RTI: Academic Interventions for Difficult-to-Teach Students

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INTERVENTION CENTRAL

Workshop PPTs and Handout Available at:

http://www.interventioncentral.org/sdasp

Workshop Agenda

1. Academic Interventions: 'Big Ideas' and Critical Components

2. A Sampling of Reading, Math, and Writing Interventions

3. Accessing Free Internet Resources to Support Academic Interventions

"The quality of a school as a learning community can be measured by how effectively it addresses the needs of struggling students."

--Wright (2005)

Source: Wright, J. (2005, Summer). Five interventions that work. *NAESP Leadership Compass, 2(4) pp.1,6.*

Academic Interventions: 'Big Ideas' and Critical Components

RTI & Intervention: Key Concepts
p. 5

Core Instruction, *Interventions*, Accommodations & Modifications: Sorting Them Out

- **Core Instruction.** Those instructional strategies that are used routinely with all students in a general-education setting are considered 'core instruction'. High-quality instruction is essential and forms the foundation of RTI academic support. NOTE: While it is important to verify that good core instructional practices are in place for a struggling student, those routine practices do not 'count' as individual student interventions.

*Core Instruction, **Interventions***, Accommodations & Modifications: Sorting Them Out

- **Intervention.** An academic intervention is a strategy used to teach a new skill, build fluency in a skill, or encourage a child to apply an existing skill to new situations or settings. An intervention can be thought of as "a set of actions that, when taken, have demonstrated ability to change a fixed educational trajectory" (Methe & Riley-Tillman, 2008; p. 37).

Core Instruction, Interventions, Accommodations & Modifications: Sorting Them Out

- **Accommodation.** An accommodation is intended to help the student to fully access and participate in the general-education curriculum without changing the instructional content and without reducing the student's rate of learning (Skinner, Pappas & Davis, 2005). An accommodation is intended to remove barriers to learning while still expecting that students will master the same instructional content as their typical peers.
  - Accommodation example 1: Students are allowed to supplement silent reading of a novel by listening to the book on tape.
  - Accommodation example 2: For unmotivated students, the instructor breaks larger assignments into smaller 'chunks' and providing students with performance feedback and praise for each completed 'chunk' of assigned work (Skinner, Pappas & Davis, 2005).

> *"Teaching is giving; it isn't taking away."*
>
> *(Howell, Hosp & Kurns, 2008; p. 356).*

Source: Howell, K. W., Hosp, J. L., & Kurns, S. (2008). Best practices in curriculum-based evaluation. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp.349-362). Bethesda, MD: National Association of School Psychologists..

Core Instruction, Interventions, Accommodations & **Modifications**: Sorting Them Out

- **Modification.** A modification changes the expectations of what a student is expected to know or do in core instruction—typically by lowering the academic standards against which the student is to be evaluated.

  Examples of modifications:

  – Giving a student five math computation problems for practice instead of the 20 problems assigned to the rest of the class

  – Letting the student consult course notes during a test when peers are not permitted to do so

Big Ideas: The Four Stages of Learning Can Be Summed Up in the 'Instructional Hierarchy' pp. 10-11

(Haring et al., 1978)

Student learning can be thought of as a multi-stage process. The universal stages of learning include:

- Acquisition: The student is just acquiring the skill.
- Fluency: The student can perform the skill but must make that skill 'automatic'.
- Generalization: The student must perform the skill across situations or settings.
- Adaptation: The student confronts novel task demands that require that the student adapt a current skill to meet new requirements.

Source: Haring, N.G., Lovitt, T.C., Eaton, M.D., & Hansen, C.L. (1978). The fourth R: Research in the classroom. Columbus, OH: Charles E. Merrill Publishing Co.

Improving the Integrity of Academic Interventions Through a Critical-Components 'Pre-Flight' Check pp. 6-9

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Academic Interventions 'Critical Components' Checklist

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This checklist summarizes the essential components of academic interventions. When preparing a student's Tier 1, 2, or 3 academic intervention plan, use this document as a 'pre-flight checklist' to ensure that the academic intervention is of high quality, is sufficiently strong to address the identified student problem, is fully understood and supported by the teacher, and can be implemented with integrity. NOTE: While the checklist refers to the 'teacher' as the interventionist, it can also be used as a guide to ensure the quality of interventions implemented by non-instructional personnel, adult volunteers, parents, and peer (student) tutors.

Directions: When creating an academic intervention plan, review that plan by comparing it to each of the items below.

- If a particular intervention element is missing or needs to be reviewed, check the 'Critical Item?' column for that element.
- Write any important notes or questions in the 'Notes' column.

Allocating Sufficient Contact Time & Assuring Appropriate Student-Teacher Ratio

The cumulative time set aside for an intervention and the amount of direct teacher contact are two factors that help to determine that intervention's 'strength' (Yeaton & Bechrest, 1981).

Critical Item?	Intervention Element	Notes
☐	**Time Allocated.** The time set aside for the intervention is appropriate for the type and level of student problem (Burns & Gibbons, 2008; Kratochwill, Clements & Kalymon, 2007). When evaluating whether the amount of time allocated is adequate, consider: • Length of each intervention session. • Frequency of sessions (e.g., daily, 3 times per week) • Duration of intervention period (e.g., 6 instructional weeks)	
☐	**Student-Teacher Ratio.** The student receives sufficient contact from the teacher or other person delivering the intervention to make that intervention effective. NOTE: Generally, supplemental intervention groups should be limited to 6-7 students (Burns & Gibbons, 2008).	

Matching the Intervention to the Student Problem

Academic interventions are not selected at random. First, the student academic problem(s) is defined clearly and in detail. Then, the likely explanations for the academic problem(s) are identified to understand which intervention(s) are likely to help—and which should be avoided.

Critical Item?	Intervention Element	Notes
☐	**Problem Definition.** The student academic problem(s) to be addressed in the intervention are defined in clear, specific, measureable terms (Bergan, 1995; Witt, VanDerHeyden & Gilbertson, 2004). The full problem definition describes: • *Conditions.* Describe the environmental conditions or task demands in place when the academic problem is observed. • *Problem Description.* Describe the actual observable academic behavior in which the student is engaged. Include rate, accuracy, or other quantitative information of student performance. • *Typical or Expected Level of Performance.* Provide a typical or expected performance criterion for this skill or behavior. Typical or expected academic performance can be calculated using a variety of sources.	
☐	**Appropriate Target.** Selected intervention(s) are appropriate for the identified student problem(s) (Burns, VanDerHeyden & Boice, 2008). TIP: Use the Instructional Hierarchy (Haring et al., 1978) to select	

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Academic Problems: Sample Definitions		
Environmental Conditions or Task Demands	**Problem Description**	**Typical or Expected Level of Performance**
When given a passage from the 3rd grade reading series book…	…John reads 56 words per minutes…	… compared to DIBELS mid-year 3rd-grade benchmark norms of 78 words per minute.
On a math computation worksheet (double-digit times double-digit with no regrouping)…	…Ann computes 45 digits per minute…	…while peers in her 3rd grade compute an average of 67 correct digits.
During social studies large-group instruction…	…Franklin attends to instruction an average of 45% of the time…	… while peers in the same room attend to instruction an average of 85% of the time.
For science homework…	… Tye turns in assignments an average of 50% of the time…	… while the classroom median rate of homework turned in is 90%.
On weekly 30-minute in-class writing assignments…	… Angela produces compositions that average 145 words…	…while a sampling of peer compositions shows that the typical student writes an average of 254 words.

Matching the Intervention to the Student Problem (Cont.)

Critical Item?	Intervention Element	Notes
☐	**Appropriate Target.** Selected intervention(s) are appropriate for the identified student problem(s) (Burns, VanDerHeyden & Boice, 2008). TIP: Use the Instructional Hierarchy (Haring et al., 1978) to select academic interventions according to the four stages of learning: • *Acquisition*. The student has begun to learn how to complete the target skill correctly but is not yet accurate in the skill. Interventions should improve accuracy. • *Fluency*. The student is able to complete the target skill accurately but works slowly. Interventions should increase the student's speed of responding (fluency) as well as to maintain accuracy. • *Generalization*. The student may have acquired the target skill but does not typically use it in the full range of appropriate situations or settings. Or the student may confuse the target skill with 'similar' skills. Interventions should get the student to use the skill in the widest possible range of settings and situations, or to accurately discriminate between the target skill and 'similar' skills. • *Adaptation*. The student is not yet able to modify or adapt an existing skill to fit novel task-demands or situations. Interventions should help the student to identify key concepts or elements from previously learned skills that can be adapted to the new demands or situations.	

Matching the Intervention to the Student Problem (Cont.)

Critical Item?	Intervention Element	Notes
☐	**'Can't Do/Won't Do' Check.** The teacher has determined whether the student problem is primarily a skill or knowledge deficit ('can't do') or whether student motivation plays a main or supporting role in academic underperformance ('wont do'). If motivation appears to be a significant factor contributing to the problem, the intervention plan includes strategies to engage the student (e.g., high interest learning activities; rewards/incentives; increased student choice in academic assignments, etc.) (Skinner, Pappas & Davis, 2005; Witt, VanDerHeyden & Gilbertson, 2004).	

Activity: Matching the Intervention to the Student Problem

- Consider these critical aspects of academic intervention:
  - ❑ Clear and specific problem-identification statement (Conditions, Problem Description, Typical/Expected Level of Performance).
  - ❑ Appropriate intervention target (e.g., selected intervention is appropriately matched to Acquisition, Fluency, Generalization, or Adaptation phase of Instructional Hierarchy).
  - ❑ Can't Do/Won't Do Check (Clarification of whether motivation plays a significant role in student academic underperformance).
- Discuss what challenges might arise in applying any of these concepts when planning classroom interventions.

Incorporating Effective Instructional Elements

These effective 'building blocks' of instruction are well-known and well-supported by the research. They should be considered when selecting or creating any academic intervention.

Critical Item?	Intervention Element	Notes
☐	**Explicit Instruction.** Student skills have been broken down "into manageable and deliberately sequenced steps" and the teacher provided" overt strategies for students to learn and practice new skills" (Burns, VanDerHeyden & Boice, 2008, p.1153).	
☐	**Appropriate Level of Challenge.** The student experienced sufficient success in the academic task(s) to shape learning in the desired direction as well as to maintain student motivation (Burns, VanDerHeyden & Boice, 2008).	
☐	**Active Engagement.** The intervention ensures that the student is engaged in 'active accurate responding' (Skinner, Pappas & Davis, 2005).at a rate frequent enough to capture student attention and to optimize effective learning.	
☐	**Performance Feedback.** The student receives prompt performance feedback about the work completed (Burns, VanDerHeyden & Boice, 2008).	
☐	**Maintenance of Academic Standards.** If the intervention includes any accommodations to better support the struggling learner (e.g., preferential seating, breaking a longer assignment into smaller chunks), those accommodations do not substantially lower the academic standards against which the student is to be evaluated and are not likely to reduce the student's rate of learning (Skinner, Pappas & Davis, 2005).	

Verifying Teacher Understanding & Providing Teacher Support

The teacher is an active agent in the intervention, with primary responsibility for putting it into practice in a busy classroom. It is important, then, that the teacher fully understands how to do the intervention, believes that he or she can do it, and knows whom to seek out if there are problems with the intervention.

Critical Item?	Intervention Element	Notes
☐	**Teacher Responsibility.** The teacher understands his or her responsibility to implement the academic intervention(s) with integrity.	
☐	**Teacher Acceptability.** The teacher states that he or she finds the academic intervention feasible and acceptable for the identified student problem.	
☐	**Step-by-Step Intervention Script.** The essential steps of the intervention are written as an 'intervention script'--a series of clearly described steps—to ensure teacher understanding and make implementation easier (Hawkins, Morrison, Musti-Rao & Hawkins, 2008).	
☐	**Intervention Training.** If the teacher requires training to carry out the intervention, that training has been arranged.	
☐	**Intervention Elements: Negotiable vs. Non-Negotiable.** The teacher knows all of the steps of the intervention. Additionally, the teacher knows which of the intervention steps are 'non-negotiable' (they must be completed exactly as designed) and which are 'negotiable' (the teacher has some latitude in how to carry out those steps) (Hawkins, Morrison, Musti-Rao & Hawkins, 2008).	
☐	**Assistance With the Intervention.** If the intervention cannot be implemented as designed for any reason (e.g., student absence, lack of materials, etc.), the teacher knows how to get assistance quickly to either fix the problem(s) to the current intervention or to change the intervention.	

Documenting the Intervention & Collecting Data

Interventions only have meaning if they are done within a larger data-based context. For example, interventions that lack baseline data, goal(s) for improvement, and a progress-monitoring plan are 'fatally flawed' (Witt, VanDerHeyden & Gilbertson, 2004).

Critical Item?	Intervention Element	Notes
☐	**Intervention Documentation.** The teacher understands and can manage all documentation required for this intervention (e.g., maintaining a log of intervention sessions, etc.).	
☐	**Checkup Date.** Before the intervention begins, a future checkup date is selected to review the intervention to determine if it is successful. Time elapsing between the start of the intervention and the checkup date should be short enough to allow a timely review of the intervention but long enough to give the school sufficient time to judge with confidence whether the intervention worked.	
☐	**Baseline.** Before the intervention begins, the teacher has collected information about the student's baseline level of performance in the identified area(s) of academic concern (Witt, VanDerHeyden & Gilbertson, 2004).	
☐	**Goal.** Before the intervention begins, the teacher has set a specific goal for predicted student improvement to use as a minimum standard for success (Witt, VanDerHeyden & Gilbertson, 2004). The goal is the expected student outcome by the checkup date if the intervention is successful.	
☐	**Progress-Monitoring.** During the intervention, the teacher collects progress-monitoring data of sufficient quality and at a sufficient frequency to determine at the checkup date whether that intervention is successful (Witt, VanDerHeyden & Gilbertson, 2004).	

References

- Bergan, J. R. (1995). Evolution of a problem-solving model of consultation. *Journal of Educational and Psychological Consultation, 6(2),* 111-123.
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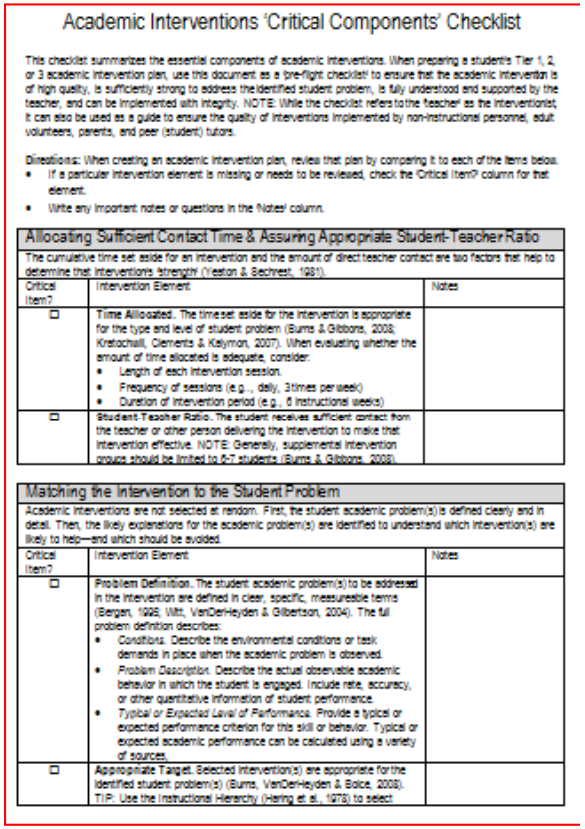
- Skinner, C. H., Pappas, D. N., & Davis, K. A. (2005). Enhancing academic engagement: Providing opportunities for responding and influencing students to choose to respond. *Psychology in the Schools, 42*, 389-403.
- Witt, J. C., VanDerHeyden, A. M., & Gilbertson, D. (2004). Troubleshooting behavioral interventions. A systematic process for finding and eliminating problems. *School Psychology Review, 33*, 363-383.
- Yeaton, W. M. & Sechrest, L. (1981). Critical dimensions in the choice and maintenance of successful treatments: Strength, integrity, and effectiveness. *Journal of Consulting and Clinical Psychology, 49*, 156-167.

Activity: Using the Academic Interventions 'Critical Components' Checklist

In your teams:

- Discuss the Academic Interventions 'Critical Components' Checklist.
- How might your school use this checklist to improve the quality of your building's interventions at Tiers 1, 2, and/or 3?



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RTI Challenge: Defining the Key Role of Classroom Teachers in RTI

The Key Role of Classroom Teachers as 'Interventionists' in RTI: 6 Steps

1. The teacher defines the student academic or behavioral problem clearly.
2. The teacher decides on the best explanation for why the problem is occurring.
3. The teacher selects 'evidence-based' interventions.
4. The teacher documents the student's Tier 1 intervention plan.
5. The teacher monitors the student's response (progress) to the intervention plan.
6. The teacher knows what the next steps are when a student fails to make adequate progress with Tier 1 interventions alone.

Tier 1 Case Example: Colin:
Letter Identification

AIMSweb Cut-Points: Using National Aggregate Sample

- **Low Risk:** At or above the 25th percentile: *Core instruction alone is sufficient for the student.*
- **Some Risk:** 10th to 24th percentile: *Student will benefit from additional intervention, which may be provided by the classroom teacher or other provider (e.g., reading teacher).*
- **At Risk:** Below 10th percentile : *Student requires intensive intervention, which may be provided by the classroom teacher or other provider (e.g., reading teacher).*

Case Example: Letter Naming

The Concern

- In a mid-year (Winter) school-wide screening for Letter Naming Fluency, a first-grade student new to the school, Colin, was found have moderate delays when compared to peers. In his school, Colin fell below the 25th percentile compared with peers (AIMSweb norms). According to the benchmark norms, a student at the 25th percentile should read at least 38 letters per minute. Colin was able to read only 27 letters per minute. (NOTE: These results place Colin between the 10th and 25th percentile, a mild level of deficit—'Some Risk'.)
- Screening results, therefore, suggested that Colin has problems with Letter Naming. However, more information is needed to better understand this student academic delay.

