Academic Intervention is Deceptively Simple…

_________________________ Responding

Student Achievement

Five Reasons Why Students Don’t Get it Right

1. They _____________ to do it…
   - The student is not motivated to respond to the instructional demands.
   - For example,
     - Chris only finished 25% of his math worksheets correctly until his teacher told him he could have extra computer time for right answers.
     - Sandy had poor coin identification skills and was non-compliant when taught using a multiple-choice discrimination task; but, she improved significantly when the teacher changed to a simulated shopping activity.

2. They need ____________ doing it…
   - Insufficient active responding in curricular materials
   - For example, Shane has a reading problem. Classroom
observations revealed that Shane was only reading 4 minutes a day in the classroom.

3. They need more ___________ …
   - Insufficient prompting and feedback for active responding
     - For example, Jim consistently gets Ds on his history tests. The teacher calls on him infrequently and his answers are mostly incorrect.

   - Student displays poor accuracy in target skill(s)
     - For example, Tanika reads words with consonant combinations with 60% accuracy

   - Student displays poor fluency in target skill(s)
     - For example, it takes Brian 20 minutes to complete 5 math problems correctly.

   - Student does not ____________ use of the skill to the natural setting and/or/to other materials/settings
     - For example, Matthew can read long vowel words on flashcards, but not in texts.

Five Reasons Why Students Don’t Get it Right

4. They haven’t had to do it that way before…
   - The instructional demands do not promote mastery of the curricular objective

For example,
   - Emily’s spelling instruction involves selecting the correctly spelled word from three alternatives.
• Bill has learned that on his vocabulary worksheets if he pays attention to the filled in spaces next to the blank spaces, he can write in the correct word without even reading the definition…

Faulty Curricular Materials: When Correct Responding Goes Awry…

• Is the teaching exercise teaching what you want?
• Do students get the right answer for the wrong reason?

What’s wrong here?

Five Reasons Why Students Don’t Get it Right

5. It’s too hard…

• Student’s skill level is poorly matched to the difficulty level of the instructional materials

• For example,
  • Zach reads 6 words correctly per minute in the reading text in which he is being instructed.

So, How Do I Know Which Strategies to Choose?

Before Intervention

• Effective, scientifically-based curriculum

• A Consumer’s Guide to Evaluating a Core Reading Program Grades K-3: A Critical Elements Analysis
Two Approaches to Selecting Interventions

● Standard Protocol Versus Problem Solving

● Common elements of both approaches (NASDSE):
  ● Procedural steps are followed sequentially,
  ● Interventions are scientifically-based,
  ● Data are collected frequently
  ● Goals or interventions are changed based on child outcomes, and
  ● Decisions are made based on outcome data

Batsche et al. (2005)

Standard Protocol Approach

● Standard instructional program for students who struggle in regular education curriculum

  ● More structured and intensive than general education instruction
  ● In reading, focuses on the five essential components of reading
    ● Phoneme awareness, Phonics, Vocabulary, Reading fluency, and Comprehension
  
  ● Generally, small groups of 3-6 children in pull-out fashion

For Example,

Sharon Vaughn’s 3-tier Reading Model:

http://www.texasreading.org/utcrla/
• 3-Tier Reading Model
  • Classroom instruction
  • Supplemental intervention
  • Intensive intervention

• Classroom instruction: 90 minutes per day

For Example,
• Supplemental intervention
  • Specialized, scientifically based reading program emphasizing 5 areas of reading
  • Small group (3-5 students)
  • Minimum of 30 minutes per day in addition to classroom instruction
  • Progress monitor 2x per week

For Example,
• Intensive intervention
  • Students who have not made adequate progress in Supplemental intervention
  • Intensive, scientifically based reading program emphasizing 5 areas of reading
  • Small group of 3
  • Minimum of two 30 minute sessions per day in addition to classroom instruction
  • Progress monitor 2x per week

• Students move in an out of the levels as needed

Good Intervention Programs in Reading
• Oregon Reading First Review of Supplemental and Intervention Reading Programs: http://oregonreadingfirst.uoregon.edu/
• Headsprout: http://headsprout.com
• Phonemic Awareness in Young Children (Adams, Foorman, Lundberg, & Beeler, 1998)
• *Ladders to Literacy, Preschool Activity Book* (Notari-Syverson, O’Connor, & Vadasy, 1998)

• *Ladders to Literacy, Kindergarten Activity Book* (O’Connor, Notari-Syverson, & Vadasy, 1998)
• *Road to the Code: A Phonological Awareness Program for Young Children* (Blachman, Ball, Black, & Tangel, 2000)
• *Phonological Awareness Training for Reading* (Torgesen & Bryant, 1994)
• *The Lindamood Phoneme Sequencing Program for Reading, Spelling, and Speech* (Lindamood & Lindamood, 1998)

**What About When It’s Still Not Working?**

• Selecting Academic Intervention Strategies
  • Increasing intensity
  • Adapting to instructional need (differentiation)
  • Not wed to a particular tier or RtI model!
  • Not individualized instruction!

