): _____ (Parent Notified: When: _____ By Whom: _____)		
Initiator of this Form: _____ Attendees: _____		
Facilitator: _____ Time-Keeper: _____ Note-Taker: _____		

Step 1: Define the Problem. Identify the Goal (What is the goal?)

Identify initial concern (What data raised concerns?)	
Using data, what is the current level of performance?	
Using data, what is the benchmark level?	
Using data, what is the peer performance?	
What is the gap?	
GOAL:	

Step 2: Problem Analysis (Why is the goal not occurring?)

Generate multiple hypotheses addressing why the goal is not occurring.

HYPOTHESIS #1	The goal is not occurring because . . .
I C E L <small>Instruction, Curriculum, Environment, Learner</small>	
Prediction If..., then...	
Relevant Data R I O T <small>Review, Interview, Observe, Test</small>	
Validated? Yes/No	

Mashpee Public Schools—Problem-Solving Protocol

School: _____ Grade-Level: _____ Date: _____
FOCUS(Group/Student): _____ (Parent Notified: When: _____ By Whom: _____)
Initiator of this Form: _____ Attendees: _____

Step 1: Define the Problem. Identify the Goal (*What is the goal?*)

GOAL:

Identify initial concern (What data raised concerns?)	
What is the desired replacement behavior?	
Using data, what is the current level of performance?	
Using data, what is the benchmark level?	
Using data, what is the peer performance?	
What is the gap?	

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MTSS Problem-Solving Protocol

for Instructional Leadership Teams

The purpose of this protocol is to support systemic problem solving to address behavior and/or academic challenges at the school-, grade-, or subject-level.

Step 1: Define the Problem/Identify Goal (*What is the problem?*)

Identify initial concern <i>What data raised concerns?</i>	The 9 th grade math team reviewed the first 9-week period grades. Although 77% of the students received A, B or C grades, 10% received D grades and 12% received F grades. Because the material increases in difficulty as the year moves along and skills lost early will have a lasting and more negative impact if these students do not improve their performance, the team determined that urgent problem-solving was necessary to turn this around as soon as possible.
Expected behavior or level of performance <i>What goals were identified for the population of concern?</i>	The 9 th grade math team wanted all 27 students to receive passing grades at the end of the 2 nd 9 week grading period. The team decided to focus on expecting 3 students each week to move their performance to a passing level. This rate of improvement would predict that all 27 students would be passing within the 9-week time frame. It was expected that some students would respond more quickly than others. Some would take longer to move to a passing level.
Identified problem in terms of the gap in expected performance <i>Be specific. Include where, when, who,</i>	193 students are passing/27 are not passing. These 27 students will be targeted for problem-solving and provided with grade reports each week indicating what grade each would receive based on that week's

Your Turn 😊

English	Total	867	714 82%	64 7%	89 10%
	09	223	180 81%	9 4%	34 15%
	10	240	196 82%	18 8%	26 11%
	11	200	173 87%	15 8%	12 6%
	12	204	165 81%	22 11%	17 8%

34 of 223 9th Graders are Failing
English at the End of the First 9-
Week Grading Period