AIMSweb Letter Naming Fluency Norms: Gr 1 25th percentile for Winter Screening: 38 letters per minute

Colin's Performance: 27 letters per minute

AIMSweb® Growth Table
Letter Naming Fluency
Multi-Year Aggregate
2006-2007 School Year

		Fall		Winter		Spring		
Grade	Percentile	Num	LNC	Num	LNC	Num	LNC	ROI
1	90	77585	63	5047	74	3286	82	0.5
	75		53		63		70	0.5
	50		41		52		57	0.4
	25		29		38		43	0.4
	10		18		19		25	0.2
	Mean		41		49		55	
	StdDev		18		21		23	

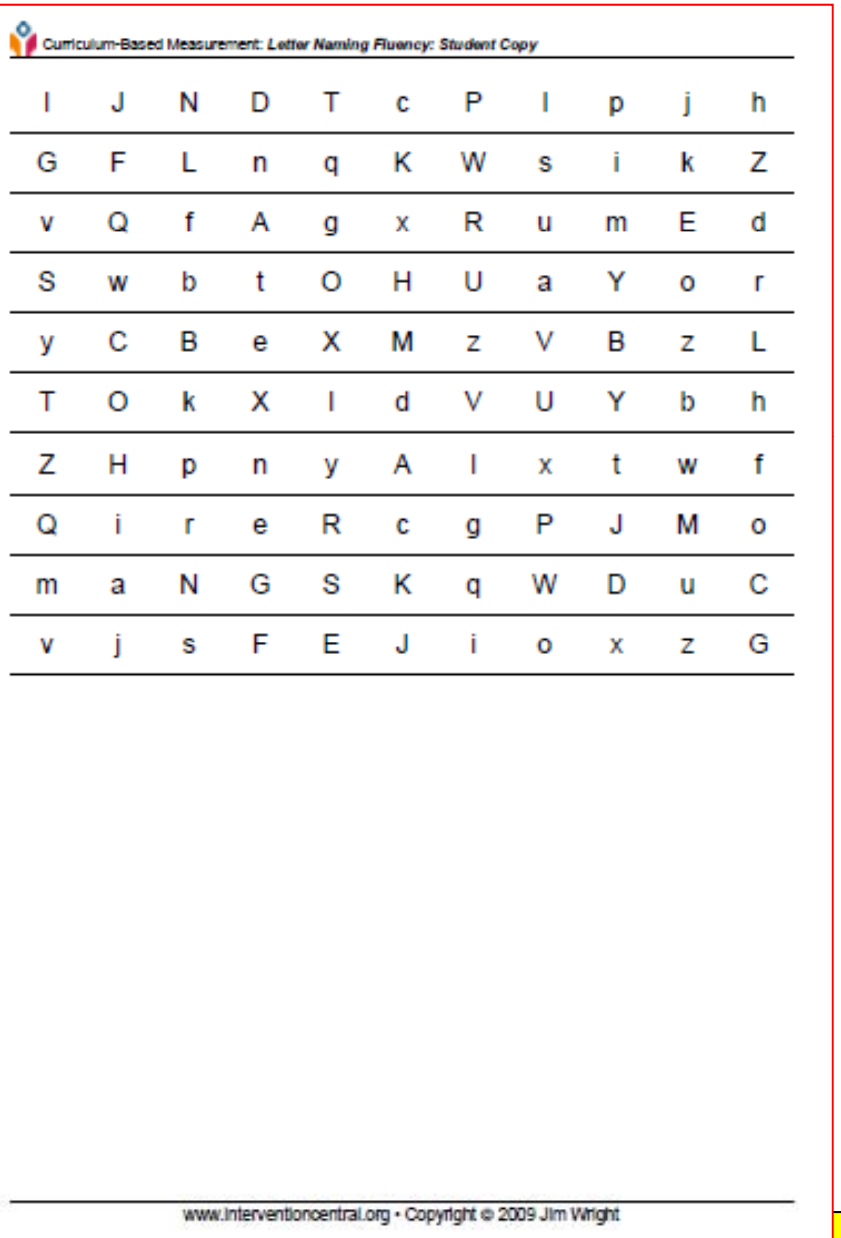
Case Example: Letter Naming

Instructional Assessment

- Colin's teacher, Ms. Tessia, sat with him and checked his letter knowledge. She discovered that, at baseline, Colin knew 23 lower-case letters and 19 upper-case letters. (Ms. Tessia defined 'knows a letter" as: "When shown the letter, the student can correctly give the name of the letter within 3 seconds.")
- Based on her findings, Ms. Tessia decided that Colin was still acquiring skill at letter names. He needed direct-teaching activities to learn to identify all of the letters.

Case Example: Letter Naming

Created at www.interventioncentral.org



Curriculum-Based Measurement: *Letter Naming Fluency: Student Copy*

I	J	N	D	T	c	P	l	p	j	h
G	F	L	n	q	K	W	s	i	k	Z
v	Q	f	A	g	x	R	u	m	E	d
S	w	b	t	O	H	U	a	Y	o	r
y	C	B	e	X	M	z	V	B	z	L
T	O	k	X	l	d	V	U	Y	b	h
Z	H	p	n	y	A	l	x	t	w	f
Q	i	r	e	R	c	g	P	J	M	o
m	a	N	G	S	K	q	W	D	u	C
v	j	s	F	E	J	i	o	x	z	G

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Case Example: Letter Naming

Intervention

- Ms. Tessia decided to use 'incremental rehearsal' (Burns, 2005) as an intervention for Colin. This intervention benefits students who are still acquiring their math facts, sight words, or letters.

  Students start by reviewing a series of 'known' cards. Then the instructor adds 'unknown' items to the card pile one at a time, so that the student has a high ratio of known to unknown items. This strategy promotes near-errorless learning.
- Colin received this intervention daily, for 10 minutes.

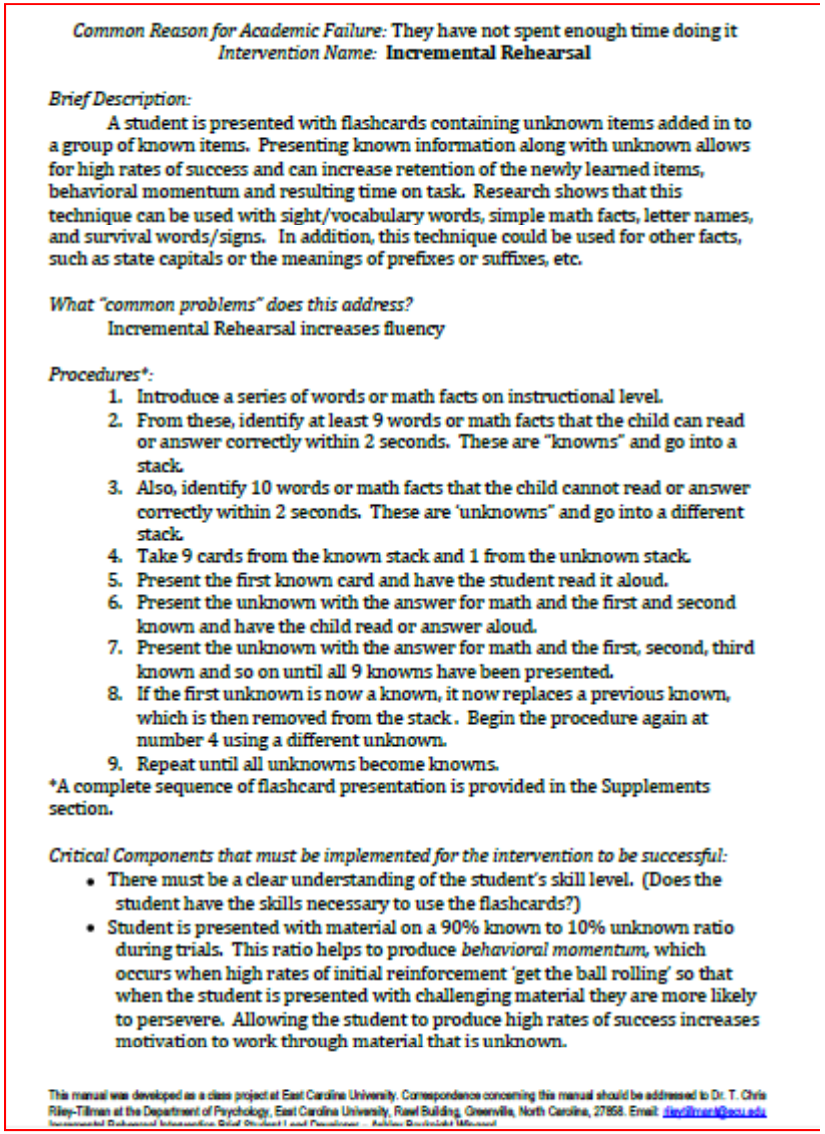
- NOTE: A paraprofessional, adult volunteer, or other non-instructional personnel can be trained to deliver this intervention.

Source: Burns, M. K. (2005). Using incremental rehearsal to increase fluency of single-digit multiplication facts with children identified as learning disabled in mathematics computation. Education and Treatment of Children, 28, 237-249.

East Carolina University Evidence-Based Intervention Project

http://ebi.missouri.edu/wp-content/uploads/2011/03/Incremental-Rehearsal-Intervention-Brief-2.pdf

Incremental Rehearsal Guidelines



Common Reason for Academic Failure: They have not spent enough time doing it
Intervention Name: **Incremental Rehearsal**

Brief Description:

A student is presented with flashcards containing unknown items added in to a group of known items. Presenting known information along with unknown allows for high rates of success and can increase retention of the newly learned items, behavioral momentum and resulting time on task. Research shows that this technique can be used with sight/vocabulary words, simple math facts, letter names, and survival words/signs. In addition, this technique could be used for other facts, such as state capitals or the meanings of prefixes or suffixes, etc.

What "common problems" does this address?

Incremental Rehearsal increases fluency

Procedures:*

1. Introduce a series of words or math facts on instructional level.
2. From these, identify at least 9 words or math facts that the child can read or answer correctly within 2 seconds. These are "knowns" and go into a stack.
3. Also, identify 10 words or math facts that the child cannot read or answer correctly within 2 seconds. These are 'unknowns" and go into a different stack.
4. Take 9 cards from the known stack and 1 from the unknown stack.
5. Present the first known card and have the student read it aloud.
6. Present the unknown with the answer for math and the first and second known and have the child read or answer aloud.
7. Present the unknown with the answer for math and the first, second, third known and so on until all 9 knowns have been presented.
8. If the first unknown is now a known, it now replaces a previous known, which is then removed from the stack. Begin the procedure again at number 4 using a different unknown.
9. Repeat until all unknowns become knowns.

*A complete sequence of flashcard presentation is provided in the Supplements section.

Critical Components that must be implemented for the intervention to be successful:

- There must be a clear understanding of the student's skill level. (Does the student have the skills necessary to use the flashcards?)
- Student is presented with material on a 90% known to 10% unknown ratio during trials. This ratio helps to produce *behavioral momentum*, which occurs when high rates of initial reinforcement 'get the ball rolling' so that when the student is presented with challenging material they are more likely to persevere. Allowing the student to produce high rates of success increases motivation to work through material that is unknown.

This manual was developed as a class project at East Carolina University. Correspondence concerning this manual should be addressed to Dr. T. Chris Riley-Tillman at the Department of Psychology, East Carolina University, Rawl Building, Greenville, North Carolina, 27858. Email: [illegible]

Classroom Intervention Planning Sheet

Teacher/Team: _____ Date: _____ Student: _____

Student Problem Definition #1: _____

Student Problem Definition #2: _____

[Optional] Person(s) assisting with intervention planning process: _____

Interventions: Essential Elements (Witt et al., 2004)
- Clear problem-definition(s)
- Baseline data
- Goal for improvement
- Progress-monitoring plan

Intervention Description	Intervention Delivery	Check-Up Date	Assessment Data
Describe each intervention that you plan to use to address the student's concern(s).	List key details about delivery of the intervention, such as:; (1) where & when the intervention will be used; (2) the adult-to-student ratio; (3) how frequently the intervention will take place; (4) the length of time each session of the intervention will last;.	Select a date when the data will be reviewed to evaluate the intervention.	Note what classroom data will be used to establish baseline , set a goal for improvement, and track the student's progress during this intervention.
pp. 2-4			Type(s) of Data to Be Used: Baseline | Goal by Check-Up
			Type(s) of Data to Be Used: Baseline | Goal by Check-Up
			Type(s) of Data to Be Used: Baseline | Goal by Check-Up

Witt, J. C., VanDerHeyden, A. M., & Gilbertson, D. (2004). Troubleshooting behavioral interventions. A systematic process for finding and eliminating problems. *School Psychology Review, 33*, 363-383.

Case Example: Letter Naming

Goal-Setting and Data Collection

- Ms. Tessia set the goals that, within 4 instructional weeks, Colin would:
  - identify all upper-case and lower-case letters.
  - move above the 25th percentile in Letter Naming Fluency when compared to grade-level peers (using the AIMSweb norms).
- The teacher collected two sources of data on the intervention:
  - At the end of each tutoring session, the tutor logged any additional formerly unknown letters that were now 'known' (that the student could now accurately identify within 3 seconds).
  - Each week, the teacher administered a one-minute timed Letter Naming Fluency probe and charted the number of correctly identified letters.

Case Example: Letter Naming

Outcome

- Ms. Tessia discovered that Colin attained the first goal ('able to identify all upper-case and lower-case letters') within 2 weeks.
- Colin attained the second goal ('move above the 25th percentile in Letter Naming Fluency when compared to grade-level peers' by reading at least 38 letters per minute) within the expected four instructional weeks.
- Ms. Tessia then discontinued the intervention after four weeks, as Colin had moved into the average range with letter naming skills.

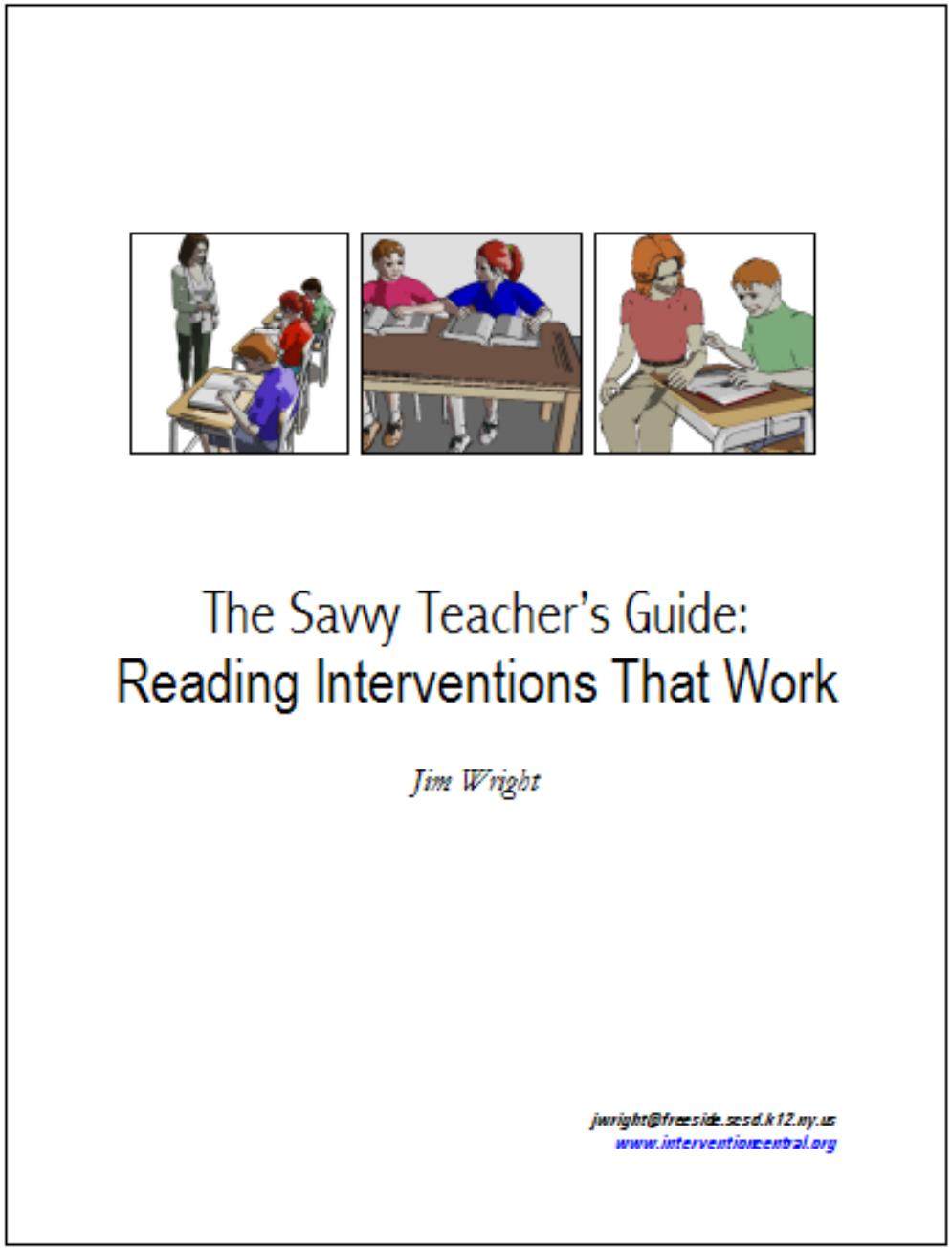
Sample Reading Interventions

> *"Risk for reading failure always involves the interaction of a particular set of child characteristics with specific characteristics of the instructional environment. Risk status is not entirely inherent in the child, but always involves a "mismatch" between child characteristics and the instruction that is provided." (Foorman & Torgesen, 2001; p. 206).*

Source: Foorman, B. R., & Torgesen, J. (2001). Critical elements of classroom and small-group instruction promote reading success in all children. Learning Disabilities Research & Practice, 16, 203-212.

Savvy Teacher's Guide: Reading Interventions That Work

(Wright, 2000)



Big Ideas in Beginning Reading

- "Phonemic Awareness: The ability to hear and manipulate sounds in words.
- Alphabetic Principle: The ability to associate sounds with letters and use these sounds to form words.
- Fluency with Text: The effortless, automatic ability to read words in connected text.
- Vocabulary: The ability to understand (receptive) and use (expressive) words to acquire and convey meaning.
- Comprehension: The complex cognitive process involving the intentional interaction between reader and text to convey meaning."