• Focus on Two Elements of Instructional Intervention
  • Instructional Presentation Strategies
  • Assigning Instructional Tasks

**Functional Approach to Intervention**

• Local Validation—Proving it works for each student…

• “Functional assessment is the process of gathering information about the antecedents and consequences that are functionally related to the occurrence of a problem behavior. It provides information that helps you determine why a problem behavior is occurring…” Miltenberger (2004)

• Instructional _____________ …
Start with a Simple Question…

- Can they actually do it or not?
- Skill versus Performance Deficit assessment

Protocol for Testing for a Performance Deficit for Classroom Assignments

- Obtain 2 more or more previously completed assignments in which the student has failed or performed markedly below expectations
- Present the 1st assignment (with answers removed) and say, “If you are able to get X number of items (80%) correct, then we can [desirable activity].” If the student increases the score by 25% or obtains a score of 80% or higher, go to next step.
- Present a list of teacher approved reinforcers and have the student indicate which one he/she would like to work for in the future
- Test reinforcer efficacy. Present the previously failed assignment to the student and say, “If you are able to get X number of items (80%) correct, then you can select one of these (show list of rewards). If you get X or fewer correct, then you will not get to select anything.”
- Evaluate outcomes. If the student markedly increases performance when offered incentives, suspect a performance deficit. If performance remains constant under reinforced and non-reinforced trials, then suspect a skill deficit.

Can’t Do Problems: Skill Deficits

- When you have ruled out “won’t do”…
- The _____________ Trial
• A strong contributor to student learning!

• The Instructional Hierarchy
  • A model for thinking about the components of instruction and how to adapt it

The Learning Trial as the Basic Unit of Instruction

TIME

Instructional Antecedent → Student Response → Feedback

Wait Time & Response Latency

Feedback Delay

Intertrial Interval

Learning Trials

• Too simplistic?

• Rosenshine & Berliner (1978)…
  • Found that the sequence of “a pattern of ‘_________________________’ consisting of factual questions, student academic responses, and adult academic feedback” led to higher achievement rates.

  • “The frequency of factual, single-answer questions is positively related to achievement gain in most of these studies.” (p. 10)
The Instructional Hierarchy

Acquisition
- Modeling, prompting, E/C, feedback for every response
- Practice, incentives & feedback for a collection of responses
- Practice and feedback across items, practicing the skill in the context of other skills, etc.

Fluency

Generalization

(Haring, Lovitt, Eaton, & Hansen, 1978)

See also Ardoin & Daly (2007) & Daly, Lentz, & Boyer (1996)
Acquisition Format

TIME → Instructional Antecedent → Student Response → Feedback (S\textsuperscript{r+}, E/C)

- Models, prompts, cues
- E.g., Responses to flashcards
- Feedback for every response

Fluency Format

TIME → Instructional Antecedent → Student Response → Feedback for multiple responses, reinforce rate

- E.g., worksheet with 20 problems
- Student writes answer to each problem
- Teacher corrects all answers before feedback is given
Generalization Format

TIME →

Instructional Antecedent → Student Response → Feedback

(Student response +, Environment/Classroom) (S\textsuperscript{+}, E/C)

Student given word problems with math facts →

Student writes answers to problems → “Correct!” or “Incorrect!”

Natural Environment

TIME →

Natural Antecedent → Student Response → Feedback

(Student response +, Environment/Classroom) (S\textsuperscript{+}, E/C)

Student works as Engineer

Former student solves problems → ?
Generalization Strategies

- Practice and feedback across instructional items
  - Teach and provide practice reading many different words with long vowel sounds
  - Provide practice and feedback on reading rate in different stories

- Practicing the skill across __________________________ of instructional items
  - Reading long- a words and long- e words
  - Provide practice and feedback on reading phrases and paragraphs

Generalization Strategies

- Practice using the skill to __________ other skills successfully
  - Have student practice reading high frequency words on flashcards and in sentences
  - Have student practice reading paragraphs fluently and to complete comprehension activities

- Explicitly teaching the student when and when not to use the skill and assigning practice
  - Have student practice reading long-a words and short-a words together

Still Can’t Figure It Out?