Steps in the Problem-Solving Process

1. Goal Identification

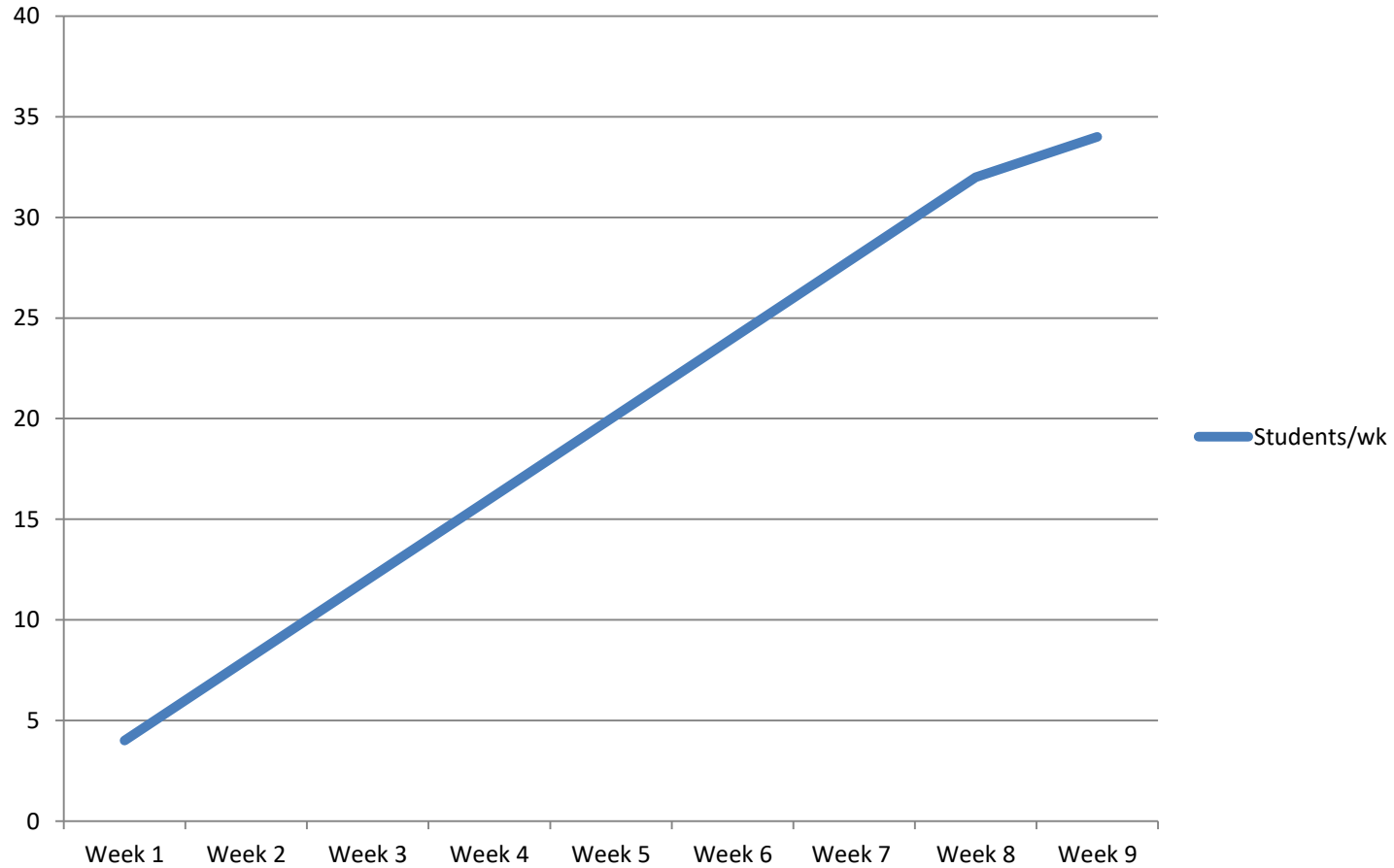
- Identify replacement behavior
 - _____
- Data- current level of performance
 - _____
- Data- benchmark (desired) level(s)
 - _____
- Data- peer performance
 - _____
- Data- GAP analysis
 - _____

Data-Based Determination of Expectations

English 9

- Current- 34 Students Failing
- Benchmark Level- 0 Failing
- Date- ? weeks
- Calculate-
 - Difference between current and benchmark level- ?
 - Divide by # Weeks- ?
 - Result: # of student increased passing - ? per week

Students Passing Per Week Starting with 0/34 Total/English



Problem Solving Documentation Protocol

Steps in the Problem Solving Process

Step 2

Problem Analysis

Hypotheses, Predictions and
Assessment



Step 2 Problem Analysis

(Why is it occurring?)

- Develop root cause hypotheses
- Using data validate or invalidate hypotheses

Developing a Hypothesis: Things to Consider

- A hypothesis is an explanation for what the data and your experience tell you.
- Data can only give part of the picture.
- An **accurate hypothesis** is crucial to designing solutions that will be effective.

Developing a Hypothesis involves...

- **Answering:** Why isn't the goal being attained?
- **Identifying** possible root causes
- **Analyzing** and **validating** supplemental data to support or refute each hypothesis



Developing a Hypothesis

Developing informed statements about why the desired behavior(s) are not occurring.

Example:

The (desired behavior) is not occurring because...

27 students are not passing Math I because...

Hypothesis / Prediction Statement

The desired behavior is not occurring because

_____.

**(27 students are not passing Math I because...
they lack basic arithmetic skills.)**

If _____ would occur, then the
desired behavior would occur.

**(If students were fluent in basic math facts,
then they would more likely pass Math I.)**

Testing Hypotheses using...

ICEL by RIOT Matrix

Develop Hypothesis: ICEL

- We must ask questions to form a hypothesis regarding “What is the goal not being attained? Why is the goal not being attained?”
- We ask questions across four domains.