Source: Big ideas in beginning reading. University of Oregon. Retrieved September 23, 2007, from http://reading.uoregon.edu/index.php

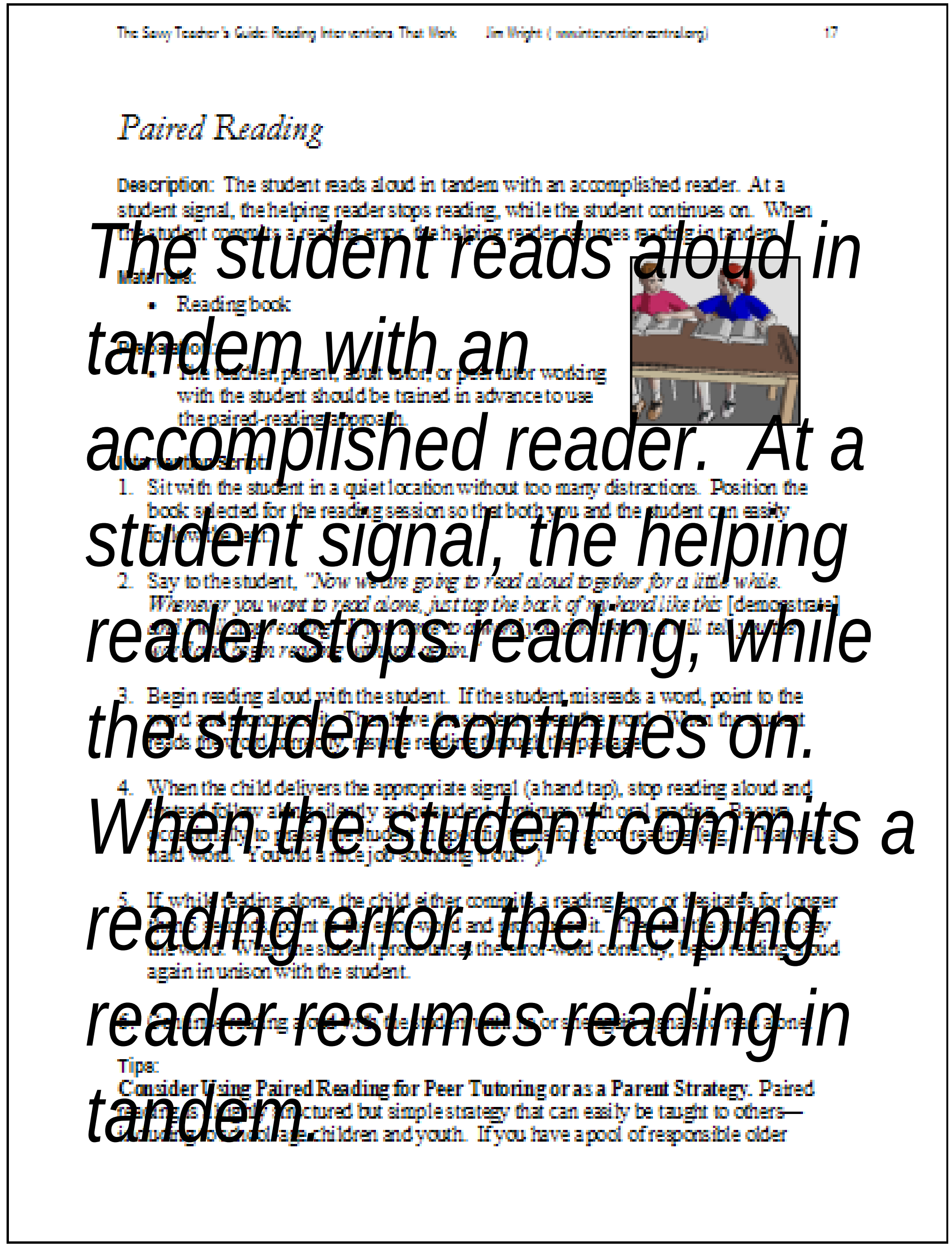
Building Reading Fluency

Interventions for…*Increasing Reading Fluency*

- Assisted Reading Practice
- Listening Passage Preview ('Listening While Reading')
- Paired Reading
- Repeated Reading

Paired Reading

pp. 17-18


The Savvy Teacher's Guide: Reading Interventions That Work   Jim Wright (www.interventioncentral.org)   17

Paired Reading

Description: The student reads aloud in tandem with an accomplished reader. At a student signal, the helping reader stops reading, while the student continues on. When the student commits a reading error, the helping reader resumes reading in tandem.

Materials:

- Reading book

- The teacher, parent, adult tutor, or peer tutor working with the student should be trained in advance to use the paired-reading approach.

1. Sit with the student in a quiet location without too many distractions. Position the book selected for the reading session so that both you and the student can easily follow the text.
2. Say to the student, "*Now we are going to read aloud together for a little while. Whenever you want to read alone, just tap the back of my hand like this* [demonstrate]
3. Begin reading aloud with the student. If the student misreads a word, point to the
4. When the child delivers the appropriate signal (a hand tap), stop reading aloud and
5. If, while reading alone, the child either commits a reading error or hesitates for longer

again in unison with the student.

Tips:

Consider Using Paired Reading for Peer Tutoring or as a Parent Strategy. Paired reading is a structured but simple strategy that can easily be taught to others—including school-age children and youth. If you have a pool of responsible older

The student reads aloud in tandem with an accomplished reader. At a student signal, the helping reader stops reading, while the student continues on. When the student commits a reading error, the helping reader resumes reading in tandem.


Paired
Reading

HELPS Program: Reading Fluency www.helpsprogram.org

- HELPS (Helping Early Literacy with Practice Strategies) is a free tutoring program that targets student reading fluency skills. Developed by Dr. John Begeny of North Carolina State University, the program is an evidence-based intervention package that includes:
  - adult modeling of fluent reading,
  - repeated reading of passages by the student,
  - phrase-drill error correction,
  - verbal cueing and retell check to encourage student reading comprehension,
  - reward procedures to engage and encourage the student reader.

Promoting Student Reading Comprehension 'Fix-Up' Skills
pp. 19-20

Jim Wright
www.interventioncentral.org

INTERVENTION CENTRAL

Reading Comprehension 'Fix-Up' Skills: A Toolkit

Good readers continuously monitor their understanding of informational text. When necessary, they also take steps to improve their understanding of text through use of reading comprehension 'fix-up' skills.

Presented here are a series of fix-up skill strategies that can help struggling students to better understand difficult reading assignments…

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

- [Core Instruction] **Providing Main Idea Practice through 'Partner Retell'** (Carnine & Carnine, 2004). Students in a group or class are assigned a text selection to read silently. Students are then paired off, with one student assigned the role of 'reteller' and the other appointed as 'listener'. The reteller recounts the main idea to the listener, who can comment or ask questions. The teacher then states the main idea to the class. Next, the reteller locates two key details from the reading that support the main idea and shares these with the listener. At the end of the activity, the teacher does a spot check by randomly calling on one or more students in the listener role and asking them to recap what information was shared by the reteller.

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

- [Student Strategy] **Promoting Understanding & Building Endurance through Reading-Reflection Pauses** (Hedin & Conderman, 2010). The student decides on a reading interval (e.g., every four sentences; every 3 minutes; at the end of each paragraph). At the end of each interval, the student pauses briefly to recall the main points of the reading. If the student has questions or is uncertain about the content, the student rereads part or all of the section just read. This strategy is useful both for students who need to monitor their understanding as well as those who benefit from brief breaks when engaging in intensive reading as a means to build up endurance as attentive readers.

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

- [Student Strategy] **Identifying or Constructing Main Idea Sentences** (Davey & McBride, 1986; Rosenshine, Meister & Chapman, 1996). For each paragraph in an assigned reading, the student either (a) highlights the main idea sentence or (b) highlights key details and uses them to write a 'gist' sentence. The student then writes the main idea of that paragraph on an index card. On the other side of the card, the student writes a question whose answer is that paragraph's main idea sentence. This stack of 'main idea' cards becomes a useful tool to review assigned readings.

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

- [Student Strategy] **Restructuring Paragraphs with Main Idea First to Strengthen 'Rereads'** (Hedin & Conderman, 2010). The student highlights or creates a main idea sentence for each paragraph in the assigned reading. When rereading each paragraph of the selection, the student (1) reads the main idea sentence or student-generated 'gist' sentence first (irrespective of where that sentence actually falls in the paragraph); (2) reads the remainder of the paragraph, and (3) reflects on how the main idea relates to the paragraph content.

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

- [Student Strategy] **Linking Pronouns to Referents** (Hedin & Conderman, 2010). Some readers lose the connection between pronouns and the nouns that they refer to (known as 'referents')—especially when reading challenging text. The student is encouraged to circle pronouns in the reading, to explicitly identify each pronoun's referent, and (optionally) to write next to the pronoun the name of its referent. For example, the student may add the referent to a pronoun in this sentence from a biology text: *"The Cambrian Period is the first geological age that has large numbers of multi-celled organisms associated with* ***it*** *Cambrian Period."*

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

- Student Strategy] **Apply Vocabulary 'Fix-Up' Skills for Unknown Words** (Klingner & Vaughn, 1999). When confronting an unknown word in a reading selection, the student applies the following vocabulary 'fix-up' skills:
  1. Read the sentence again.
  2. Read the sentences before and after the problem sentence for clues to the word's meaning.
  3. See if there are prefixes or suffixes in the word that can give clues to meaning.
  4. Break the word up by syllables and look for 'smaller words' within.

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

- [Student Strategy] **Compiling a Vocabulary Journal from Course Readings** (Hedin & Conderman, 2010). The student highlights new or unfamiliar vocabulary from course readings. The student writes each term into a vocabulary journal, using a standard 'sentence-stem' format: e.g., "*Mitosis* means…" or "A *chloroplast* is…". If the student is unable to generate a definition for a vocabulary term based on the course reading, he or she writes the term into the vocabulary journal without definition and then applies other strategies to define the term: e.g., look up the term in a dictionary; use Google to locate two examples of the term being used correctly in context; ask the instructor, etc.).

Reading Comprehension 'Fix-Up' Skills: A Toolkit (Cont.)

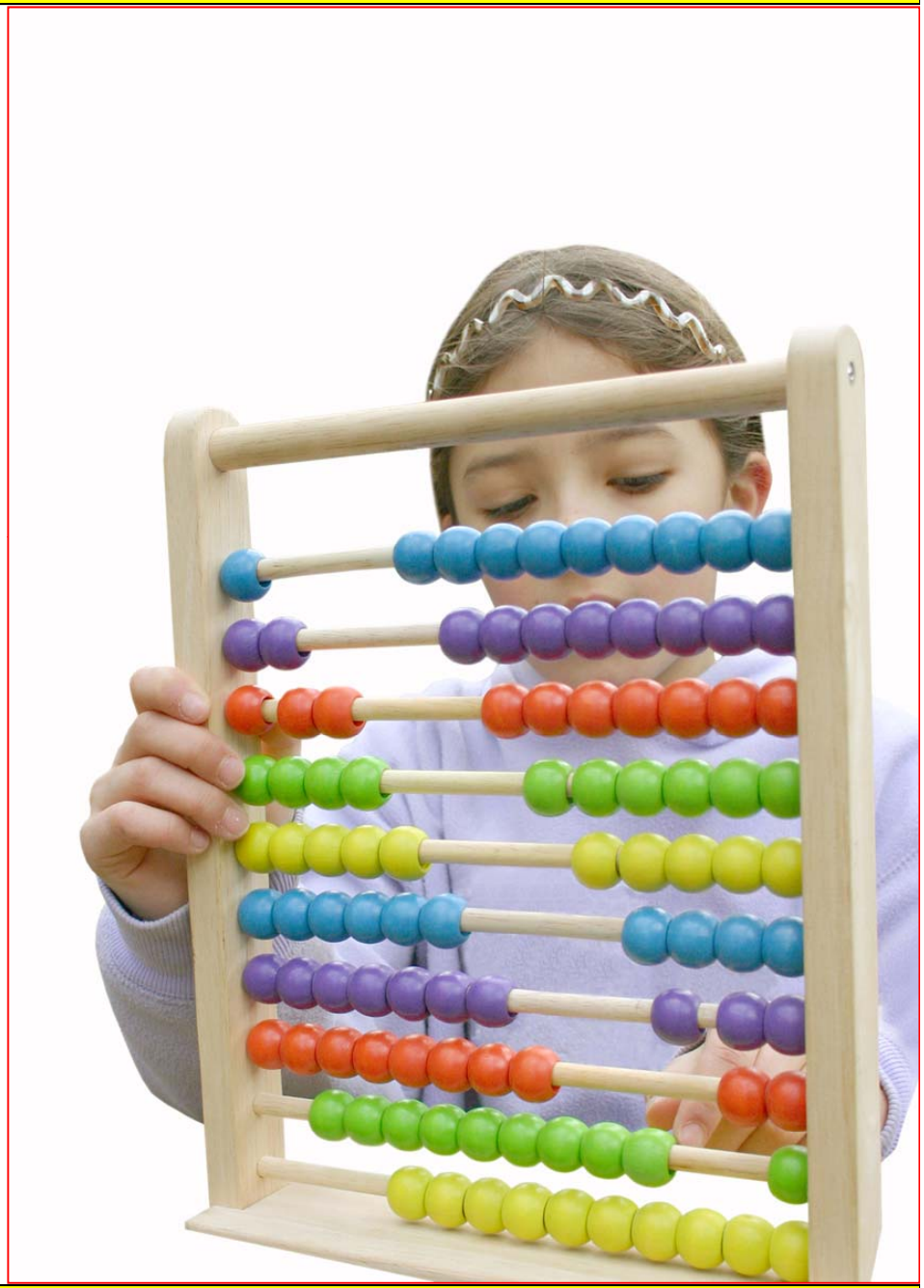
- [Student Strategy] **Reading Actively Through Text Annotation** (Harris, 1990; Sarkisian et al., 2003). Students are likely to increase their retention of information when they interact actively with their reading by jotting comments in the margin of the text. Using photocopies, the student is taught to engage in an ongoing 'conversation' with the writer by recording a running series of brief comments in the margins of the text. The student may write annotations to record opinions about points raised by the writer, questions triggered by the reading, or unknown vocabulary words.

Team Activity: Promoting Student-Administered Interventions

At your table:

- Consider the ideas included in the Reading Comprehension Fix-Up Skills handout.
- What are some ideas that your school might consider to promote training students to use these or other Reading Comprehension Fix-Up Skills reliably on their own?

Sample Math Interventions



Benefits of Automaticity of 'Arithmetic Combinations'

(Gersten, Jordan, & Flojo, 2005)

- There is a strong correlation between poor retrieval of arithmetic combinations ('math facts') and global math delays
- Automatic recall of arithmetic combinations frees up student 'cognitive capacity' to allow for understanding of higher-level problem-solving
- By internalizing numbers as mental constructs, students can manipulate those numbers in their head, allowing for the intuitive understanding of arithmetic properties, such as *associative property* and *commutative property*

Source: *Gersten, R., Jordan, N. C., & Flojo, J. R. (2005). Early identification and interventions for students with mathematics difficulties. Journal of Learning Disabilities, 38, 293-304.*

Math Computation: Increase Accuracy By Intermixing Easy and Challenging Problems pp. 28-29

- The teacher first identifies the range of 'challenging' problem-types that are to appear on the worksheet.
- Then the teacher then selects an 'easy' problem-type that the student can complete very quickly (e.g., adding or subtracting two 1-digit numbers). The teacher next prepares a series of student math computation worksheets with a fixed ratio of 'easy' computation problems interspersed with 'challenging' problems.
- If the student is expected to complete the worksheet independently, 'challenging' and 'easy' problems should be interspersed at a 1:1 ratio (that is, every 'challenging' problem in the worksheet is preceded and/or followed by an 'easy' problem).
- If the student is to have the problems read aloud and then asked to solve the problems mentally and write down only the answer, the items should appear on the worksheet at a ratio of 3 'challenging' problems for every 'easy' one.

Source: *Hawkins, J., Skinner, C. H., & Oliver, R. (2005). The effects of task demands and additive interspersal ratios on fifth-grade students' mathematics accuracy. School Psychology Review, 34, 543-555..*

Peer Tutoring in Math Computation with Constant Time Delay

Peer Tutoring in Math Computation with Constant Time Delay

- DESCRIPTION: This intervention employs students as reciprocal peer tutors to target acquisition of basic math facts (math computation) using constant time delay (Menesses & Gresham, 2009; Telecsan, Slaton, & Stevens, 1999). Each tutoring 'session' is brief and includes its own progress-monitoring component--making this a convenient and time-efficient math intervention for busy classrooms.

Peer Tutoring in Math Computation with Constant Time Delay

MATERIALS:

Student Packet: A work folder is created for each tutor pair. The folder contains:

- ❑ 10 math fact cards with equations written on the front and correct answer appearing on the back. NOTE: The set of cards is replenished and updated regularly as tutoring pairs master their math facts.
- ❑ Progress-monitoring form for each student.
- ❑ Pencils.

Peer Tutoring in Math Computation with Constant Time Delay

PREPARATION: To prepare for the tutoring program, the teacher selects students to participate and trains them to serve as tutors.

Select Student Participants. Students being considered for the reciprocal peer tutor program should at minimum meet these criteria (Telecsan, Slaton, & Stevens, 1999, Menesses & Gresham, 2009):

- ❑ Is able and willing to follow directions;
- ❑ Shows generally appropriate classroom behavior;
- ❑ Can attend to a lesson or learning activity for at least 20 minutes.

Peer Tutoring in Math Computation with Constant Time Delay

Select Student Participants (Cont.). Students being considered for the reciprocal peer tutor program should at minimum meet these criteria (Telecsan, Slaton, & Stevens, 1999, Menesses & Gresham, 2009):

- Is able to name all numbers from 0 to 18 (if tutoring in addition or subtraction math facts) and name all numbers from 0 to 81 (if tutoring in multiplication or division math facts).
- Can correctly read aloud a sampling of 10 math-facts (equation plus answer) that will be used in the tutoring sessions. (NOTE: The student does not need to have memorized or otherwise mastered these math facts to participate—just be able to read them aloud from cards without errors).
- [To document a deficit in math computation] When given a two-minute math computation probe to complete independently, computes **fewer** than 20 correct digits (Grades 1-3) or **fewer** than 40 correct digits (Grades 4 and up) (Deno & Mirkin, 1977).

Peer Tutoring in Math Computation: Teacher Nomination Form

Reciprocal Peer Tutoring in Math Computation: Teacher Nomination Form

Teacher: _____ Classroom: _____ Date: _____

Directions: Select students in your class that you believe would benefit from participation in a peer tutoring program to boost math computation skills. Write the names of your student nominees in the space provided below. Remember, students who are considered for the peer tutoring program should—*at minimum*—meet these criteria:

- Show generally appropriate classroom behaviors and follow directions.
- Can pay attention to a lesson or learning activity for at least 20 minutes.
- Are able to wait appropriately to hear the correct answer from the tutor if the student does not know the answer.
- When given a two-minute math computation probe to complete independently, computes **fewer** than 20 correct digits (Grades 1-3) or **fewer** than 40 correct digits (Grades 4 and up) (Deno & Mirkin, 1977).
- Can name all numbers from 0 to 18 (if tutoring in addition or subtraction math facts) and name all numbers from 0 to 81 (if tutoring in multiplication or division math facts).
- Can correctly read aloud a sampling of 10 math-facts (equation plus answer) that will be used in the tutoring sessions. (NOTE: The student does not need to have memorized or otherwise mastered these math facts to participate—just be able to read them aloud from cards without errors).