- Try both!
  - Skill-based and performance-based intervention strategies
    - E.g., Gortmaker, Daly, McCurdy, Persampieri, & Hergenrader (in press)
Reading Fluency Intervention Protocol

Materials

- Examiner Copy of the Instructional Passage
- Student Copy of the Instructional Passage
- Examiner Copy of the corresponding Generalization Passage (with predetermined goal*)
- Student Copy of the corresponding Generalization Passage
- Stopwatch
- Pen or Pencil
- Highlighter
- Rewards
- Tape Recorder and tape

* A bracket should be placed in the Generalization Passage after the third word following the number of correct read words per min from screening. For example, if the student read 36 correct read words per min during screening, place a bracket after the 39th word.

Record Beginning Time

Explanation of Reward Contingency

- 1. Place several rewards in front of the child and say: “YOU WILL HAVE THE CHANCE TO EARN ONE OF THESE REWARDS FOR READING THIS STORY (point to the generalization passage).”
- 2. Say “LET’S CHOOSE A REWARD. CHOOSE ONE OF THE THINGS BEFORE YOU TO WORK FOR.”
- 3. Place the chosen reward so that it is visible to the student and if possible sitting on top of the generalization passage, but beyond his or her reach.
- 4. Say: “FIRST, WE WILL PRACTICE READING THIS STORY” (point to the instructional passage). PRACTICING THIS STORY (point to the instructional passage) WILL MAKE IT EASIER TO EARN THE REWARD IN THIS STORY (point to the generalization passage). THEY HAVE A LOT OF THE SAME WORDS.”

Listening Passage Preview (Instructional Passage)

- 5. Present the Student Copy of the Instructional Passage to the student, saying: “HERE IS A STORY THAT I WOULD LIKE FOR YOU TO READ. HOWEVER, I AM GOING TO READ THE STORY TO YOU FIRST. PLEASE FOLLOW ALONG WITH YOUR FINGER, READING THE WORDS TO YOURSELF AS I SAY THEM.”
6. Using the Examiner Copy of the Instructional Passage, read the entire passage at a comfortable reading rate (approx. 130 words per min), making sure that the student is following along with a finger. Prompt the student to follow along if he or she is not doing so.

Student Reading 1 (Instructional Passage)

7. Say: “NOW I WANT YOU TO READ THE STORY. YOU ARE GOING TO PRACTICE READING THIS STORY A COUPLE OF TIMES TO HELP YOU GET BETTER AT READING. EACH TIME I WILL TELL YOU HOW FAST YOU HAVE READ THE STORY AND HOW MANY WORDS YOU MISSED. READ THE STORY ALOUD. TRY TO READ EACH WORD. IF YOU COME TO A WORD YOU DON’T KNOW, I WILL TELL IT TO YOU. BE SURE TO DO YOUR BEST READING. DO YOU HAVE ANY QUESTIONS?”

8. Say, “BEGIN!” and start the stopwatch when the student says the first word.

9. While the student is reading the passage aloud, follow along on the Examiner Copy highlighting errors. If the student hesitates on a word for more than 3 seconds, say the word and highlight it.

10. Make a bracket and write the number “1” after the first min of reading, but have the student read aloud for TWO MIN and tell the student to stop reading. [The number 1 indicates that this is where you stopped after the first reading.]

11. Say, "THAT TIME, YOU READ ___ WORDS PER MIN AND MADE ___ ERRORS."

Phrase Drill (Instructional Passage)

12. Say: “YOU MISSED [SEVERAL/A COUPLE/NO] WORDS. WE ARE GOING TO PRACTICE THE WORDS YOU MISSED.” Show the student where each error word is highlighted in the passage.

13. Point to the first word read incorrectly and say: “THIS WORD IS ____.” Have the student say the word. Point to the beginning of the sentence containing the error word and say, “PLEASE READ THIS SENTENCE THREE TIMES. GO ALL THE WAY TO HERE [point to closest punctuation; e.g., period, question mark].” Have the student read the sentence containing the error word three times. If more than 1 error occurs in the sentence, model and prompt correct reading of each word once in the sentence and only have the student read the sentence three times (regardless of the number of errors in the sentence). Do the same for each of the highlighted words.