Problem-Solving using the ICEL/RIOT Matrix

Domain		Variables	Review	Interview	Observe	Test
Instruction	<p>Instruction is how curriculum is taught. How content is presented to students can vary in many different ways: Level of Instruction Rate of Instruction Presentation of Instruction</p> <p>Is the curriculum being differentiated to meet the needs of the learners?</p> <p>Consider:</p> <ul style="list-style-type: none"> instructional techniques presentation style clarity of instruction questioning feedback technique cooperative learning use of graphic organizers instructional conversations development of academic language/ vocabulary 	<p>Group/System</p> <ul style="list-style-type: none"> Instructional decision making regarding selection and use of materials Use of progress monitoring Explicit Instruction Differentiated Instruction Sequencing of lesson designs to promote success Use of a variety of practice and application activities Pace and presentation of new content Block of time allotted per subject <p>Individual</p> <ul style="list-style-type: none"> Instructional decision making regarding placement of the student in groups Use of progress monitoring Communication of expectations and criteria for success Differentiated Instruction Direct instruction with explanations and cues Use of a variety of practice and application activities Pace and presentation of new content 	<ul style="list-style-type: none"> Unit/Lessons Plans Permanent products (e.g. written pieces, worksheets, projects) for skill/degree of difficulty requirements Benchmarks / standards Assignments (calculate % of assign turned in, average amount-% of assignments completed), Length/time required to complete assignments 	<p>Stakeholders about:</p> <ul style="list-style-type: none"> Effective teaching practices Instructional decision making regarding choice of materials, placement of students, instructional strategies Sequencing/pacing of instruction Choice of screening, diagnostic and formative assessments Product methods (e.g. dictation, oral retell, paper pencil, projects) Grouping structures used Accommodations/ modifications used Reinforcement management/ engagement strategies Allowable repetition for mastery/ understanding Who is providing the supplemental/ intensive instruction Use of supportive technology Student/group performance compared to peers Patterns of performance errors/ behavior Setting(s) where behavior is problematic Significance of academic, speech, social, task or motor difficulties Onset and duration of problem Consistency from day to day, subject to subject Interference with personal, interpersonal, and academic adjustment Performance using different modes of expression (e.g. verbal, written, kinesthetic) Teacher perceptions/hypotheses regarding why the student is unable to demonstrate the desired behaviors- academic and/or behavioral Philosophical orientation of curriculum (e.g. whole language, phonics) Expectations of district for pacing/coverage of curriculum 	<ul style="list-style-type: none"> Teachers' instructional styles/preferred styles of presenting Clarity of instructions/ directions Effective teaching practices Communication of benchmarks/expectations and criteria for success How new information is presented Percent of time with direct instruction, whole group instruction, practice time, differentiated instruction, etc. How teachers gain/ maintain student attention Academic engaged time Transitions Large group instruction Small group instruction Independent work time Group work time Teachers use of positive reinforcement, student-teacher interaction quality/quantity, (use of direct observation protocols) Time on task External supports necessary to sustain engagement 	<p>Classroom environment survey</p> <p>Develop checklists on effective instruction</p> <p>"Things to Look For" and "Ask About"</p>

E

The schedule does not provide time/opportunity for practice and instruction necessary to “catch up”.

I

The instructional strategies do not emphasize explicit instructional strategies, content enhancement routines, sufficient feedback, guided instruction, or differentiation

E

Expectations (home/school community) for performance are low

C

Pacing is too fast, does not provide for sufficient student engagement. Materials are not aligned with standards, and instructional sequences are not sufficiently explicit and inconsistent across teachers.

Key Domains of Learning

I	Instruction	Instruction is <u>how</u> the curriculum is taught.
C	Curriculum	Curriculum refers to <u>what</u> is taught.
E	Environment	The environment is <u>where</u> the instruction takes place.
L	Learner	The learner is <u>who</u> is being taught.



Your Turn:

Developing Hypotheses

The desired behavior is not occurring because...

**27 students are not passing Math I
because...**



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Hypothesis

The problem is occurring because _____ .

**Brainstorm
hypotheses
and write on
stickies**

...s beco
...se fa
...a re
...cours

...k in 9th
...nathem
...greatest
...r 9th grad

students

ICEL Sort

Instruction	Curriculum	Environment	Learner
<p>Instruction is how curriculum is taught.</p> <p>How content is presented to students can vary in many different ways:</p> <ul style="list-style-type: none">• Level of instruction• Rate of instruction• Presentation of instruction <p>Is the curriculum being differentiated to meet the needs of the learners?</p> <p>Consider:</p> <ul style="list-style-type: none">• instructional techniques• presentation style• questioning• feedback technique• cooperative learning• use of graphic organizers• instructional conversations• development of academic language/ vocabulary	<p>Curriculum refers to what is taught.</p> <p>Scope and sequence would be included here as well as pacing within and between topics.</p> <p>Is curriculum appropriate for student?</p> <p>Consider:</p> <ul style="list-style-type: none">• sequencing of objectives• teaching methods• materials provided• difficulty• presentation• length• format• relevance	<p>The environment includes the classroom/school, family/community, and peers.</p> <p>How is the environment impacting learning?</p> <p>Consider:</p> <ul style="list-style-type: none">• what may distract or inhibit student learning• peers• home/family support• expectations• beliefs/attitudes• transience• attendance/tardies• class size	<p>The learner is who is being taught.</p> <p>This is the last domain that is considered and is only addressed when the curriculum and instruction are found to be appropriate and the environment is accommodating.</p> <p>Variables include motivation, attendance, prerequisite skills, organization/study habits, abilities, impairments, and history of instruction.</p>



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Hypothesis

The problem is occurring because _____ .

teacher and student relationships do not support or encourage participation or academic risks **E**

become far more successful in 9th mathematics
insufficient instruction is not maintaining high levels of student engagement
greatest for 9th grade

school-wide classroom behavior expectations are not well defined and taught **E**

students
excessive absenteeism during 1st period

E

teachers do not implement high yield instructional practices **I**

the grading policy is not implemented consistently in all classes **E**

Prioritizing Hypotheses

- You can't do them all at once
- Prioritize most critical
- Prioritize for the 'domino effect'

Step 2-Problem Analysis Hypotheses

Step 2: Problem Analysis (*Why is it occurring?*)

Generate multiple hypotheses addressing what you think is at the root of the identified issue.