Number	Student Name	NOTES
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Peer Tutoring in Math Computation with Constant Time Delay

Tutoring Activity. Each tutoring 'session' last for 3 minutes. The tutor:

- *Presents Cards*. The tutor presents each card to the tutee for 3 seconds.
- *Provides Tutor Feedback*. [When the tutee responds correctly] The tutor acknowledges the correct answer and presents the next card.

  [When the tutee does not respond within 3 seconds or responds incorrectly] The tutor states the correct answer and has the tutee repeat the correct answer. The tutor then presents the next card.
- *Provides Praise*. The tutor praises the tutee immediately following correct answers.
- *Shuffles Cards*. When the tutor and tutee have reviewed all of the math-fact carts, the tutor shuffles them before again presenting cards.

Peer Tutoring in Math Computation with Constant Time Delay

Progress-Monitoring Activity. The tutor concludes each 3-minute tutoring session by assessing the number of math facts mastered by the tutee. The tutor follows this sequence:

- *Presents Cards.* The tutor presents each card to the tutee for 3 seconds.
- *Remains Silent*. The tutor does not provide performance feedback or praise to the tutee, or otherwise talk during the assessment phase.
- *Sorts Cards*. Based on the tutee's responses, the tutor sorts the math-fact cards into 'correct' and 'incorrect' piles.
- *Counts Cards and Records Totals*. The tutor counts the number of cards in the 'correct' and 'incorrect' piles and records the totals on the tutee's progress-monitoring chart.

Peer Tutoring in Math Computation with Constant Time Delay

Tutoring Integrity Checks. As the student pairs complete the tutoring activities, the supervising adult monitors the integrity with which the intervention is carried out. At the conclusion of the tutoring session, the adult gives feedback to the student pairs, praising successful implementation and providing corrective feedback to students as needed. NOTE: Teachers can use the attached form *Peer Tutoring in Math Computation with Constant Time Delay: Integrity Checklist* to conduct integrity checks of the intervention and student progress-monitoring components of the math peer tutoring.

Peer Tutoring in Math Computation: Intervention Integrity Sheet: (Part 1: Tutoring Activity)

Peer Tutoring in Math Computation with Constant Time Delay: Integrity Checklist			
Tutoring Session: Intervention Phase			
Directions: Observe the tutor and tutee for a full intervention session. Use this checklist to record whether each of the key steps of the intervention were correctly followed.			
Correctly Carried Out?	Step	Tutor Action	NOTES
__Y__N	1.	**Promptly Initiates Session.** At the start of the timer, the tutor immediately presents the first math-fact card.	
__Y__N	2.	**Presents Cards.** The tutor presents each card to the tutee for 3 seconds.	
__Y__N	3.	**Provides Tutor Feedback.** [When the tutee responds correctly] The tutor acknowledges the correct answer and presents the next card. [When the tutee does not respond within 3 seconds or responds incorrectly] The tutor states the correct answer and has the tutee repeat the correct answer. The tutor then presents the next card.	
__Y__N	4.	**Provides Praise.** The tutor praises the tutee immediately following correct answers.	
__Y__N	5.	**Shuffles Cards.** When the tutor and tutee have reviewed all of the math-fact cards, the tutor shuffles them before again presenting cards.	
__Y__N	6.	**Continues to the Timer.** The tutor continues to presents math-fact cards for tutee response until the timer rings.	

Peer Tutoring in Math Computation: Intervention Integrity Sheet (Part 2: Progress-Monitoring)

Tutoring Session: Assessment Phase			
Directions: Observe the tutor and tutee during the progress-monitoring phase of the session. Use this checklist to record whether each of the key steps of the assessment were correctly followed.			
Correctly Carried Out?	Step	Tutor Action	NOTES
__Y__N	1.	**Presents Cards.** The tutor presents each card to the tutee for 3 seconds.	
__Y__N	2.	**Remains Silent.** The tutor does not provide performance feedback or praise to the tutee, or otherwise talk during the assessment phase.	
__Y__N	3.	**Sorts Cards.** The tutor sorts cards into 'correct' and 'incorrect' piles based on the tutee's responses.	
__Y__N	4.	**Counts Cards and Records Totals.** The tutor counts the number of cards in the 'correct' and 'incorrect' piles and records the totals on the tutee's progress-monitoring chart.	

Peer Tutoring in Math Computation: Score Sheet

Math Tutoring: Score Sheet

Tutor 'Coach': _____ Tutee 'Player': _____

Directions to the Tutor: Write down the number of math-fact cards that your partner answered *correctly* and the number answered *incorrectly*.		
Date:	Cards Correct:	Cards Incorrect:
Date:	Cards Correct:	Cards Incorrect:
Date:	Cards Correct:	Cards Incorrect:
Date:	Cards Correct:	Cards Incorrect:
Date:	Cards Correct:	Cards Incorrect:
Date:	Cards Correct:	Cards Incorrect:
Date:	Cards Correct:	Cards Incorrect:
Date:	Cards Correct:	Cards Incorrect:

Team Activity: Peer Tutoring in Math Computation with Constant Time Delay

In your elbow groups:

- Discuss how you might use or adapt this math computation tutoring intervention in your school.

Developing Student Metacognitive Abilities: Mathematics pp. 32-34

Importance of Metacognitive Strategy Use…

"Metacognitive processes focus on self-awareness of cognitive knowledge that is presumed to be necessary for effective problem solving, and they direct and regulate cognitive processes and strategies during problem solving…That is, successful problem solvers, consciously or unconsciously (depending on task demands), use self-instruction, self-questioning, and self-monitoring to gain access to strategic knowledge, guide execution of strategies, and regulate use of strategies and problem-solving performance." p. 231

Source: *Montague, M. (1992). The effects of cognitive and metacognitive strategy instruction on the mathematical problem solving of middle school students with learning disabilities.* Journal of Learning Disabilities, 25*, 230-248.*

Elements of Metacognitive Processes

"**Self-instruction** helps students to identify and direct the problem-solving strategies prior to execution. **Self-questioning** promotes internal dialogue for systematically analyzing problem information and regulating execution of cognitive strategies. **Self-monitoring** promotes appropriate use of specific strategies and encourages students to monitor general performance. [Emphasis added]." p. 231

Source: *Montague, M. (1992). The effects of cognitive and metacognitive strategy instruction on the mathematical problem solving of middle school students with learning disabilities.* Journal of Learning Disabilities, 25, *230-248.*

Combining Cognitive & Metacognitive Strategies to Assist Students With Mathematical Problem Solving p. 37

Solving an advanced math problem independently requires the coordination of a number of complex skills. The following strategies combine both cognitive and metacognitive elements (Montague, 1992; Montague & Dietz, 2009). First, the student is taught a 7-step process for attacking a math word problem (cognitive strategy). Second, the instructor trains the student to use a three-part self-coaching routine for each of the seven problem-solving steps (metacognitive strategy).

Cognitive Portion of Combined Problem Solving Approach p. 37

In the cognitive part of this multi-strategy intervention, the student learns an explicit series of steps to analyze and solve a math problem. Those steps include:

1. **Reading the problem.** The student reads the problem carefully, noting and attempting to clear up any areas of uncertainly or confusion (e.g., unknown vocabulary terms).
2. **Paraphrasing the problem.** The student restates the problem in his or her own words.
3. **'Drawing' the problem.** The student creates a drawing of the problem, creating a visual representation of the word problem.
4. **Creating a plan to solve the problem.** The student decides on the best way to solve the problem and develops a plan to do so.
5. **Predicting/Estimating the answer.** The student estimates or predicts what the answer to the problem will be. The student may compute a quick approximation of the answer, using rounding or other shortcuts.
6. **Computing the answer.** The student follows the plan developed earlier to compute the answer to the problem.
7. **Checking the answer.** The student methodically checks the calculations for each step of the problem. The student also compares the actual answer to the estimated answer calculated in a previous step to ensure that there is general agreement between the two values.

Metacognitive Portion of Combined Problem Solving Approach

The metacognitive component of the intervention is a three-part routine that follows a sequence of 'Say', 'Ask, 'Check'. For each of the 7 problem-solving steps reviewed above:

- The student first self-instructs by stating, or 'saying', the purpose of the step ('Say').
- The student next self-questions by 'asking' what he or she intends to do to complete the step ('Ask').
- The student concludes the step by self-monitoring, or 'checking', the successful completion of the step ('Check').

Combined Cognitive & Metacognitive Elements of Strategy

Table 1: 'Say-Ask-Check' Metacognitive Prompts Tied to a Word-Problem Cognitive Strategy (Montague, 1992)		
Cognitive Strategy Step	Metacognitive 'Say-Ask-Check' Prompt Targets	Sample Metacognitive 'Say-Ask-Check' Prompts
1. **Read the problem.**	**'Say' (Self-Instruction) Target:** *The student reads and studies the problem carefully before proceeding.* ***'Ask' (Self-Question) Target:*** *Does the student fully understand the problem?* ***'Check' (Self-Monitor) Target:*** *Proceed only if the problem is understood.*	**Say:** "I will read the problem. I will reread the problem if I don't understand it." **Ask:** "Now that I have read the problem, do I fully understand it?" **Check:** "I understand the problem and will move forward."

Combined Cognitive & Metacognitive Elements of Strategy

Table 1: 'Say-Ask-Check' Metacognitive Prompts Tied to a Word-Problem Cognitive Strategy (Montague, 1992)		
Cognitive Strategy Step	Metacognitive 'Say-Ask-Check' Prompt Targets	Sample Metacognitive 'Say-Ask-Check' Prompts
2. **Paraphrase the problem.**	**'Say' (Self-Instruction) Target:** *The student restates the problem in order to demonstrate understanding.* ***'Ask' (Self-Question) Target:*** *Is the student able to paraphrase the problem?* ***'Check' (Self-Monitor) Target:*** *Ensure that any highlighted key words are relevant to the question.*	**Say:** "I will highlight key words and phrases that relate to the problem question." "I will restate the problem in my own words." **Ask:** "Did I highlight the most important words or phrases in the problem?" **Check:** "I found the key words or phrases that will help to solve the problem."

Combined Cognitive & Metacognitive Elements of Strategy

Table 1: 'Say-Ask-Check' Metacognitive Prompts Tied to a Word-Problem Cognitive Strategy (Montague, 1992)		
Cognitive Strategy Step	Metacognitive 'Say-Ask-Check' Prompt Targets	Sample Metacognitive 'Say-Ask-Check' Prompts
3. **'Draw' the problem.**	**'Say' (Self-Instruction) Target:** *The student creates a drawing of the problem to consolidate understanding.* ***'Ask' (Self-Question) Target:*** *Is there a match between the drawing and the problem?* ***'Check' (Self-Monitor) Target:*** *The drawing includes in visual form the key elements of the math problem.*	**Say:** "I will draw a diagram of the problem." **Ask:** "Does my drawing represent the problem?" **Check:** "The drawing contains the essential parts of the problem."

Combined Cognitive & Metacognitive Elements of Strategy

Table 1: 'Say-Ask-Check' Metacognitive Prompts Tied to a Word-Problem Cognitive Strategy (Montague, 1992)		
Cognitive Strategy Step	Metacognitive 'Say-Ask-Check' Prompt Targets	Sample Metacognitive 'Say-Ask-Check' Prompts
4. **Create a plan to solve the problem.**	**'Say' (Self-Instruction) Target:** *The student generates a plan to solve the problem.* ***'Ask' (Self-Question) Target:*** *What plan will help the student to solve this problem?* ***'Check' (Self-Monitor) Target:*** *The plan is appropriate to solve the problem.*	**Say:** "I will make a plan to solve the problem." **Ask:** "What is the first step of this plan? What is the next step of the plan?" **Check:** "My plan has the right steps to solve the problem."

Combined Cognitive & Metacognitive Elements of Strategy

Table 1: 'Say-Ask-Check' Metacognitive Prompts Tied to a Word-Problem Cognitive Strategy (Montague, 1992)		
Cognitive Strategy Step	Metacognitive 'Say-Ask-Check' Prompt Targets	Sample Metacognitive 'Say-Ask-Check' Prompts
5. **Predict/ estimate the Answer.**	**'Say' (Self-Instruction) Target:** *The student uses estimation or other strategies to predict or estimate the answer.* ***'Ask' (Self-Question) Target:*** *What estimating technique will the student use to predict the answer?* ***'Check' (Self-Monitor) Target:*** *The predicted/estimated answer used all of the essential problem information.*	**Say:** "I will estimate what the answer will be." **Ask:** "What numbers in the problem should be used in my estimation?" **Check:** "I did not skip any important information in my estimation."

Combined Cognitive & Metacognitive Elements of Strategy

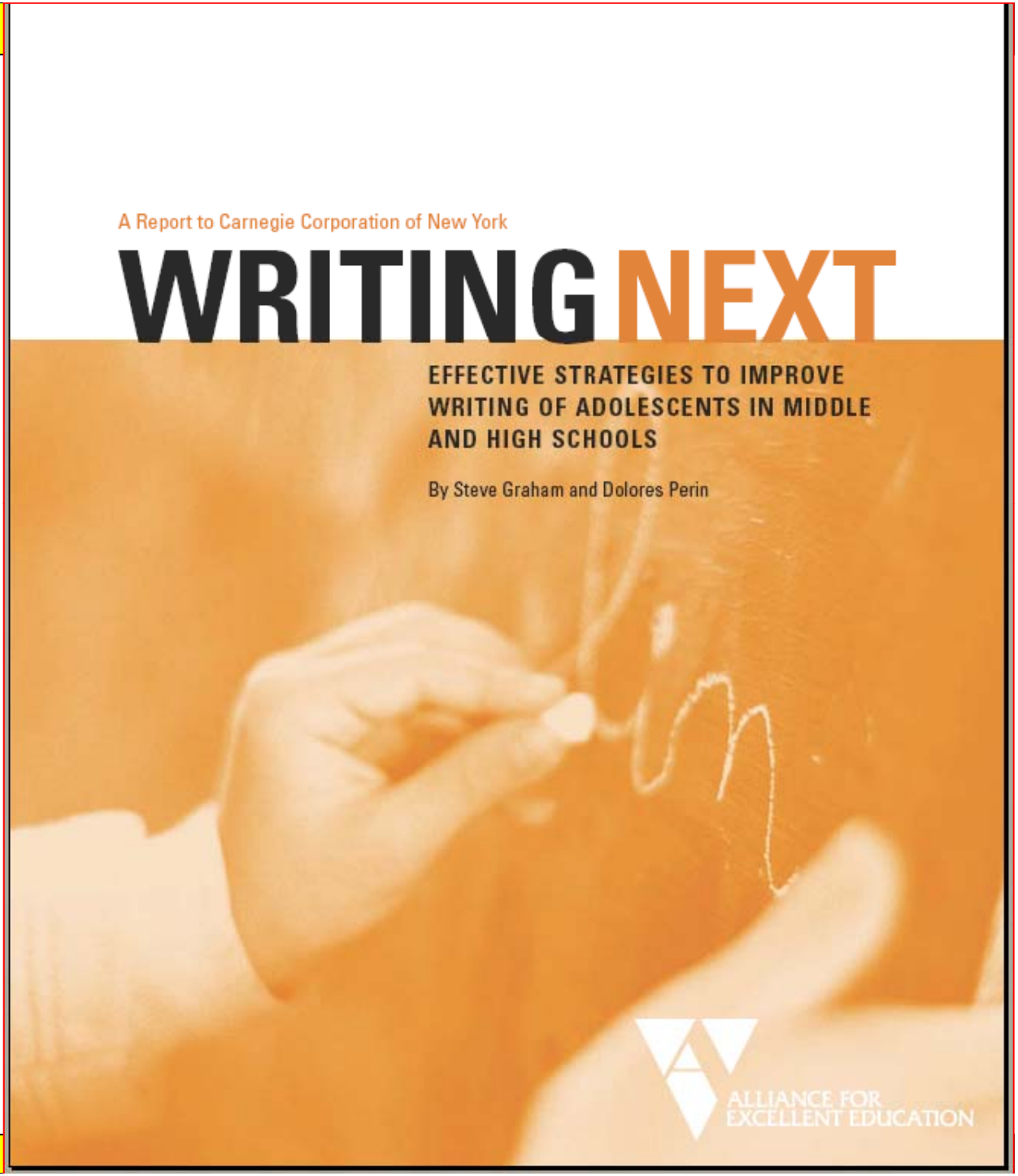
Table 1: 'Say-Ask-Check' Metacognitive Prompts Tied to a Word-Problem Cognitive Strategy (Montague, 1992)		
Cognitive Strategy Step	Metacognitive 'Say-Ask-Check' Prompt Targets	Sample Metacognitive 'Say-Ask-Check' Prompts
6. **Compute the answer.**	**'Say' (Self-Instruction) Target:** *The student follows the plan to compute the solution to the problem.* ***'Ask' (Self-Question) Target:*** *Does the answer agree with the estimate?* ***'Check' (Self-Monitor) Target:*** *The steps in the plan were followed and the operations completed in the correct order.*	**Say:** "I will compute the answer to the problem." **Ask:** "Does my answer sound right?" "Is my answer close to my estimate?" **Check:** "I carried out all of the operations in the correct order to solve this problem."

Combined Cognitive & Metacognitive Elements of Strategy

Table 1: 'Say-Ask-Check' Metacognitive Prompts Tied to a Word-Problem Cognitive Strategy (Montague, 1992)		
Cognitive Strategy Step	Metacognitive 'Say-Ask-Check' Prompt Targets	Sample Metacognitive 'Say-Ask-Check' Prompts
7. **Check the answer.**	**'Say' (Self-Instruction) Target:** *The student reviews the computation steps to verify the answer.* ***'Ask' (Self-Question) Target:*** *Did the student check all the steps in solving the problem and are all computations correct?* ***'Check' (Self-Monitor) Target:*** *The problem solution appears to have been done correctly.*	**Say:** "I will check the steps of my answer." **Ask:** "Did I go through each step in my answer and check my work?" **Check:** ""

Sample Writing Instruction/ Interventions

Graham, S., & Perin, D. (2007). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools – A report to Carnegie Corporation of New York*. Washington, DC Alliance for Excellent Education. Retrieved from http://www.all4ed.org/files/WritingNext.pdf



The Effect of Grammar Instruction as an Independent Activity

"Grammar instruction in the studies reviewed [for the *Writing* Next report] involved the explicit and systematic teaching of the parts of speech and structure of sentences. The meta-analysis found an effect for this type of instruction for students across the full range of ability, but …surprisingly, this effect was negative…Such findings raise serious questions about some educators' enthusiasm for traditional grammar instruction as a focus of writing instruction for adolescents….Overall, the findings on grammar instruction suggest that, although teaching grammar is important, alternative procedures, such as sentence combining, are more effective than traditional approaches for improving the quality of students' writing." p. 21

Source: Graham, S., & Perin, D. (2007). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools – A report to Carnegie Corporation of New York*. Washington, DC Alliance for Excellent Education.