Student Reading 2 (Instructional Passage)


15. Say, “BEGIN!” and start the stopwatch when the student says the first word. While the student is reading the passage aloud, follow along on the Examiner
Copy underlining errors. If the student hesitates on a word for more than 3 seconds, say the word and underline it.

16. Make a bracket and write the number 2 after the first min of reading, but have the student read aloud for TWO MIN and tell the student to stop reading. [The number 2 indicates that this is where you stopped after the second reading.]

17. Say, "THAT TIME, YOU READ ___ WORDS PER MIN AND MADE ___ ERRORS. [Say the 2 appropriate statements regarding fluency and errors:]

   - YOU READ THE STORY FASTER THIS TIME, AND...
   - YOU DID NOT READ THE STORY FASTER THIS TIME, AND...

   - YOU MADE FEWER ERRORS THIS TIME. [or]
   - YOU DID NOT MAKE FEWER ERRORS THIS TIME.

Syllable Segmenting and Blending Lesson (Instructional Passage)

18. Say: “WE ARE GOING TO PRACTICE SOME OF THE DIFFICULT WORDS.” [You will work only with words missed during both student readings. These words will be both underlined and highlighted.]

19. Turn the Examiner Copy of the instructional passage towards the student. For each underlined and highlighted error word in the passage, cover all but the first syllable of the error word with an index card. Say, “THESE LETTERS SAY____. NOW YOU SAY IT.” Wait for a response and say, “GOOD!” [If the student makes an error or fails to respond, say, “THESE LETTERS SAY____. SAY IT. GOOD!”] Repeat this step for all of the syllables in the word, successively exposing each syllable until the student practices all of the syllables in the word. Do this for every underlined and highlighted word.

20. Returning to the first error word, cover all but the first syllable of the error word with an index card and say, “NOW SAY THE SOUNDS AND THEN SAY THE WORD.” Expose the first syllable and have the student say the sounds. [If the student makes an error or fails to respond, say, “NO. THESE LETTERS SAY____. SAY IT. GOOD!”] Expose each successive syllable, following the same procedure. With all syllables exposed, say, “SAY THE WORD.” [If the student makes an error, say, “NO. THE WORD IS ___. SAY IT. GOOD!”] Do this for every underlined and highlighted word.

Reward and Assessment (Generalization Passage)

21. Remove the Instructional Passage and replace it with the Generalization passage.

22. Say: “NOW I WOULD LIKE FOR YOU TO READ THIS STORY. THIS TIME YOU CAN EARN THE REWARD FOR DOING WELL. IN ORDER TO EARN THE _____ (say the name of the chosen reward) YOU HAVE TO BEAT YOUR LAST SCORE (based on screening results), WHILE MAKING NO MORE THAN THREE ERRORS. WHEN I SAY ‘BEGIN,’ START READING ALOUD AT THE TOP OF THE PAGE (point to the top of the page) AND READ ACROSS THE PAGE (demonstrate by pointing). TRY TO READ EACH
WORD. IF YOU COME TO A WORD YOU DON’T KNOW, I WILL TELL IT TO YOU. DO NOT STOP READING UNTIL I SAY ‘STOP’. BE SURE TO DO YOUR BEST READING.”

☐ 23. Say, “BEGIN!” and start the stopwatch when the student says the first word. While the student is reading the passage aloud, follow along on the Examiner Copy putting a slash through errors. If the student hesitates on a word for more than 3 seconds, say the word and put a slash through it.

☐ 24. Make a bracket after ONE MIN and tell the student to stop reading.

☐ 25. When the student finishes the passage, determine whether the student read past the goal bracket and count the number of error words.

☐ A. If the student met the goal with no more than 3 errors, say, "THAT TIME, YOU READ ___ WORDS PER MIN AND MADE ___ ERRORS. GREAT WORK! YOU MET THE GOAL AND EARNED THE REWARD!” Deliver the reward to the student.

☐ B. If the student did not meet the goal and/or made more than 3 errors, say "THAT TIME, YOU READ ___ WORDS PER MIN AND MADE ___ ERRORS. NICE TRY. BUT, YOU DID NOT MEET THE GOAL. NEXT TIME YOU READ FOR ME, YOU WILL HAVE A CHANCE TO EARN A REWARD.”