Hypothesis sentence frame: *The problem is occurring because _____.*

HYPOTHESIS 1	<i>The difference between desired and current levels of performance in Math 1 exists because of excessive absences during Math classes.</i>
Prediction If, then...	<i>When students attend class at a much high rate then they will receive passing grades.</i>

Step 2-Problem Analysis

Hypotheses

Problem-Solving Protocol

HYPOTHESIS 2	<i>The difference between expected and current levels of performance exist because not enough time is allocated for the most effective instructional practices.</i>
Prediction If, then...	<i>If more time was spent during class time using instructional practices that had high rates of student engagement (modeled practice, guided practice with teacher support, guided practice with peer support) then student performance would improve</i>

Step 2-Problem Analysis

Hypotheses

HYPOTHESIS 3	<i>The difference between expected and current levels of performance exist because students do not believe that they are engaged by the types of instructional strategies used.</i>
Prediction If, then...	<i>When teachers use instructional strategies that engage students, then student performance will improve significantly.</i>

Step 2-Problem Analysis

Hypotheses

HYPOTHESIS 4	The difference between expected and current levels of performance in Common Core Math I exist because students who are failing complete less than 50% of their classwork and their homework.
Prediction If, then...	When struggling students (D or F) complete more that 80% of their homework and classwork, then they improve at least 1 letter grade. When struggling students (D or F) complete less than 50% of their homework they do not improve at least 1 letter grade.

Test and Validate Hypotheses

R	Review	Review of historical records and products
	and/or	
I	Interview	Interviews of key stakeholders
	and/or	
O	Observe	Observe performance in real time functional settings
	and/or	
T	Test	Test through careful use of appropriately matched measurement strategies/methods

Assessment Information

RIOT

Step 2: Problem Analysis (*Why is it occurring?*)

Generate multiple hypotheses addressing what you think is at the root of the identified issue.

Hypothesis sentence frame: *The problem is occurring because _____.*

HYPOTHESIS 1	<i>The difference between desired and current levels of performance in Math 1 exists because of excessive absences during Math classes.</i>
Prediction If, then...	<i>When students attend class at a much high rate then they will receive passing grades.</i>
Relevant Data R I O T	Compare grade distributions of students attending 95% of the time or more to the grade distributions of students attending 80-89%.

Step 2-Problem Analysis

Hypotheses

Problem-Solving Protocol

HYPOTHESIS 2	<i>The difference between expected and current levels of performance exist because not enough time is allocated for the most effective instructional practices.</i>
Prediction If, then...	<i>If more time was spent during class time using instructional practices that had high rates of student engagement (modeled practice, guided practice with teacher support, guided practice with peer support) then student performance would improve</i>

Assessment Information

RIOT

Problem-Solving Protocol

HYPOTHESIS 2	<i>The difference between expected and current levels of performance exist because not enough time is allocated for the most effective instructional practices.</i>
Prediction If, then...	<i>If more time was spent during class time using instructional practices that had high rates of student engagement (modeled practice, guided practice with teacher support, guided practice with peer support) then student performance would improve</i>
Relevant Data R I O T	<u>Observation</u> - collect data during walkthroughs to assess the types of instruction strategies used, what percent of the time they are used and the level of student engagement for each type of strategy.

Step 2-Problem Analysis

Hypotheses

HYPOTHESIS 3	<i>The difference between expected and current levels of performance exist because students do not believe that they are engaged by the types of instructional strategies used.</i>
Prediction If, then...	<i>When teachers use instructional strategies that engage students, then student performance will improve significantly.</i>

Assessment Information

RIOT

HYPOTHESIS 3	<i>The difference between expected and current levels of performance exist because students do not believe that they are engaged by the types of instructional strategies used.</i>
Prediction If, then...	<i>When teachers use instructional strategies that engage students, then student performance will improve significantly.</i>
Relevant Data R I O T	<u>Interview</u> - data will be collected from interviews with student focus groups designed to identify the types of instructional strategies that engage students the most.

Assessment Information

RIOT

HYPOTHESIS 4	The difference between expected and current levels of performance in Common Core Math I exist because students who are failing complete less than 50% of their classwork and their homework.
Prediction If, then...	When struggling students (D or F) complete more than 80% of their homework and classwork, then they improve at least 1 letter grade. When struggling students (D or F) complete less than 50% of their homework they do not improve at least 1 letter grade.