Elements of effective writing instruction for adolescents:

1. Writing Process (Effect Size = 0.82): Students are taught a process for planning, revising, and editing.
2. Summarizing (Effect Size = 0.82): Students are taught methods to identify key points, main ideas from readings to write summaries of source texts.
3. Cooperative Learning Activities ('Collaborative Writing') (Effect Size = 0.75): Students are placed in pairs or groups with learning activities that focus on collaborative use of the writing process.
4. Goal-Setting (Effect Size = 0.70): Students set specific 'product goals' for their writing and then check their attainment of those self-generated goals.

Source: Graham, S., & Perin, D. (2007). Writing next: Effective strategies to improve writing of adolescents in middle and high schools – A report to Carnegie Corporation of New York. Washington, DC Alliance for Excellent Education. Retrieved from http://www.all4ed.org/files/WritingNext.pdf

Elements of effective writing instruction for adolescents:

5. **Writing Processors (Effect Size = 0.55):** Students have access to computers/word processors in the writing process.
6. **Sentence Combining (Effect Size = 0.50):** Students take part in instructional activities that require the combination or embedding of simpler sentences (e.g., Noun-Verb-Object) to generate more advanced, complex sentences.
7. **Prewriting (Effect Size = 0.32):** Students learn to select, develop, or organize ideas to incorporate into their writing by participating in structured 'pre-writing' activities.
8. **Inquiry Activities (Effect Size = 0.32):** Students become actively engaged researchers, collecting and analyzing information to guide the ideas and content for writing assignments.

Source: Graham, S., & Perin, D. (2007). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools – A report to Carnegie Corporation of New York*. Washington, DC Alliance for Excellent Education. Retrieved from http://www.all4ed.org/files/WritingNext.pdf

Elements of effective writing instruction for adolescents:

9. **Process Writing (Effect Size = 0.32):** Writing instruction is taught in a 'workshop' format that " stresses extended writing opportunities, writing for authentic audiences, personalized instruction, and cycles of writing" (Graham & Perin, 2007; p. 4).
10. **Use of Writing Models (Effect Size = 0.25):** Students read and discuss models of good writing and use them as exemplars for their own writing.
11. **Writing to Learn Content (Effect Size = 0.23):** The instructor incorporates writing activities as a means to have students learn content material.

Source: Graham, S., & Perin, D. (2007). Writing next: Effective strategies to improve writing of adolescents in middle and high schools – A report to Carnegie Corporation of New York. Washington, DC Alliance for Excellent Education. Retrieved from http://www.all4ed.org/files/WritingNext.pdf

Sentence Combining Packet pp. 39-41

Students with poor writing skills often write sentences that lack 'syntactic maturity'. Their sentences often follow a simple, stereotyped format. A promising approach to teach students use of diverse sentence structures is through sentence combining.

In sentence combining, students are presented with kernel sentences and given explicit instruction in how to weld these kernel sentences into more diverse sentence types either

- by using connecting words to combine multiple sentences into one or
- by isolating key information from an otherwise superfluous sentence and embedding that important information into the base sentence.

Sources: Saddler, B. (2005). Sentence combining: A sentence-level writing intervention. *The Reading Teacher, 58,* 468-471.

Strong, W. (1986). *Creative approaches to sentence combining.* Urbana, OL: ERIC Clearinghouse on Reading and Communication Skill & National Council of Teachers of English.

Formatting Sentence Combining Examples

- In each example, the base clause (sentence) appears first. Any sentence(s) to be combined or embedded with the base clause appear below that base clause.

  Example: **Base clause:** The dog ran after the bus.
  Sentence to be embedded: The dog is yellow.
  Student-Generated Solution: *The yellow dog ran after the bus.*

- 'Connecting words' to be used as a sentence-combining tool appear in parentheses at the end of a sentence that is to be combined with the base clause.

  Example: **Base clause:** The car stalled.
  Sentence to be combined: The car ran out of gas. (because)
  Student-Generated Solution: *The car stalled because it ran out of gas.*

- The element(s) of any sentence to be embedded in the base clause are underlined.

  Example: **Base clause:** The economic forecast resulted in strong stock market gains.
  Sentence to be embedded: The economic forecast was upbeat.
  Student-Generated Solution: *The upbeat economic forecast resulted in strong stock market gains.*

Table 1: Sentence-combining types and examples (Saddler, 2005; Strong, 1986)	
Type of Sentence	Sentence Combining Example
Multiple (Compound) Sentence Subjects or Objects: Two or more subjects can be combined with a conjunction (e.g., *or*, *and*). Two or more direct or indirect objects can be combined with a conjunction (e.g., *or*, *and*).	• Skyscrapers in the city were damaged in the hurricane. Bridges in the city were damaged in the hurricane. *Skyscrapers and bridges in the city were damaged in the hurricane.* • When they travel, migratory birds need safe habitat. When they travel, migratory birds need regular supplies of food. *When they travel, migratory birds need safe habitat and regular supplies of food.*
Adjectives & Adverbs: When a sentence simply contains an adjective or adverb that modifies the noun or verb of another sentence, the adjective or adverb from the first sentence can be embedded in the related sentence.	• Dry regions are at risk for chronic water shortages. Overpopulated regions are at risk for chronic water shortages. *Dry and overpopulated regions are at risk for chronic water shortages.* • Health care costs have risen nationwide. Those health care costs have risen quickly. *Health care costs have risen quickly nationwide.*

Table 1: Sentence-combining types and examples (Saddler, 2005; Strong, 1986)	
Type of Sentence	Sentence Combining Example
Connecting Words: One or more sentences are combined with connecting words. Coordinating conjunctions (e.g., *and, but*) link sentences on an equal basis. Subordinating conjunctions (e.g., *after, until, unless, before, while, because*) link sentences with one of the sentences subordinate or dependent on the other.	• The house was falling apart. No one seemed to care. (but) *The house was falling apart, but no one seemed to care.* • The glaciers began to melt. The earth's average temperature increased. (because) *The glaciers began to melt because the earth's average temperature increased.*
Relative Clauses: Sentence contains an embedded, subordinate clause that modifies a noun.	• The artist was the most popular in the city. The artist painted watercolors of sunsets. (who) *The artist who painted watercolors of sunsets was the most popular in the city.*
Appositives: Sentence contains two noun phrases that refer to the same object. When two sentences refer to the same noun, one sentence be reduced to an appositive and embedded in the other sentence.	• The explorer paddled the kayak across the raging river. The explorer was an expert in handling boats. *The explorer, an expert in handling boats, paddled the kayak across the raging river.*

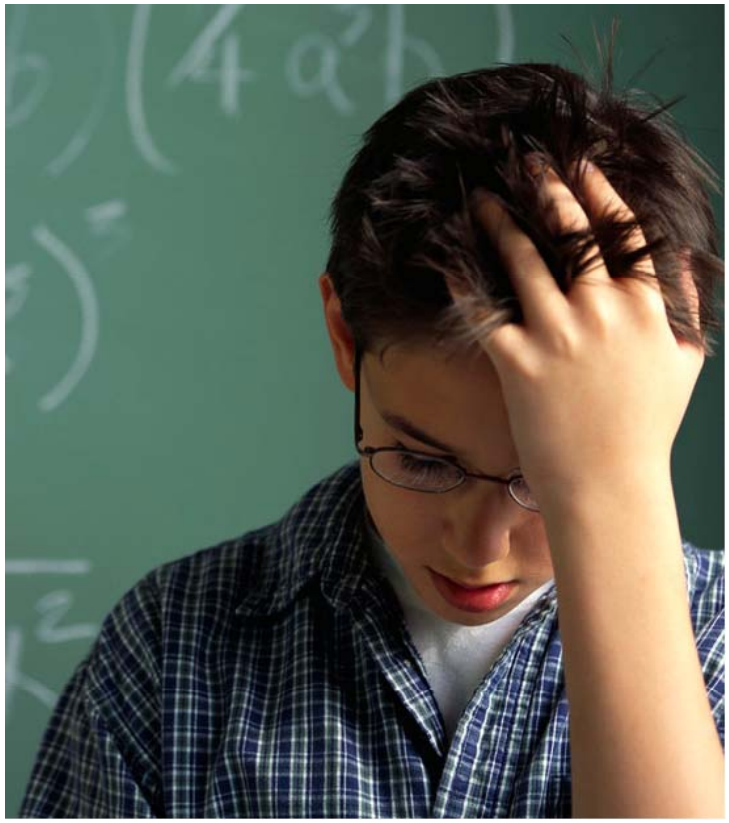
Table 1: Sentence-combining types and examples (Saddler, 2005; Strong, 1986)	
Type of Sentence	Sentence Combining Example
Possessive Nouns: A sentence that describes possession or ownership can be reduced to a possessive noun and embedded in another sentence.	• Some historians view the Louisiana Purchase as the most important expansion of United States territory. The Louisiana Purchase was President Jefferson's achievement. *Some historians view President Jefferson's Louisiana Purchase as the most important expansion of United States territory.*

Sentence Combining: Activity

Pair off & discuss…

- Discuss how content-area / general-education teachers could use sentence-combining as a classroom strategy to promote writing skills as well as content…

RTI & Student Conduct: Research-Based Interventions to Manage Challenging Behaviors in the Classroom



Jim Wright
www.interventioncentral.org

INTERVENTION CENTRAL

Key Behavioral Challenges

1. Understanding the Essential 'Big Ideas' in Student Behavior Management
2. Defining Student Problem Behaviors Clearly
3. Managing Groups of Students
4. Motivating the Reluctant Student
5. Managing the Difficult Behaviors of Individual Students
6. Finding Internet Resources to Help Support Strong Behavior Management in Your Classroom

Access PPTs and other materials from this workshop at:

http://www.interventioncentral.org/sdasp

Behavior Challenge:
Understanding the Essential 'Big Ideas' in Student Behavior Management

Big Ideas: Similar Behaviors May Stem from Very Different 'Root' Causes

(Kratochwill, Elliott, & Carrington Rotto, 1990)

- Behavior is not random but follows purposeful patterns.

  Students who present with the same apparent 'surface' behaviors may have very different 'drivers' (underlying reasons) that explain why those behaviors occur.

  A student's problem behaviors must be carefully *identified* and *analyzed* to determine the drivers that support them.

Source: Kratochwill, T. R., Elliott, S. N., & Carrington Rotto, P. (1990). Best practices in behavioral consultation. In A. Thomas and J. Grimes (Eds.). Best practices in school psychology-II (pp. 147=169). Silver Spring, MD: National Association of School Psychologists..

Common 'Root Causes' or 'Drivers' for Behaviors Include…

- Power/Control
- Protection/Escape/Avoidance
- Attention
- Acceptance/Affiliation
- Expression of Self
- Gratification
- Justice/Revenge

Source: Witt, J. C., Daly, E. M., & Noell, G. (2000). Functional assessments: A step-by-step guide to solving academic and behavior problems. Longmont, CO: Sopris West..pp. 3-4.

From the Trenches…
Office Disciplinary Referral

"

Disrespect toward teachers. Yelled at me while I was helping him with his assignment. Told him to cool down and sit in the center and he started up again. Finally, I asked him to leave. Have called home twice and spoke to grandmother about tardiness, attendance, and behavior.

"

From the Trenches…
Office Disciplinary Referral

"

L. was sleeping in class. I told him twice to wake up and read along with class. He did so, albeit reluctantly. The third time he fell asleep I buzzed the office to tell them he was coming down, with a referral to follow. He cursed and threw his book in the 'book box'.

"

From the Trenches…
Office Disciplinary Referral

“

For some reason, R. wants to keep challenging me. Today he was being persistent that he wanted to sit on a table not in his chair. This was after I asked him to stop talking 4-5 times, that’s all. I sent him to the office again, second time.

”

Big Ideas: Low-Level Inferences Should Be Investigated First

(Christ, 2008)

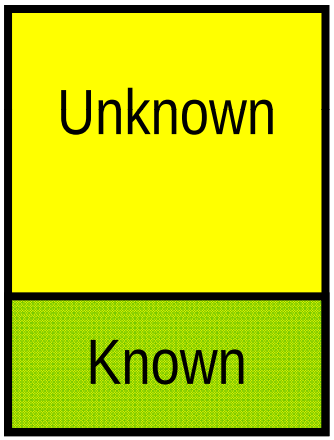
"An inference is a tentative conclusion without direct or conclusive support from available data. All hypotheses are, by definition, inferences. It is critical that problem analysts make distinctions between what is known and what is inferred or hypothesized….Low-level inferences should be exhausted prior to the use of high-level inferences." p. 161

Source: Christ, T. (2008). Best practices in problem analysis. In A. Thomas & J. Grimes (Eds.), Best practices in school psychology V (pp. 159-176).

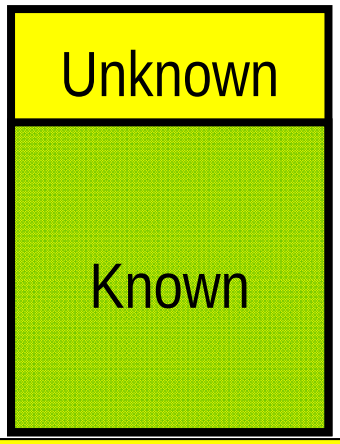
Examples of High vs. Low Inference Hypotheses

An 11th-grade student does poorly on tests and quizzes in math. Homework is often incomplete. He frequently shows up late for class and does not readily participate in group discussions.

High-Inference Hypothesis. The student is 'just lazy' and would do better if he would only apply himself.



Low-Inference Hypothesis. The student has gaps in academic skills that require (a) mapping out those skill gaps, and (b) providing the student with remedial instruction as needed.



Big Ideas: Academic Delays Can Be a Potent Cause of Behavior Problems

(Witt, Daly, & Noell, 2000)

Student academic problems cause many school behavior problems.

"Whether [a student's] problem is a behavior problem or an academic one, we recommend starting with a functional academic assessment, since often behavior problems occur when students cannot or will not do required academic work."

Source: Witt, J. C., Daly, E. M., & Noell, G. (2000). Functional assessments: A step-by-step guide to solving academic and behavior problems. Longmont, CO: Sopris West, p. 13

Big Ideas: Behavior is a Continuous 'Stream'

(Schoenfeld & Farmer, 1970)

- Individuals are always performing SOME type of behavior: watching the instructor, sleeping, talking to a neighbor, completing a worksheet ('*behavior stream'*).
- When students are fully engaged in academic behaviors, they are less likely to get off-task and display problem behaviors.
- Academic tasks that are clearly understood, elicit student interest, provide a high rate of student success, and include teacher encouragement and feedback are most likely to effectively 'capture' the student's 'behavior stream'.

Source: Schoenfeld, W. N., & Farmer, J. (1970). Reinforcement schedules and the "behavior stream." In W. N. Schoenfeld (Ed.), *The theory of reinforcement schedules* (pp. 215–245). New York: Appleton-Century-Crofts.

Unmotivated Students: What Works

Motivation can be thought of as having two dimensions:

1. the student's expectation of success on the task 10

Multiplied by X

2. the value that the student places on achieving success on that learning task 10

100

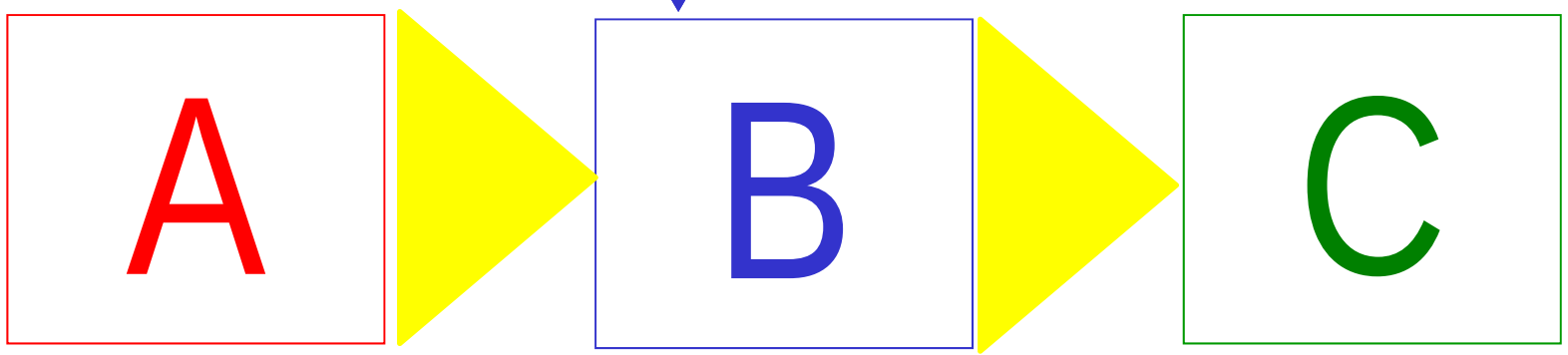
The relationship between the two factors is *multiplicative*. If EITHER of these factors (the student's expectation of success on the task OR the student's valuing of that success) is zero, then the 'motivation' product will also be zero.

Source: Sprick, R. S., Borgmeier, C., & Nolet, V. (2002). Prevention and management of behavior problems in secondary schools. In M. A. Shinn, H. M. Walker & G. Stoner (Eds.), *Interventions for academic and behavior problems II: Preventive and remedial approaches* (pp.373-401). Bethesda, MD: National Association of School Psychologists.

ABC: The Core of Behavior Management

"....at the core of behavioral interventions is the three-term contingency consisting of an antecedent, behavior, and consequence."

"That is, most **behavior** is believed to occur…"

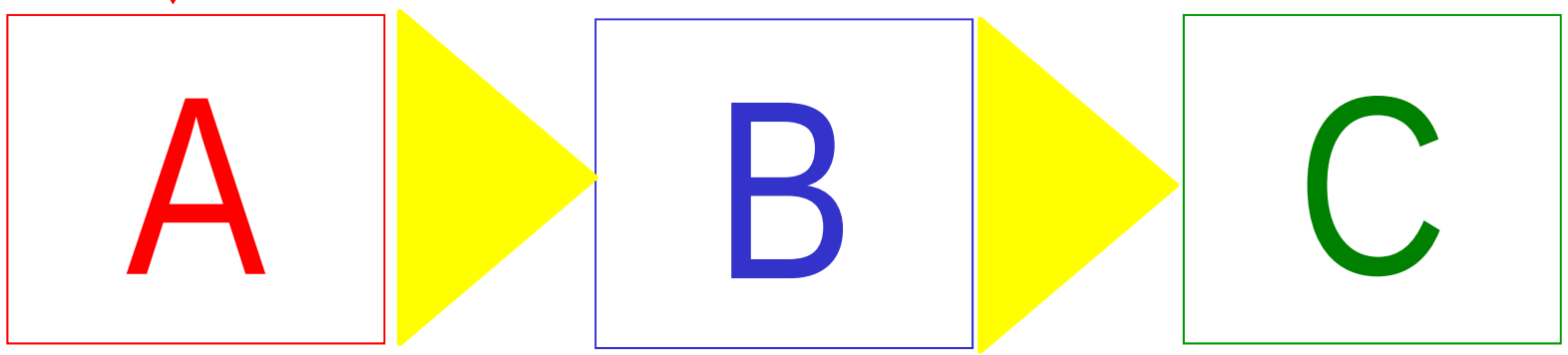


Source: Kern, L., Choutka, C. M., & Sokol, N. G. (2002). Assessment-based antecedent interventions used in natural settings to reduce challenging behaviors: An analysis of the literature. *Education & Treatment of Children, 25*, 113-130. p. 113.

ABC: The Core of Behavior Management

"....at the core of behavioral interventions is the three-term contingency consisting of an antecedent, behavior, and consequence."

"... subsequent to some type of environmental event (i.e., an **antecedent**) ..."



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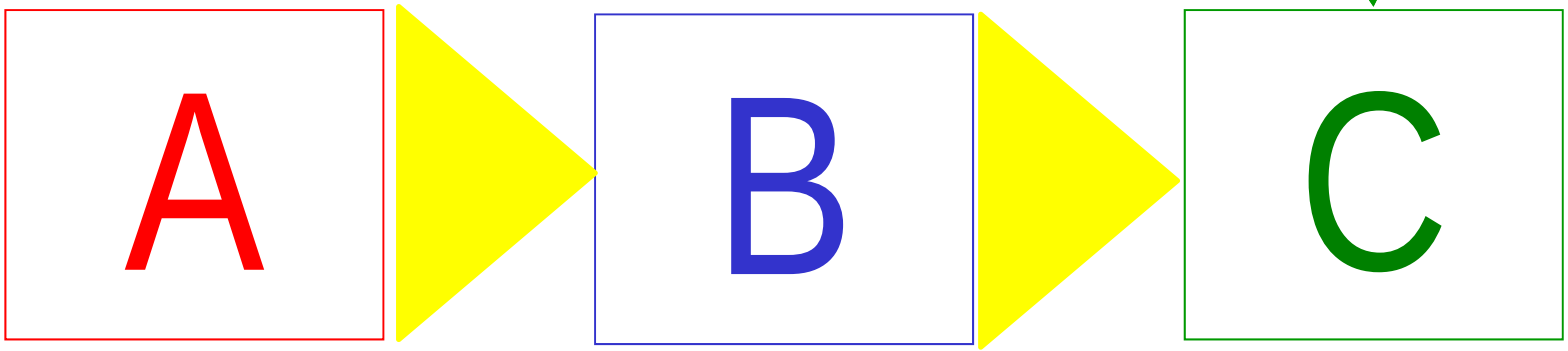
ABC: The Core of Behavior Management

"....at the core of behavioral interventions is the three-term contingency consisting of an antecedent, behavior, and consequence."

"…which then may be maintained if it is followed by an event that is pleasurable or reinforcing (i.e., **consequence**)."



Source: Kern, L., Choutka, C. M., & Sokol, N. G. (2002). Assessment-based antecedent interventions used in natural settings to reduce challenging behaviors: An analysis of the literature. *Education & Treatment of Children, 25*, 113-130. p. 113.

Antecedent Strategies to Manage Behavior: Proactive Changes to the Environment

"Antecedent interventions typically involve some type of environmental rearrangement. "

Source: Kern, L., Choutka, C. M., & Sokol, N. G. (2002). Assessment-based antecedent interventions used in natural settings to reduce challenging behaviors: An analysis of the literature. *Education & Treatment of Children, 25*, 113-130. p. 113.

Advantages of Antecedent Strategies vs. 'Reactive Approaches'

1. Can prevent behavior problems from occurring
2. Are typically 'quick acting'
3. Can result in an instructional environment that better promotes student learning

Source: Kern, L. & Clemens, N. H. (2007). Antecedent strategies to promote appropriate classroom behavior. *Psychology in the Schools, 44*, 65-75.

Group Activity: *Big Ideas in Behavior Management*

At your tables:

- Review the big ideas in behavior management presented in this workshop.
- Select the top 1-2 big ideas that you feel are most important for your teachers to understand and keep in mind.

Big Ideas in Behavior Management

1. Student behaviors are not random; they have an underlying purpose
2. Schools should explore' low inference' explanations for student behavior problems before 'high inference'
3. Academic problems often cause behavior problems
4. Motivation has two elements: (a) the student's perceived ability to complete a task multiplied by (b) the value that the student places on completing the task
5. It is better to **prevent** the triggers to problem behaviors than being reactive.

Good Behavior Game pp. 68-71

(Barrish, Saunders, & Wold, 1969)

Sample Classroom Management Strategy: Good Behavior Game (Barrish, Saunders, & Wold, 1969)

The Good Behavior Game is a whole-class intervention to improve student attending and academic engagement. It is best used during structured class time: for example, whole-group instruction or periods of independent seatwork

Description: The class is divided into two or more student teams. The teacher defines a small set of 2 to 3 negative behaviors. When a student shows a problem behavior, the teacher assigns a negative behavior 'point' to that student's team. At the end of the Game time period, any team whose number of points falls below a 'cut-off' set by the teacher earns a daily reward or privilege.

Guidelines for using this intervention: The Game is ideal to use with the entire class during academic study or lecture periods to keep students academically engaged The Game is not suitable for less-structured activities such as cooperative learning groups, where students are expected to interact with each other as part of the work assignment.

Good Behavior Game: Steps

1. The instructor decides when to schedule the Game. (NOTE: Generally, the Good Behavior Game should be used for no more than 45 to 60 minutes per day to maintain its effectiveness.)
2. The instructor defines the 2-3 negative behaviors that will be scored during the Game. Most teachers use these 3 categories:
   - **Talking Out:** The student talks, calls out, or otherwise verbalizes without teacher permission.
   - **Out of Seat:** The student's posterior is not on the seat.
   - **Disruptive Behavior:** The student engages in any other behavior that the instructor finds distracting or problematic.

Good Behavior Game: Steps

3. The instructor selects a daily reward to be awarded to each member of successful student teams. (HINT: Try to select rewards that are inexpensive or free. For example, student winners might be given a coupon permitting them to skip one homework item that night.)
4. The instructor divides the class into 2 or more teams.
5. The instructor selects a daily cut-off level that represents the maximum number of points that a team is allowed (e.g., 5 points).

Good Behavior Game: Steps

6. When the Game is being played, the instructor teaches in the usual manner. Whenever the instructor observes student misbehavior during the lesson, the instructor silently assigns a point to that student's team (e.g., as a tally mark on the board) and continues to teach.
7. When the Game period is over, the teacher tallies each team's points. Here are the rules for deciding the winner(s) of the Game:
   - Any team whose point total is at or below the pre-determined cut-off earns the daily reward. (NOTE: This means that more than one team can win!)
   - If one team's point total is above the cut-off level, that team does not earn a reward.
   - If ALL teams have point totals that EXCEED the cut-off level for that day, only the team with the LOWEST number of points wins.

Good Behavior Game: Troubleshooting

Here are some tips for using the Good Behavior Game:

- Avoid the temptation to overuse the Game. Limit its use to no more than 45 minutes to an hour per day.
- If a student engages in repeated bad behavior to sabotage a team and cause it to lose, you can create an additional 'team of one' that has only one member--the misbehaving student. This student can still participate in the Game but is no longer able to spoil the Game for peers!
- If the Game appears to be losing effectiveness, check to be sure it is being implemented with care and that you are:
  - Assigning points consistently when you observe misbehavior.
  - Not allowing yourself to be pulled into arguments with students when you assign points for misbehavior.
  - Reliably giving rewards to Game winners.
  - Not overusing the Game.

Behavior Challenge: Defining Student Problem Behaviors Clearly pp. 42-46

Defining Problem Student Behaviors…

1. **Define the problem behavior in clear, observable, measurable terms** (Batsche et al., 2008; Upah, 2008). Write a clear description of the problem behavior. Avoid vague problem identification statements such as "The student is disruptive."

   A well-written problem definition should include three parts:

   – Conditions. The condition(s) under which the problem is likely to occur
   – Problem Description. A specific description of the problem behavior
   – Contextual information. Information about the frequency, intensity, duration, or other dimension(s) of the behavior that provide a context for estimating the degree to which the behavior presents a problem in the setting(s) in which it occurs.

Sample Problem Behavior Definitions		
Conditions. The condition(s) under which the problem is likely to occur	*Problem Description. A specific description of the problem behavior*	*Contextual Information. Information about the frequency, intensity, duration, or other dimension(s) of the behavior*
During 20-minute independent seatwork literacy tasks,…	…John talks with peers about non-instructional topics…	…an average of three times.
In school settings such as the playground or gymnasium, when unsupervised by adults,…	…Angela is reported by peers to use physically threatening language…	…at least once per week.
When given a verbal teacher request…	…Jay fails to comply with that request within 3 minutes…	… an average of 50% of the time.

Defining Problem Student Behaviors…

2. **Develop examples and non-examples of the problem behavior** (Upah, 2008). Writing both examples and non-examples of the problem behavior helps to resolve uncertainty about when the student's conduct should be classified as a problem behavior. Examples should include the most frequent or typical instances of the student problem behavior. Non-examples should include any behaviors that are acceptable conduct but might possibly be confused with the problem behavior.

Examples and Non-Examples of Problem Behavior		
Problem Behavior	Examples	Non-Examples
During 20-minute independent seatwork literacy tasks, John talks with peers about non-instructional topics	• John chats with another student that he encounters at the pencil sharpener. • John whispers to a neighboring student about a comic book in his desk.	• At the direction of the teacher, John pairs up with another student to complete an assignment.. • John verbally interacts with students in an appropriate manner while handing out work materials as requested by the teacher.
When given a verbal teacher request, Jay fails to comply with that request within 3 minutes.	• Jay does not comply when directed by the teacher to open his math book and begin work. • Jay is verbally defiant and uncooperative when requested by an adult to stop running in the hall.	• Jay does not comply with a teacher request because he does not hear that request. • Jay asks the teacher to explain directions that he does not understand.

Defining Problem Student Behaviors…

3. **Write a behavior hypothesis statement** (Batsche et al., 2008; Upah, 2008). The next step in problem-solving is to develop a hypothesis about why the student is engaging in an undesirable behavior or not engaging in a desired behavior. Teachers can gain information to develop a hypothesis through direct observation, student interview, review of student work products, and other sources. The behavior hypothesis statement is important because (a) it can be tested, and (b) it provides guidance on the type(s) of interventions that might benefit the student.

Behavior Hypothesis Statements		
Problem Behavior	<Because>	Hypothesis
During 20-minute independent seatwork literacy tasks, John talks with peers about non-instructional topics…	…because…	…he is avoiding academic work.
When given a verbal teacher request, Jay fails to comply with that request…	…because…	…he is reinforced by the negative adult attention that results from his noncompliance.

Common 'Root Causes' or 'Drivers' for Behaviors Include…

- Power/Control
- Protection/Escape/Avoidance
- Attention
- Acceptance/Affiliation
- Expression of Self
- Gratification
- Justice/Revenge

Source: Witt, J. C., Daly, E. M., & Noell, G. (2000). Functional assessments: A step-by-step guide to solving academic and behavior problems. Longmont, CO: Sopris West..pp. 3-4.

Defining Problem Student Behaviors…

4. **Select a replacement behavior** (Batsche et al., 2008). Behavioral interventions should be focused on increasing student skills and capacities, not simply on suppressing problem behaviors. By selecting a positive behavioral goal that is an appropriate replacement for the student's original problem behavior, the teacher reframes the student concern in a manner that allows for more effective intervention planning.

Selection of Replacement Behavior	
Problem Behavior	Replacement Behavior
During 20-minute independent seatwork literacy tasks, John talks with peers about non-instructional topics.	During 20-minute independent seatwork literacy tasks, John is engaged in active accurate academic responding.
When given a verbal teacher request, Jay fails to comply with that request.	When given a verbal teacher request, Jay carries out the request without argument or complaint within 3 minutes.

Defining Problem Student Behaviors…

5. **Write a prediction statement** (Batsche et al., 2008; Upah, 2008). The prediction statement proposes a strategy (intervention) that is predicted to improve the problem behavior. The importance of the prediction statement is that it spells out specifically the expected outcome if the strategy is successful. The formula for writing a prediction statement is to state that *if* the proposed strategy ('Specific Action') is adopted, then the *rate* of problem behavior is expected to *decrease* or *increase* in the desired direction.

Prediction Statement		
Specific Action	Problem Behavior	Rate of Behavior
If prior to independent seatwork, John meets with a tutor to review key vocabulary terms and rehearse the assigned reading,..	…the amount of time that John spends talking with peers about non-instructional topics during independent work…	…will decrease.
If adults avoid engaging Jay in long exchanges when he fails to comply with their requests and instead impose appropriate pre-selected consequences…	…the frequency of Jay's timely compliance with adult requests…	…will increase.

Finding the Right Behavioral Intervention: Five Steps to Defining Student Problem Behaviors

Teachers can select effective interventions for student behavior problems only if they first clearly define the problem behavior(s) and the reason(s) that a behavior is occurring.

The process of defining student problem behaviors goes more smoothly if the teacher has first collected relevant information about the student's problem behavior (e.g., examples of seatwork, anecdotal notes of student behavior, frequency counts of behavior, student interview, etc.).

By following the five steps below, the teacher is more likely to describe a student's problem behavior(s) with clarity and to identify effective interventions to address them.

1. **Define the problem behavior in clear, observable, measurable terms.**

Sample Problem Behavior Definitions		
Conditions. The condition(s) under which the problem is likely to occur	*Problem Description. A specific description of the problem behavior*	*Contextual Information. Information about the frequency, intensity, duration, or other dimension(s) of the behavior*

2. **Develop examples and non-examples of the problem behavior.**

Examples and Non-Examples of Problem Behavior	
Examples	Non-Examples

3. **Write a behavior hypothesis statement.**

Behavior Hypothesis Statements		
Problem Behavior	<Because>	Hypothesis
	...because...	

4. **Select a replacement behavior.**

Selection of Replacement Behavior
Replacement Behavior

5. **Create a prediction statement.**

Prediction Statement		
Specific Action	Problem Behavior	Rate of Behavior

Defining Student Problem Behaviors: Team Activity

- Discuss how your school might promote the use **by all teachers** of this 5-step behavior-problem identification process.

Five Steps in Understanding & Addressing Problem Behaviors:

1. Define the problem behavior in clear, observable, measurable terms.
2. Develop examples and non-examples of the problem behavior.
3. Write a behavior hypothesis statement.
4. Select a replacement behavior.
5. Write a prediction statement.

Finding the Right Spark: Strategies for Motivating the Resistant Learner

Student Motivation: Reframing the Issue in Observable (and Fixable) Terms

Step 1: Redefine 'motivation' as academic engagement: e.g., The student chooses "to engage in active accurate academic responding" (Skinner, Pappas, & Davis, 2005).

Step 2: Build staff support for this mission statement: "When a student appears unmotivated, it is the school's job to figure out why the student is unmotivated and to find a way to get that student motivated."

Source: Skinner, C. H., Pappas, D. N., & Davis, K. A. (2005). Enhancing academic engagement: Providing opportunities for responding and influencing students to choose to respond. *Psychology in the Schools, 42*, 389-403.

Motivation Challenge:

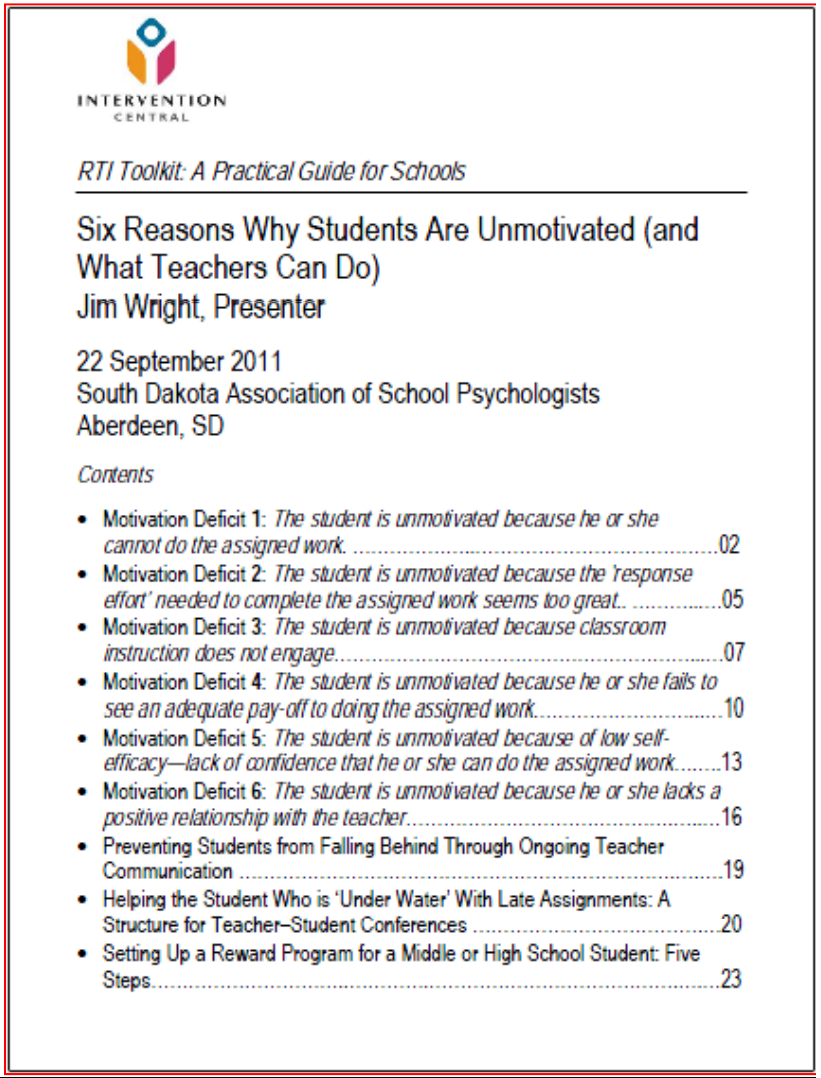
Analyzing Why a Student Lacks Motivation and Selecting Appropriate Strategies

Six Reasons That Students Are Unmotivated (And What Teachers Can Do)

- The student is unmotivated because he or she cannot do the assigned work.
- The student is unmotivated because the 'response effort' needed to complete the assigned work seems too great.
- The student is unmotivated because classroom instruction does not engage.
- The student is unmotivated because he or she fails to see an adequate pay-off to doing the assigned work.
- The student is unmotivated because of low self-efficacy—lack of confidence that he or she can do the assigned work.
- The student is unmotivated because he or she lacks a positive relationship with the teacher.