Assessment Information

RIOT

HYPOTHESIS 4	The difference between expected and current levels of performance in Common Core Math I exist because students who are failing complete less than 50% of their classwork and their homework.
Prediction If, then...	When struggling students (D or F) complete more that 80% of their homework and classwork, then they improve at least 1 letter grade. When struggling students (D or F) complete less than 50% of their homework they do not improve at least 1 letter grade.
Relevant Data R I O T	Review. Identify struggling students who complete less than 50%of their homework/classwork and students who complete more than 80%.

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ICEL by RIOT: Validating/Invalidating Hypothesis

Hypothesis 1:

The difference between expected and current levels of performance in Common Core Math I exists because of excessive absenteeism during 1st period.

Data: The average rate of attendance for students receiving A-C grades is 96%. The average rate of attendance for students receiving F grades is 94%. No difference exists.

Complete Step 2

Step 2: Problem Analysis (*Why is it occurring?*)

Generate multiple hypotheses addressing what you think is at the root of the identified issue.

Hypothesis sentence frame: *The problem is occurring because _____.*

HYPOTHESIS 1	<i>The difference between desired and current levels of performance in Math 1 exists because of excessive absences during Math classes.</i>
Prediction If, then...	<i>When students attend class at a much high rate then they will receive passing grades.</i>
Relevant Data R I O T	Compare grade distributions of students attending 95% of the time or more to the grade distributions of students attending 80-89%.
Validated? <i>Yes/No</i>	NO. A <u>Review</u> of the attendance and grade data indicated that the students receiving F grades had attendance patterns very similar to those students receiving A-C grades.

Assessment Information

RIOT

Problem-Solving Protocol

HYPOTHESIS 2	<i>The difference between expected and current levels of performance exist because not enough time is allocated for the most effective instructional practices.</i>
Prediction If, then...	<i>If more time was spent during class time using instructional practices that had high rates of student engagement (modeled practice, guided practice with teacher support, guided practice with peer support) then student performance would improve</i>
Relevant Data R I O T	<u>Observation</u> - collect data during walkthroughs to assess the types of instruction strategies used, what percent of the time they are used and the level of student engagement for each type of strategy.