Six Reasons Why Students Are Unmotivated (And What Teachers Can Do)

- This handout provides guidance to teachers in identifying why a student lacks motivation and what general strategies are recommended in the research.
- The teacher then has latitude to use the general guidelines and the research that supports them as a starting-point for their own intervention ideas to boost motivation.



INTERVENTION CENTRAL

RTI Toolkit: A Practical Guide for Schools

Six Reasons Why Students Are Unmotivated (and What Teachers Can Do)
Jim Wright, Presenter

22 September 2011
South Dakota Association of School Psychologists
Aberdeen, SD

Contents

Motivation Deficit 1: *The student is unmotivated because he or she cannot do the assigned work.*

- **Profile of a Student with This Motivation Problem:**
  The student lacks essential skills required to do the task.

Motivation Deficit 1: Cannot Do the Work

- **Profile of a Student with This Motivation Problem (Cont.):** Areas of deficit might include:
- *Basic academic skills.* Basic skills have straightforward criteria for correct performance (e.g., the student defines vocabulary words or decodes text or computes 'math facts') and comprise the building-blocks of more complex academic tasks (Rupley, Blair, & Nichols, 2009).
- *Cognitive strategies.* Students employ specific cognitive strategies as "guiding procedures" to complete more complex academic tasks such as reading comprehension or writing (Rosenshine, 1995
- *Academic-enabling skills.* Skills that are 'academic enablers' (DiPerna, 2006) are not tied to specific academic knowledge but rather aid student learning across a wide range of settings and tasks (e.g., organizing work materials, time management).

Motivation Deficit 1: Cannot Do the Work (Cont.)

- **What the Research Says:** When a student lacks the capability to complete an academic task because of limited or missing basic skills, cognitive strategies, or academic-enabling skills, that student is still in the acquisition stage of learning (Haring et al., 1978). That student cannot be expected to be motivated or to be successful as a learner unless he or she is first explicitly taught these weak or absent essential skills (Daly, Witt, Martens & Dool, 1997).

Motivation Deficit 1: Cannot Do the Work (Cont.)

- **How to Verify the Presence of This Motivation Problem:** The teacher collects information (e.g., through observations of the student engaging in academic tasks; interviews with the student; examination of work products, quizzes, or tests) demonstrating that the student lacks basic skills, cognitive strategies, or academic-enabling skills essential to the academic task.

Motivation Deficit 1: Cannot Do the Work (Cont.)

- **How to Fix This Motivation Problem:** Students who are not motivated because they lack essential skills need to be taught those skills.

  Direct-Instruction Format. Students learning new material, concepts, or skills benefit from a 'direct instruction' approach. (Burns, VanDerHeyden & Boice, 2008; Rosenshine, 1995; Rupley, Blair, & Nichols, 2009).

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- ❑ ensures that the lesson content is appropriately matched to students' abilities.
- ❑ opens the lesson with a brief review of concepts or material that were previously presented.
- ❑ states the goals of the current day's lesson.
- ❑ breaks new material into small, manageable increments, or steps.
- ❑ throughout the lesson, provides adequate explanations and detailed instructions for all conce and materials being taught. NOTE: Verbal explanations can include 'talk-alouds' (e.g., the teacher describes and explains each step of a cognitive strategy) and 'think-alouds' (e.g., the teacher applies a cognitive strategy to a particular problem or task and verbalizes the steps applying the strategy).
- ❑ regularly checks for student understanding by posing frequent questions and eliciting group responses.
- ❑ verifies that students are experiencing sufficient success in the lesson content to shape their learning in the desired direction and to maintain student motivation and engagement.
- ❑ provides timely and regular performance feedback and corrections throughout the lesson as needed to guide student learning.
- ❑ allows students the chance to engage in practice activities distributed throughout the lesson (e.g., through teacher demonstration; then group practice with teacher supervision and feedback; then independent, individual student practice).
- ❑ ensures that students have adequate support (e.g., clear and explicit instructions; teacher monitoring) to be successful during independent seatwork practice activities.

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- ❑ ensures that students have adequate support (e.g., clear and explicit instructions; teacher monitoring) to be successful during independent seatwork practice activities.

Motivation Deficit 2: *The student is unmotivated because the 'response effort' needed to complete the assigned work seems too great.*

- **Profile of a Student with This Motivation Problem:** Although the student has the required skills to complete the assigned work, he or she perceives the 'effort' needed to do so to be so great that the student loses motivation.

Motivation Deficit 2: Response Effort (Cont.)

- **What the Research Says:** Research indicates that (1) as the perceived effort to complete an academic task or other behavior ('response effort') *increases*, people are *less* likely to engage in that behavior, while (2) as the effort to complete the same behavior *decreases*, people are *more* likely to engage in it (Friman & Poling, 1995).

Motivation Deficit 2: Response Effort (Cont.)

- **How to Verify the Presence of This Motivation Problem:** The teacher first checks to see that the student has the requisite skills needed for academic success. The teacher then looks for evidence that, in specific situations, the student is reluctant to undertake academic tasks because they are perceived to require too much effort.

  Tell-tale signs that a student may be unmotivated because of the required response effort include procrastination, verbal complaining, frequent seeking of teacher help, and other avoidant behaviors.

Motivation Deficit 2: Response Effort (Cont.)

- **How to Fix This Motivation Problem:** Teachers can increase student motivation through any method that reduces the apparent 'response effort' of an academic task (Friman & Poling, 1995). - so long as that method does not hold the student to a lesser academic standard than classmates (Skinner, Pappas, & Davis, 2005).

Motivation Deficit 2: Response Effort (Cont.)

Try These Ideas to Improve Motivation by Reducing Response Effort :

- *Start Assigned Readings in Class.* Whenever the teacher assigns a challenging text for students to read independently (e.g., as homework), the teacher (or perhaps a skilled student reader) reads the first few paragraphs of the assigned reading aloud while the class follows along silently in their own texts. Students are then expected to read the remainder of the text on their own.

Motivation Deficit 2: Response Effort (Cont.)

Try These Ideas to Improve Motivation by Reducing Response Effort :

- *Begin Challenging Homework Assignments in Class.* When assigned challenging homework, students are paired off or divided into groups and given a small amount of class time to begin the homework together, develop a plan for completing the homework, formulate questions about the homework, or engage in other activities that will create the necessary momentum to motivate students then to complete the work independently.

Motivation Deficit 2: Response Effort (Cont.)

Try These Ideas to Improve Motivation by Reducing Response Effort :

- *'Chunk' Assignments.* The teacher breaks a larger student assignment into smaller 'chunks'. The teacher provides the student with performance feedback and praise for each completed 'chunk' of assigned work (Skinner, Pappas, & Davis, 2005).
- *Select a Supportive Peer or Adult to Get a Student Started on Assignments.* If a student finds it difficult to get organized and begin independent seatwork activities, a supportive peer or adult in the classroom can get the student organized and started on the assignment.

Motivation Deficit 2: Response Effort (Cont.)

Try These Ideas to Improve Motivation by Reducing Response Effort :

- *Provide a Formal Work Plan.* For more complex assignments such as research papers, the teacher gives the student an outline of a work plan for completing those assignments. The plan breaks a larger assignment into appropriate sub-steps (e.g., 'find five research articles for the paper', 'summarize key information from research articles into notes', etc.). For each sub-step, the plan provides (1) an estimate of the minimum 'seat time' required to complete it and (2) sets a calendar-date deadline for completion. The teacher then touches base with the student at least weekly about his or her progress.

Helping the Student Who is ‘Under Water’ With Late Assignments: A Structure for Teacher–Student Conferences

Negotiating Missing Work: Student-Teacher Conference

When students fall behind in their classwork, they can quickly enter a downward spiral. Some students become overwhelmed and simply give up.

In such cases, the teacher may want to meet with the student –and if possible, a parent--to help that student to create a work plan to catch up with late work.

At the meeting, the teacher and student inventory what work is missing, negotiate a plan to complete that overdue work, and perhaps agree on a reasonable penalty when late work is turned in. All attending then sign off on the work plan. The teacher also ensures that the atmosphere at the meeting is supportive.

Negotiating Missing Work: Student-Teacher Conference (Cont.)

Here in greater detail are the steps that the teacher and student would follow at a meeting to renegotiate missing work:

1. *Inventory All Missing Work*. The teacher reviews with the student all late or missing work. The student is given the opportunity to explain why the work has not yet been submitted.

Negotiating Missing Work: Student-Teacher Conference (Cont.)

2. *Negotiate a Plan to Complete Missing Work*. The teacher and student create a log with entries for all missing assignments. Each entry includes a description of the missing assignment and a due date by which the student pledges to submit that work. This log becomes the student's work plan. Submission dates for late assignments should be realistic--particularly for students who owe a considerable amount of late work and are also trying to keep caught up with current assignments.

Student Late-Work Planning Form: Middle & High School

Teacher: _____ Course: _____

Student: _____ Date: _____/____/_____

Directions: At a teacher-student conference, use this form to create a plan for the student to complete and submit missing or late work.

Assignment	Target Date for Completion	NOTES

What penalty–if any–will be imposed for these late assignments? _____

_____

_____ _____ _____

Student Signature Teacher Signature Parent Signature

Negotiating Missing Work: Student-Teacher Conference (Cont.)

3. *[Optional] Impose a Penalty for Missing Work*. The teacher may decide to impose a penalty for the work being submitted late. Examples of possible penalties are a reduction of points (e.g., loss of 10 points per assignment) or the requirement that the student do additional work on the assignment than was required of his or her peers who turned it in on time. If imposed, such penalties would be spelled out at this teacher-student conference. Any penalties should be balanced and fair, permitting the teacher to impose appropriate consequences while allowing the student to still see a path to completing missing work and passing the course.

Negotiating Missing Work: Student-Teacher Conference (Cont.)

4. *Periodically Check on the Status of the Missing-Work Plan*. If the schedule agreed upon by teacher and student to complete and submit all late work exceeds two weeks, the teacher (or other designated school contact, such as a counselor) should meet with the student weekly while the plan is in effect. At these meetings, the teacher checks in with the student to verify that he or she is attaining the plan milestones on time and still expects to meet the submission deadlines agreed upon. If obstacles to emerge, the teacher and student engage in problem-solving to resolve them.

Motivation Deficit 3: *The student is unmotivated because classroom instruction does not engage.*

- **Profile of a Student with This Motivation Problem:** The student is distracted or off-task because classroom instruction and learning activities are not sufficiently reinforcing to hold his or her attention.

> *…researchers [shows] that when provided with a choice of two or more behaviors, with all else held constant, students are more likely to choose to engage in the behavior that results in more immediate reinforcement, higher rate reinforcement, or higher quality reinforcement… Thus, educators can increase the probability of students choosing to engage in assigned work by both enhancing reinforcement for assigned tasks and weakening reinforcement for competing behaviors…* (Skinner et al., 2005; p. 396)

Source: Skinner, C. H., Pappas, D. N., & Davis, K. A. (2005). Enhancing academic engagement: Providing opportunities for responding and influencing students to choose to respond. *Psychology in the Schools, 42,* 389-403.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

- **What the Research Says:** In classroom settings, students can choose to respond to a variety of reinforcing events—for example, watching the teacher, interacting with peers, looking out the window at passing traffic. The fact is that classroom instruction must always compete for student attention with other sources of reinforcement (Billington & DiTommaso, 2003; Skinner, Pappas, & Davis, 2005). There are two ways that the instructor can increase the student's motivation to attend to classroom instruction: (1) by *decreasing* the reinforcing power of competing (distracting) stimuli, and/or (2) by *increasing* the reinforcing power of academic activities.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

- **How to Verify the Presence of This Motivation Problem:** The teacher observes that the student is engaged in behaviors other than those related to instruction or is otherwise distracted by non-instructional events occurring in the classroom. Furthermore, the teacher has verified that the student's lack of attention to instruction is not due primarily to that student's attempting to escape or avoid difficult classwork.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

- **How to Fix This Motivation Problem:** The teacher can increase the inattentive student's focus on instruction and engagement in learning activities by:
  - *Reducing the Reinforcing Power of Non-Instructional Activities.* The teacher identifies any non-instructional activities in the classroom that are competing with instruction for the student's attention and takes steps to reduce or eliminate them.
  - *Increasing the Reinforcing Power of Classroom Instruction.* The teacher strives to boost the reinforcing quality of academic activities and instruction to better capture and hold the student's attention.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Reducing* the Reinforcing Power of Non-Instructional Activities:

- *Use Preferential Seating* (U.S. Department of Education, 2004). The teacher seats a student who is distracted by peers or other environmental factors in a location where the student is most likely to stay focused on instructional content. All teachers have an 'action zone', a part of the room where they tend to focus most of their instruction; the instructor seats the distractible student somewhere within that zone. The ideal seating location for any particular student will vary, depending on the unique qualities of that student and of the classroom.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Reducing* the Reinforcing Power of Non-Instructional Activities:

- *Create Low-Distraction Work Areas* (U.S. Department of Education, 2004. For students who are off-task during independent seatwork, the teacher can set up a study carrel in the corner of the room or other low-distraction work area. The teacher can then either direct the distractible student to use that area whenever independent seatwork is assigned or can permit the student to choose when to use the area.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Reducing* the Reinforcing Power of Non-Instructional Activities:

- *Restrict Student Access to Electronic Devices and Other Potential Distracting Objects.* The teacher creates a list of personal possessions that can pose the potential to distract from instruction (e.g., cell phones, personal game devices, etc.). The teacher either completely bans use of these items of student property at any point during a course session or restricts their use to clearly specified times or conditions.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Increasing* the Reinforcing Power of Classroom Instruction:

- *Use Bellringer Activities.* The teacher routinely gives students 'bellringer' activities to work on as soon as they enter the classroom. The point of this strategy is to capture students' attention at the outset with academically relevant activities. Ideally, bellringer tasks should be engaging but also should review and reinforce previously taught content or prepare students for the upcoming lesson.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Increasing* the Reinforcing Power of Classroom Instruction:

- *Provide Opportunities for Choice* (Kern, Bambara, & Fogt, 2002). One efficient way to promote choice in the classroom is for the teacher to create a master menu of options that students can select from in various learning situations. For example, during independent assignment, students might be allowed to (1) choose from at least 2 assignment options, (2) sit where they want in the classroom, and (3) select a peer-buddy to check their work. Student choice then becomes integrated seamlessly into the classroom routine.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Increasing* the Reinforcing Power of Classroom Instruction:

- *Structure Lessons around High-Interest or Functional-Learning Goals* (Kern, Bambara, & Fogt, 2002; Miller et al., 2003). A student is more likely to be engaged when academic lessons are based on 'high-interest' topics that interest the student (e.g., NASCAR racing; fashion) or that have a 'functional-learning' pay-off—e.g., job interview skills; money management skills --that the student values and can apply in his or her own life.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Increasing* the Reinforcing Power of Classroom Instruction:

- *Incorporate Cooperative Learning Activities into Instruction* (Beyda, Zentall, & Ferko, 2002; Linnenbrink & Pintrich, 2002). Teacher-directed cooperative learning activities can be highly reinforcing for adolescent students, who typically find opportunities to interact with classmates to be a strong motivator. Cooperative learning tasks have the added advantages of promoting active student engagement and allowing the instructor to get real-time feedback through direct observation about the abilities and learning of individual students.

Motivation Deficit 3: Instruction Does Not Engage (Cont.)

Try These Ideas to Improve Motivation by *Increasing* the Reinforcing Power of Classroom Instruction:

- *Maintain a Brisk Pace of Instruction* (Gettinger & Seibert, 2002). Instruction that is well-matched to the abilities of the classroom and moves at a brisk pace is most likely to capture and hold student attention. Additionally, the teacher is careful to avoid 'dead time', interruptions of instruction (e.g., time-consuming transitions to other activities; etc.) when students may get off-task and be difficult to redirect back to academic tasks.

Motivation Deficit 4: *The student is unmotivated because he or she fails to see an adequate pay-off to doing the assigned work.*

- **Profile of a Student with This Motivation Problem:** The student requires praise, access to rewards, or other reinforcers in the short term as a temporary 'pay-off' to encourage her or him to apply greater effort.

Motivation Deficit 4: Insufficient Student Pay-Off (Cont.)

- **What the Research Says:** The use of external rewards ('reinforcers') can serve as a temporary strategy to encourage a reluctant student to become invested in completing school work and demonstrating appropriate behaviors (Akin-Little, Eckert, Lovett, & Little, 2004). As the student puts increased effort into academics and behavior to earn teacher-administered reinforcers, the student may in turn begin to experience such positive natural reinforcers as improved grades, increased peer acceptance, a greater sense of self-efficacy in course content, and higher rates of teacher and parent approval. The teacher can then fade and perhaps fully eliminate the use of rewards.

Motivation Deficit 4: Insufficient Student Pay-Off (Cont.)

- **How to Verify the Presence of This Motivation Problem:** Through direct observation, student interview, and/or other means, the teacher has verified that instruction is effectively delivered and sufficiently engaging for most of the class, that the target student has the academic and related skills required for the academic work, and that the student has failed to be motivated by existing incentives such as grades that are typically available in classrooms. In the teacher's judgment, the target student needs additional incentives (e.g., praise, rewards) to promote motivation to complete academic tasks.

Motivation Deficit 4: Insufficient Student Pay-Off (Cont.)

- How to Fix This Motivation Problem:

  Praise the Student. The teacher praises the student in clear and specific terms when the student engages in the desired behavior (Kern & Clemens, 2007). The teacher uses praise statements at a rate sufficient to motivate and guide the student toward the behavioral goal.

Praise: Effective…and Underused

Praise can be an efficient way to raise the compliance level of whole groups or individual students. However, studies show that praise is seldom used with general education students and is used even less often with special-needs students (Kern & Clemens, 2007).

Source: Kern, L. & Clemens, N. H. (2007). Antecedent strategies to promote appropriate classroom behavior. *Psychology in the Schools, 44*, 65-75.

Motivation Deficit 4: Insufficient Student Pay-Off (Cont.)