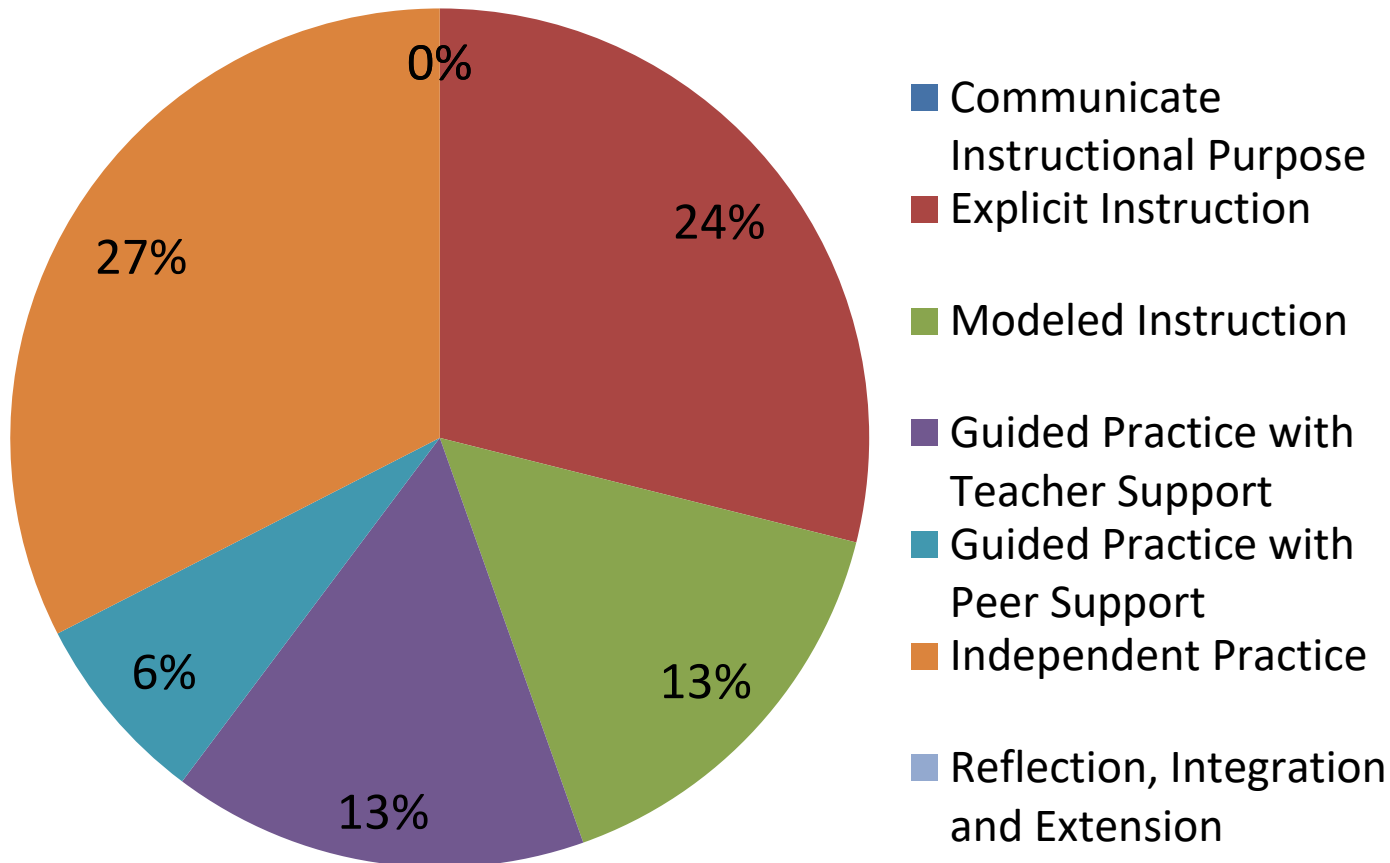


Model: Happy High School

OBSERVE: Conducted Walkthrough



Instruction Component: Percent of Intervals Observed



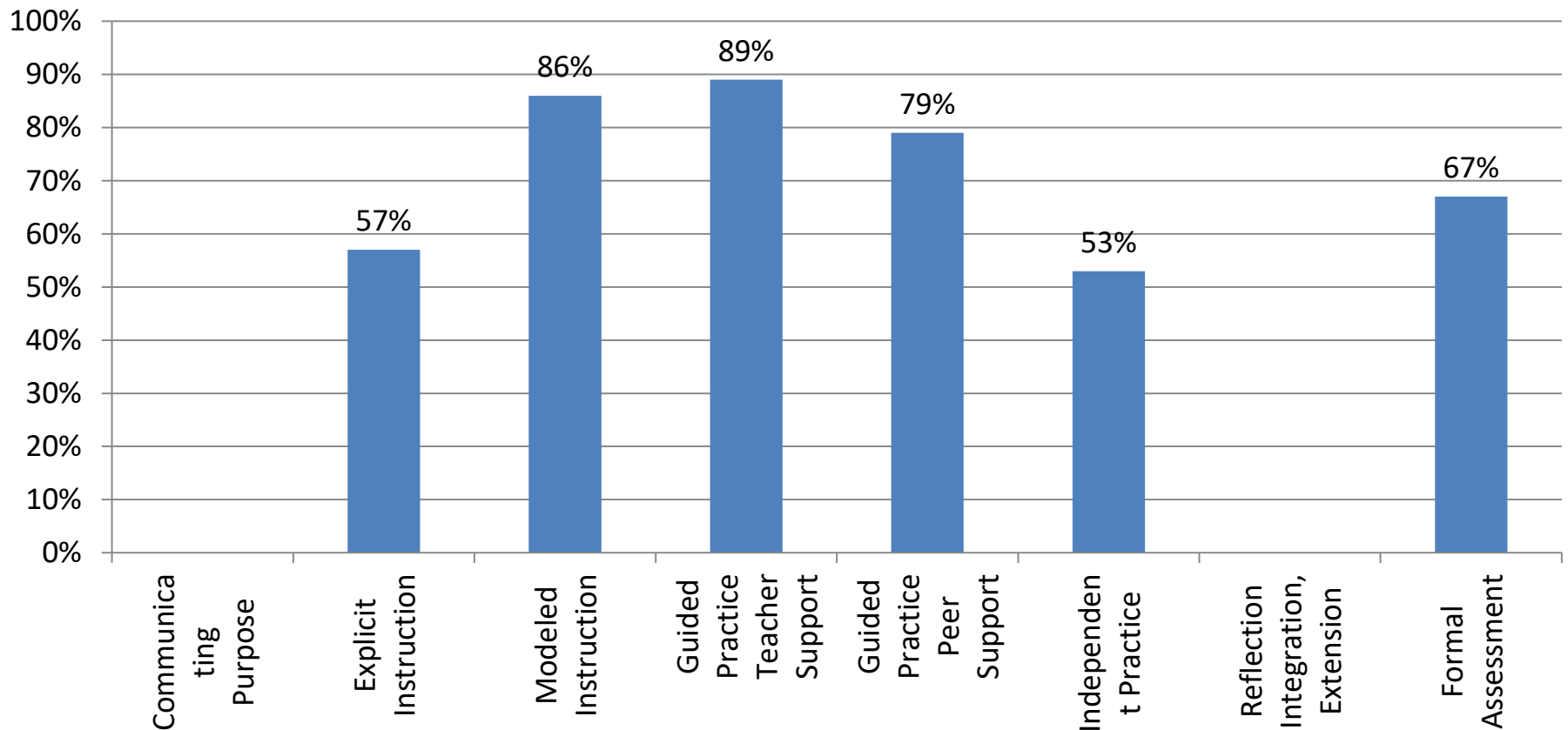


Model: Happy High School

OBSERVE: Walkthrough Data



Percent of Students Engaged by Instructional Component



Complete Step 2

Hypothesis 2

Problem-Solving Protocol

HYPOTHESIS 2	<i>The difference between expected and current levels of performance exist because not enough time is allocated for the most effective instructional practices.</i>
Prediction If, then...	<i>If more time was spent during class time using instructional practices that had high rates of student engagement (modeled practice, guided practice with teacher support, guided practice with peer support) then student performance would improve</i>
Relevant Data R I O T	Observation- collect data during walkthroughs to assess the types of instruction strategies used, what percent of the time they are used and the level of student engagement for each type of strategy.
Validated? <i>Yes/No</i>	YES. The types and times of instructional strategies vary significantly and the strategies with the greatest student engagement are used for lesser amounts of time.

Assessment Information

RIOT

HYPOTHESIS 3	<i>The difference between expected and current levels of performance exist because students do not believe that they are engaged by the types of instructional strategies used.</i>
Prediction If, then...	<i>When teachers use instructional strategies that engage students, then student performance will improve significantly.</i>
Relevant Data R I O T	<u>Interview</u> - data will be collected from interviews with student focus groups designed to identify the types of instructional strategies that engage students the most.

Interview-Student Focus Group

Focus Group Prompt: Describe your Algebra 1 Class. What is your class like?

High Performing Student Themes	At-Risk Student Themes
<ul style="list-style-type: none"> ▶ Class is “boring” ▶ Too much lecture (“teacher talks too much”) ▶ Too many “worksheets” and too much “busy work” 	<ul style="list-style-type: none"> ▶ Class is boring (“makes me want to put my head down and sleep”) ▶ Too much lecture (“teacher goes on and on without really saying anything”) ▶ Too much work for which they feel unprepared both in class and as homework (“my teacher doesn’t even explain it, she just hands us 50 problems to do and says ‘get to work’”) ▶ Uncomfortable asking teacher or peers for help (teachers sometimes say, “You should already know that”, “other kids laugh or make comments under their breath when you ask questions”) ▶ Reported higher performing students were favored (“teachers have favorites that get away with everything. They come to class late and mess around and nothing happens. If I did that I would be sent out”)

Focus Group Prompt: What changes could be made within your Algebra 1 class that would make students more interested in learning, more motivated to work hard, and more successful?”

High Performing Student Themes	At-Risk Student Themes
<ul style="list-style-type: none"> ▶ Less teacher talk ▶ More group work ▶ More frequent use of technology ▶ Academic games ▶ Opportunities to retake tests (“let us re-take tests if we didn’t get an A or a B”) 	<ul style="list-style-type: none"> ▶ Less teacher talk ▶ More modeling (“show us how to do a problem a bunch of times before making us do it on our own”) ▶ More guided practice (“have teachers watch their students do some problems and tell them what they are doing right and wrong”) ▶ Treat students more fairly (“don’t let some kids get away with everything when you won’t even answer my questions”) ▶ Teachers more supportive and encouraging (“don’t ask me why I came today and then tell me that I should have stayed home because I am going to fail anyway”) ▶ Answer student questions and appropriately respond to incomplete or incorrect answers (“answer my questions when I ask them instead of telling me to figure it out on my own”, “teachers shouldn’t roll their eyes or laugh or let other students laugh when someone answers a question wrong”)

Complete Step 2

Hypothesis 3

HYPOTHESIS 3	<i>The difference between expected and current levels of performance exist because students do not believe that they are engaged by the types of instructional strategies used.</i>
Prediction If, then...	<i>When teachers use instructional strategies that engage students, then student performance will improve significantly.</i>
Relevant Data R I O T	Interview- data will be collected from interviews with student focus groups designed to identify the types of instructional strategies that engage students the most.
Validated? Yes/No	YES. Data from the interviews revealed that student preferences for instructional strategies are not used sufficiently to sustain engagement.

Complete Step 2

Hypothesis 3

HYPOTHESIS 4	The difference between expected and current levels of performance in Common Core Math I exist because students who are failing complete less than 50% of their classwork and their homework.
Prediction If, then...	When struggling students (D or F) complete more that 80% of their homework and classwork, then they improve at least 1 letter grade. When struggling students (D or F) complete less than 50% of their homework they do not improve at least 1 letter grade.
Relevant Data R I O T	Review. Identify struggling students who complete less than 50%of their homework/classwork and students who complete more than 80%.

Student Survey Data: Productivity: The ILT collected survey data from all current students to better understand the barriers that impede productivity (work completion).

About how often do you not complete your classwork?

Almost Everyday	1-3 times a week	1-3 times a month	1-3 times a semester	I always complete my classwork
6%	11%	17%	12%	54%

When you do not complete your classwork, it is because...

I don't understand how to do it	I need my teacher to show me more examples of how to do it	I need my teacher to watch me work and correct my mistakes	The classwork is boring	It doesn't matter if I do my classwork, I will fail anyway
49%	23%	31%	39%	9%

About how often do you not complete your homework?