- **How to Fix This Motivation Problem:**

  Use Rewards. The teacher establishes a reward system to motivate an individual student by implementing these steps (e.g., Kazdin, 1989):

  1. *Define the Target Behavior*.
  2. *Establish Criteria for Success*.
  3. *Choose Student Incentives*.
  4. *Decide Whether a Point System Will Be Used*.
  5. *Decide How the Reward is to Be Delivered.*

Setting Up a Reward Program for a Middle or High School Student: Five Steps

Students who lack motivation to apply effort or behave appropriately in their middle or high school classrooms may benefit from the temporary opportunity to earn incentives for important behavioral goals such as paying attention in class, doing assigned work, or complying with teacher requests. Reward programs can work well for students who chronically struggle in the classroom and do not see a meaningful payoff to doing their assigned work. The purpose of a reward program is to give the student external incentives to encourage increased effort. Presumably, as the student tries harder to attend to instruction and complete academic tasks in order to earn rewards, there is the possibility that the student will also begin to experience collateral benefits from the increased effort, such as improved grades, greater peer acceptance, and an improved sense of self-efficacy with course work. As these benefits accrue, the teacher can gradually fade, then discontinue, the reward program.

General guidelines appear below for setting up an individual reward program in a middle or high school classroom:

1. **Define the Target Behavior.** The teacher writes a definition of the undesired student behavior to be decreased or the desired behavior to be increased as a result of the reward program. The behavioral definition should be written in clear, specific terms—sufficiently clear to allow different observers who might review the behavioral definition to all be in general agreement about when the student is displaying that behavior in the classroom.

   Here are sample behavioral definitions:

   - *John turns in homework, with clear evidence that he has attempted each problem or item assigned.*
   - *Jane remains in her seat during large-group instruction.*
   - *Frank complies with teacher requests within 1 minute.*

2. **Establish Criteria for Success.** The teacher defines the minimum acceptable criteria for student success in the target behavior, which may include information about time intervals, cumulative frequency, and/or percentage of compliance.

   Time-intervals. Most reward systems are based on time intervals. If the student meets the behavioral goal within a specified time interval, the student is judged to have earned an incentive (e.g., reward, token point, praise, etc.). Here are examples of success criteria tied to time intervals:

Motivating the Reluctant Student: Activity

- Review the two reasons for poor student motivation presented.
- Discuss how your school might identify and support students who lack motivation for these reasons.

- Motivation Deficit 3: The student is unmotivated because classroom instruction does not engage.
- Motivation Deficit 4: The student is unmotivated because he or she fails to see an adequate pay-off to doing the assigned work.

Motivation Deficit 5: *The student is unmotivated because of low self-efficacy—lack of confidence that he or she can do the assigned work.*

- **Profile of a Student with This Motivation Problem:** The student has a low sense of self-efficacy in a subject area, activity, or academic task and that lack of confidence reduces the student's motivation to apply his or her best effort. NOTE: Self-efficacy is the student's view of his or her own abilities specific to a particular academic area (e.g., mathematics) and should not be confused with self-esteem, which represents the student's global view of his or her self-worth.

Motivation Deficit 5: Low Self-Efficacy (Cont.)

- **What the Research Says:** Students often sabotage their academic performance by engaging in negative self-talk about their abilities and by making faulty attributions to explain poor academic performance (Linnenbrink & Pintrich, 2002).

Motivation Deficit 5: Low Self-Efficacy (Cont.)

- **How to Verify the Presence of This Motivation Problem:** Teachers can tap students' impressions of self-efficacy by asking them to 'think aloud' about their abilities in the academic area of interest, encouraging the student to:
  - talk about their perceived strengths and weaknesses as learners in particular subject areas
  - give examples (with details) about specific successes and failures that they have experienced on academic assignments present strategies (if any) that they typically use to
  - Discuss how they complete a range of common academic tasks (e.g., undertaking a term paper, completing a chemistry lab exercise, doing homework)
  - disclose their routine for preparing for quizzes and tests.

Motivation Deficit 5: Low Self-Efficacy (Cont.)

- **How to Fix This Motivation Problem: Challenge Faulty Student Attributions about Ability**. As a student articulates attitudes toward learning and describes techniques that he or she uses as an independent learner, the teacher can use this information to identify whether a low sense of academic self-efficacy may be holding the student back.

  A useful framework for analyzing student views about their academic abilities is presented by Linnenbrink & Pintrich (2002). The authors analyze student attributions along three dimensions: internal/external; stable/unstable; and controllable/uncontrollable.

How Attributions About Learning Contribute to Academic Outcomes

Attribution Theory: Dimensions Affecting Student Interpretation of Academic Successes & Failures (Linnenbrink & Pintrich, 2002)	
The situation or event is…	
• Unstable (changes often)	• Stable (can be counted on to remain relatively unchanged)
• Internal (within the student)	• External (occurring in the surrounding environment)
• Uncontrollable (beyond the ability of the student to influence)	• Controllable (within the student's ability to influence)

How Attributions About Learning Contribute to Academic Outcomes

Some people are born mathematicians. I was born to watch TV.

This teacher always writes impossible tests and picks questions that are impossible to study for!

The situation or event is...

• Unstable (changes often)	• Stable (can be counted on to remain relatively unchanged)
• Internal (within the student)	• External (occurring in the surrounding environment)
• Uncontrollable (beyond the ability of the student to influence)	• Controllable (within the student's ability to influence)

Motivation Deficit 5: Low Self-Efficacy (Cont.)

- Examples of Faulty Student Attributions and 'Teacher Corrections': External vs. Internal

  A student blames the teacher for giving unannounced quizzes that catch the student unprepared (**external** explanation of the problem).

  In response, the instructor points out that the student has the option to review course content regularly and thus always be prepared for quizzes (shifting the focus by tying the **internal** explanation of student preparation to the goal of improving academic performance).

Motivation Deficit 5: Low Self-Efficacy (Cont.)

- Examples of Faulty Student Attributions and 'Teacher Corrections': Stable vs. Unstable

  A student laments to her math teacher that her difficulty in grasping concepts relating to negative numbers shows that she 'will never get a good grade in math' (a view that the problem is long-term and therefore **stable**).

  The teacher helps the student to reframe the problem as **unstable** and likely to improve soon by noting that many students struggle with negative-number concepts but that the student should find upcoming math instructional modules to be much easier to comprehend.

Motivation Deficit 5: Low Self-Efficacy (Cont.)

- Examples of Faulty Student Attributions and 'Teacher Corrections': Controllable vs. Uncontrollable

  A teacher points out to a student who complains about the requirements of a particular course as arbitrary and unfair (**uncontrollable**) that the student was given a syllabus at the start of the semester spelling out all academic requirements to be used as a roadmap for the course, that the syllabus will allow the student to complete assignments ahead of time if he wishes, and that furthermore the student is welcome to seek help from the teacher whenever he chooses (**controllable** factors).

Challenging 'Faulty' Student Attributions: Example

A student says 'I am just not wired to be a writer" (faulty attribution: stable, internal, uncontrollable). The teacher shows the student evidence to disconfirm her attribution: examples of the student's own writing from a portfolio that are of high quality because the topics had interested the student.

The instructor demonstrates that when the student puts effort into her writing, the product is reliably and predictably improved--reframe: unstable/changeable (quality of the writing product depends on student effort), internal (the student has the necessary skill set to produce good writing), controllable (student effort is the key factor in producing a quality writing product).

Source: Linnenbrink, E. A., & Pintrich, P. R. (2002). Motivation as an enabler for academic success. School Psychology Review, 31, 313-327.

Motivation Deficit 6: *The student is unmotivated because he or she lacks a positive relationship with the teacher.*

- **Profile of a Student with This Motivation Problem:** The student appears indifferent or even hostile toward the instructor and thus may lack motivation to follow teacher requests or to produce work.

Motivation Deficit 6: Lack of Positive Relationship (Cont.)

- **What the Research Says:** Because humans are highly social beings, positive teacher attention can be a very powerful motivator for students (e.g., Kazdin, 1989).

Motivation Deficit 6: Lack of Positive Relationship (Cont.)

- **What the Research Says (Cont.):** At times, however, instructors and students can fall into a 'negative reinforcement trap' (Maag, 2001; p. 176) that actively undercuts positive relationships: A student who has difficulty with the classwork misbehaves and is then sent by the teacher to the principal's office. Both teacher and student are reinforced by the student's exclusion from the classroom: The teacher is negatively reinforced by having a difficult student removed from the room and the student is *also* negatively reinforced by being allowed to escape the challenging classwork. Because this scenario is reinforcing to both parties, it is very likely to be repeated with increasing frequency unless the teacher intervenes to break the negative cycle.

Motivation Deficit 6: Lack of Positive Relationship (Cont.)

- **How to Verify the Presence of This Motivation Problem:** The teacher looks for evidence that the student lacks a positive relationship with the teacher, such as:
  - the student's apparent avoidance of opportunities to talk to the teacher
  - a lack of eye contact, sarcastic or defiant student comments
  - a general pattern of defiant or non-compliant behavior.

  NOTE: Because teachers as well as students are social beings, an instructor's impression of whether a student 'likes' them or not can often be a good predictor of the actual state of the teacher-student relationship.

Motivation Deficit 6: Lack of Positive Relationship (Cont.)

- **How to Fix This Motivation Problem:** The teacher provides the student with increased doses of positive attention at times when the student is engaging in appropriate behavior. (At the same time, the teacher keeps interactions with the student brief and neutral when that student misbehaves—although the student otherwise is held to the same behavioral expectations as his or her peers.)

Motivation Deficit 6: Lack of Positive Relationship (Cont.)

Try These Ideas to Improve the Student-Teacher Relationship:

- *Strive for a High Ratio of Positive Interactions with Students* (Sprick, Borgmeier, & Nolet, 2002). A general, proactive rule of thumb to promote positive teacher-student relationships is for instructors to maintain a ratio of at least three positive interactions with any student for every negative (disciplinary) interaction that they have that student.

Motivation Deficit 6: Lack of Positive Relationship (Cont.)

Try These Ideas to Improve the Student-Teacher Relationship:

- *Commit to a Short Series of Positive 'Micro-Conversations'* (Mendler, 2000). The teacher selects a student with whom that instructor wants to build a more positive relationship. The instructor makes a commitment to spend 2 minutes per day for ten consecutive days engaging the student in a positive conversation about topics of interest to that student. NOTE: During those two-minute daily conversations, the teacher maintains a positive tone and avoids talking about the student's problem behaviors or poor academic performance.

Motivation Deficit 6: Lack of Positive Relationship (Cont.)

Try These Ideas to Improve the Student-Teacher Relationship:

- *Emphasize the Positive in Teacher Requests* (Braithwaite, 2001). The teacher avoids using negative phrasing (e.g., "If you don't return to your seat, I can't help you with your assignment") when making a request of a student. Instead, the teacher request is stated in positive terms (e.g., "I will be over to help you on the assignment just as soon as you return to your seat"). When a request has a positive 'spin', that teacher is less likely to trigger a power struggle and more likely to gain student compliance.

Motivating the Reluctant Student: Activity

- Review the two reasons for poor student motivation presented.
- Discuss how your school might identify and support students who lack motivation for these reasons.

- Motivation Deficit 5: The student is unmotivated because of low self-efficacy—lack of confidence that he or she can do the assigned work.
- Motivation Deficit 6: The student is unmotivated because he or she lacks a positive relationship with the teacher.

Anticipating the Unmotivated Student

Teachers can proactively use the checklist of reasons for poor motivation (and related strategies to address them).

The teacher reviews each motivation blocker and verifies that he or she has procedures in place at the group level to address them.

- The student is unmotivated because he or she cannot do the assigned work.
- The student is unmotivated because the 'response effort' needed to complete the assigned work seems too great.
- The student is unmotivated because classroom instruction does not engage.
- The student is unmotivated because he or she fails to see an adequate pay-off to doing the assigned work.
- The student is unmotivated because of low self-efficacy—lack of confidence that he or she can do the assigned work.
- The student is unmotivated because he or she lacks a positive relationship with the teacher.

The Unmotivated Student: Possible Reasons: Activity

At your table:

- Review the possible reasons for lack of student motivation reviewed in this presentation.
- Discuss which of these reasons your school would probably be MOST open to addressing and which might cause some resistance among staff.

- The student is unmotivated because he or she cannot do the assigned work.
- The student is unmotivated because the 'response effort' needed to complete the assigned work seems too great.
- The student is unmotivated because classroom instruction does not engage.
- The student is unmotivated because he or she fails to see an adequate pay-off to doing the assigned work.
- The student is unmotivated because of low self-efficacy—lack of confidence that he or she can do the assigned work.
- The student is unmotivated because he or she lacks a positive relationship with the teacher.

Secondary-Level Tier 1 Intervention: Behavioral Case Example

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INTERVENTION CENTRAL

Tier 1 Case Example: Justin:
Non-Compliance

Case Example: Non-Compliance

The Problem

- Justin showed a pattern from the start of the school year of not complying with teacher requests in his English class. His teacher, Mr. Steubin, noted that – when given a teacher directive—Justin would sometimes fail to comply. Justin would show no obvious signs of opposition but would sit passively or remain engaged in his current activity, as if ignoring the instructor.

  When no task demands were made on him, Justin was typically a quiet and somewhat distant student but otherwise appeared to fit into the class and show appropriate behavior.

Case Example: Non-Compliance

The Evidence

- *Student Interview.* Mr. Steubin felt that he did not have a strong relationship with the student, so he asked the counselor to talk with Justin about why he might be non-compliant in English class. Justin told the counselor that he was bored in the class and just didn't like to write. When pressed by the counselor, Justin admitted that he could do the work in the class but chose not to.
- *Direct Observation.* Mr. Steubin noted that Justin was less likely to comply with writing assignments than other in-class tasks. The likelihood that Justin would be non-compliant tended to go up if Mr. Steubin pushed him to comply in the presence of Justin's peers. The odds that Justin would comply also appeared to increase when Mr. Steubin stated his request and walked away, rather than continuing to 'nag' Justin to comply.

Case Example: Non-Compliance

The Evidence (Cont.)

- *Work Products*. Mr. Steubin knew from the assignments that he did receive from Justin that the student had adequate writing skills. However, Justin's compositions tended to be short, and ideas were not always as fully developed as they could be—as Justin was doing the minimum to get by.
- *Input from Other Teachers.* Mr. Steubin checked with other teachers who had Justin in their classes. The Spanish teacher had similar problems in getting Justin to comply but the science teacher generally found Justin to be a compliant and pleasant student. She noted that Justin seemed to really like hands-on activities and that, when potentially non-compliant, he responded well to gentle humor.

Case Example: Non-Compliance

The Intervention

- Mr. Steubin realized that he tended to focus most of his attention on Justin's non-compliance. So the student's non compliance might be supported by teacher attention. OR the student's compliant behaviors might be extinguished because Mr. Steubin did not pay attention to them.

- The teacher decided instead that Justin needed to have appropriate consequences for non-compliance, balanced with incentives to engage in learning tasks. Additionally, Mr. Steubin elected to give the student attention at times that were NOT linked to non-compliance.

Case Example: Non-Compliance

The Intervention (Cont.)

- *Appropriate Consequences for Non-Compliance*. Mr. Steubin adopted a new strategy to deal with Justin's episodes of non-compliance. Mr. Steubin got agreement from Justin's parents that the student could get access to privileges at home each day only if he had a good report from the teacher about complying with classroom requests.

  Whenever the student failed to comply within a reasonable time (1 minute) to a teacher request, Mr. Steubin would approach Justin's desk and quietly restate the request as a two-part 'choice' statement. He kept his verbal interactions brief and neutral in tone. As part of the 'choice' statement, the teacher told Justin that if he did not comply, his parents would be emailed a negative report. If Justin still did not comply, Mr. Steubin would follow through later that day in sending the report of non-compliance to the parents.

Teacher Command Sequence: Two-Part Choice Statement

1. *Make the request.* Use simple, clear language that the student understands.

   If possible, phrase the request as a positive (*do*) statement, rather than a negative (*don't*) statement. (E.g., *"Justin, please start your writing assignment now."*) Wait a reasonable time for the student to comply (e.g., 1 minute)

Teacher Command Sequence: Two-Part Choice Statement

2. *[If the student fails to comply]* ***Repeat the request as a 2-part choice.*** Give the student two clear choices with clear consequences. Order the choices so that the student hears negative consequence as the first choice and the *teacher request* as the second choice. (E.g., *"Justin, I can email your parents to say that you won't do the class assignment or you can start the assignment now and not have a negative report go home. It's your choice."*) Give the student a reasonable time to comply (e.g., 1 minute).

Teacher Command Sequence: Two-Part Choice Statement

3. *[If the student fails to comply] **Impose the pre-selected negative consequence.*** As you impose the consequence, ignore student questions or complaints that appear intended to entangle you in a power struggle.

Case Example: Non-Compliance

The Intervention (Cont.)

- *Active Student Engagement*. Mr. Steubin reasoned that he could probably better motivate the entire class by making sure that lessons were engaging.

  He made an extra effort to build lessons around topics of high interest to students, built in cooperative learning opportunities to engage students, and moved the lesson along at a brisk pace. The teacher also made 'real-world' connections whenever he could between what was being taught in a lesson and ways that students could apply that knowledge or skill outside of school or in future situations.

Case Example: Non-Compliance

The Intervention (Cont.)

- *Teacher Attention (Non-Contingent).* Mr. Steubin adopted the two-by-ten intervention (A. Mendler, 2000) as a way to jumpstart a connection with Justin. The total time required for this strategy was 20 minutes across ten school days.

Sample Ideas to Improve Relationships With Students: The Two-By-Ten Intervention (Mendler, 2000)

- Make a commitment to spend *2 minutes per day* for *10 consecutive days* in building a relationship with the student…by talking about topics of interest to the student.

  Avoid discussing problems with the student's behaviors or schoolwork during these times.

Source: Mendler, A. N. (2000). *Motivating students who don't care*. Bloomington, IN: National Educational Service.

Case Example: Non-Compliance

The Outcome

- The strategies adopted by Mr. Steubin did not improve Justin's level of compliance right away. Once the teacher had gone through the full ten days of the 'two by ten' intervention, however, Mr. Steubin noticed that Justin made more eye contact with him and even joked occasionally. And the student's rate of compliance then noticeably improved—but still had a way to go.

- Mr. Steubin kept in regular contact with Justin's parents, who admitted about 8 days into the intervention that they were not as rigorous as they should be in preventing him from accessing privileges at home when he was non-compliant at school. When the teacher urged them to hold the line at home, they said that they would –and did. Justin's behavior improved as a result, to the point where his level of compliance was typical for the range of students in Mr. Steubin's class.