Almost Everyday	1-3 times a week	1-3 times a month	1-3 times a semester	I always complete my classwork
9%	16%	16%	13%	46%

When you do not complete your homework, it is because...

I don't understand how to do it	I don't have help to do it	I didn't write down the assignment correctly	I didn't bring home the right materials	No one is checking to see if I did my homework	I always complete my homework without trouble
66%	43%	12%	13%	3%	43%

Grade Book Data

	Less than 50% work comp	80% or more work comp
Grading Period 1-1 st half	D or F grade	NA
Grading Period 1-2 nd half	D or F grade	C or D Grade

Hypothesis 4

HYPOTHESIS 4	The difference between expected and current levels of performance in Common Core Math I exist because students who are failing complete less than 50% of their classwork and their homework.
Prediction If, then...	When struggling students (D or F) complete more that 80% of their homework and classwork, then they improve at least 1 letter grade. When struggling students (D or F) complete less than 50% of their homework they do not improve at least 1 letter grade.
Relevant Data R I O T	Review. Identify struggling students who complete less than 50%of their homework/classwork and students who complete more than 80%.
Validated? Yes/No	Yes. Evaluation of grade book data indicated clearly that completion of homework and classwork predicted an improvement in overall performance by at least 1 grading level.

ICEL by RIOT: Validating/Invalidating Hypothesis

- Hypothesis 1: **Invalidated**

The difference between desired and current levels of performance in Math 1 exists because of excessive absences during Math classes.

- Hypothesis 2: **Validated**

The difference between expected and current levels of performance exists because not enough time is allocated for the most effective instructional practices.

ICEL by RIOT: Validating/Invalidating Hypothesis

- Hypothesis 3: **Validated**

The difference between expected and current levels of performance exists because students do not believe that they are engaged by the types of instructional strategies used.

- Hypothesis 4: **Validated**

The difference between expected and current levels of performance exists because students are not completing sufficient amounts of homework and classwork.

Intervention Development and Implementation			
6. A complete intervention plan (i.e., who, what, when) was developed in areas for which data were available and hypotheses were verified	0	1	2
7. An intervention support plan was developed (including actions to be taken, who is responsible, and when the actions will occur)	0	1	2
8. A plan for assessing intervention integrity (i.e., fidelity) was agreed upon	0	1	2
9. Frequency, focus, dates of progress monitoring, and responsibilities for collecting the data were agreed upon	0	1	2

Component	0 = Absent 1 = Partially Present 2 = Present			Evidence/Comments
	0	1	2	
10. Criteria for positive response to intervention were agreed upon prior to implementing the intervention plan	0	1	2	
11. A follow-up meeting was scheduled at the initial meeting	0	1	2	

From Problem Analysis to Intervention

- Hypothesis 2: **Validated**

The difference between expected and current levels of performance exist because not enough time is allocated for the most effective instructional practices.

What type of intervention does this validated hypothesis suggest?

From Problem Analysis to Intervention

- Hypothesis 3: **Validated**

The difference between expected and current levels of performance exist because students do not believe that they are engaged by the types of instructional strategies used.

What type of intervention does this validated hypothesis suggest? Is it a separate intervention or another validation for Hypothesis 2?

From Problem Analysis to Intervention

- Hypothesis 4: **Validated**

The difference between expected and current levels of performance exists because students are not completing sufficient amounts of homework and classwork.

What type of intervention does this validated hypothesis suggest? Is it a separate intervention or another validation for Hypothesis 2?

Interventions

- **WHAT** will be done?
- **WHO** will do it?
- **WHEN** will it be implemented and for how long?
- **WHAT** data will be collected to monitor intervention on student performance
- **HOW** often will the data be reviewed?

Step 4

Response to Instruction

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

Decision Rules:

Linking Rtl 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 Rtl 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 Rtl 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)

Review/Evaluation of Progress (Date: _____) Data:		
Is the Response to Instruction/Intervention:	1. Positive	2. Questionable
3. Poor		
1. If Response to Instruction/Intervention is <i>POSITIVE</i>: A) Continue current instructional supports B) Adjust goal upward C) Fade supports Comments/Actions:		
2. If Response to Instruction/Intervention is <i>QUESTIONABLE</i>: Was the intervention/instruction implemented as planned? YES NO a. If NO — <u>What strategies will be utilized to increase implementation?</u> b. If YES — <u>Should intervention intensity be increased?</u> YES NO Comments/Actions:		
3. If Response to Instruction/Intervention is <i>POOR</i>: Was the intervention/instruction implemented as planned? YES NO a. If NO — <u>What strategies will be utilized to increase implementation?</u> b. If YES — <u>Was instruction/intervention aligned with the verified hypothesis, or is there other aligned instruction/intervention to consider?</u> c. <u>Are there other hypotheses to consider?</u> d. <u>Was the problem identified correctly?</u> Comments/Actions:		
		<div style="border: 1px solid black; padding: 5px;"> Schedule SLBT <input type="checkbox"/> Meeting <input type="checkbox"/> Date: _____ </div>