Record Ending Time_________________
## Home Reading Program

**Materials:**  Tape recorder  Instruction checklist  Highlighter  Pencil  2 copies of the story  Index card

*Read each step and place a check in the appropriate box after you have completed the step.*

<table>
<thead>
<tr>
<th>Day</th>
<th>Step Description</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Write in date.</td>
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</tr>
<tr>
<td>2</td>
<td>Get tape and recorder ready.</td>
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<tr>
<td>3</td>
<td><strong>Take out story for you and your child.</strong></td>
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<td>4</td>
<td>Explain to your child that the more they practice with you the better chance they have of earning a reward with Valerie.</td>
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<tr>
<td>5</td>
<td>Read the story while your child follows along on their copy.</td>
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<tr>
<td>6</td>
<td>Have your child read the story (1st time).</td>
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<tr>
<td>7</td>
<td><strong>Highlight</strong> all the errors that are made.</td>
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<tr>
<td>8</td>
<td>Read the highlighted words to your child (One at a time).</td>
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<tr>
<td>9</td>
<td>Have your child read each highlighted word (One at a time).</td>
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<tr>
<td>10</td>
<td>Have your child read the sentence with the highlighted word three times, correcting errors if necessary.</td>
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<tr>
<td>11</td>
<td>Have your child read the story again. (2nd time)</td>
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<tr>
<td>12</td>
<td><strong>Underline</strong> each of the errors made.</td>
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<tr>
<td>13</td>
<td>For each <strong>underlined and highlighted</strong> word, read each of the syllables in the words.</td>
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<tr>
<td>14</td>
<td>Have your child repeat the syllables after you say them.</td>
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<tr>
<td>15</td>
<td>Have your child read the syllables in each words on their own and then say the word.</td>
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</tbody>
</table>
Assigning Instructional Tasks

• Items presented in context v. in isolation v. embedded in other skills
  
  • Natural context is preferred…
    • If you want the student to read words in connected text, you should teach him or her to read connected text.

  • Natural context too __________ or too complex?
    • If learning to read words in connected text is too difficult, learning to read them in isolation increases the chances the student will then learn to read them in context.

• Accuracy and fluency achieved?
  • Must be able to read connected text to answer social studies questions…

Assigning Instructional Tasks

• Difficulty level (instructional match)
  
  • Slice back
    • The task is appropriate but needs to be divided into smaller parts

      • E.g., teaching multiplication facts to 5 instead of teaching them to 10, and progressing incrementally

  • Step back
    • The task is too difficult

      • E.g., teaching CVC phonics words may be unsuccessful if the student is not able to blend and segment sounds

Wolery, Bailey, & Sugai (1988)
Assigning Instructional Tasks

- Sequentially Matched Materials
  - Materials of appropriate difficulty level;
  - Brief, repeated practice opportunities with modeling, feedback, and reinforcement;
  - Monitoring and charting of student performance; and
  - Performance goals for changing to more difficult material.

Example of Use of Sequentially Matched Materials (Martens et al. 2007)
- Second and third grade students assigned to materials in which they could read at least 50 CRW per minute
- Students practiced a story until they could read it at 100 CRW per minute.
  - Listening passage preview + error correction + repeated readings
- Students moved on to a more difficult passage when they retained 100 CRW per minute over 2 days in the absence of practice.

Results of Use of Sequentially Matched Materials (Martens et al. 2007)
- It took an average of 1.69 sessions per passage to meet the 2-day retention criterion for moving on to the next, more difficult passage.
- Students increased an average of 2.9 grade levels in difficulty of stories they could read at 100 or more CRW per minute.
- Average increases of more than 20 CRW per minute following training and 2-day retention probes
- Significant increases in untrained passages (relative to a control group).
Looking Into the Classroom…

1. Are there incentives for the student to do the work?
2. Are the incentives to do the work greater than the incentives to do other things?
3. Did you see the teacher do things to make the task nonaversive?
4. Is there a clear rationale for why it is important to do the work?
5. **Are the opportunities to do the work frequent or infrequent?**
6. Does the student actually spend enough time doing the work to really learn how to do it?
7. Did someone show the student how to do the work?
8. Did someone prompt the student when he or she was unsure of how to do the work?
9. Were practice opportunities provided?
10. **Did someone praise the student and give feedback for correct answers?**
11. Did someone correct the student’s errors?
12. Was the activity teaching the student what the teacher wants him or her to learn?
13. **Was the task easy enough so the student could learn it?**

Observing Instruction

- Measuring Academic Engagement using momentary time sampling

- Instructional Validity Checklist
Classroom Observation Form

Student:   Date:   Instructor/Tutor:   Time of Day:   Length of Lesson:

Academic Engagement (AE): Record student behavior at 20 second intervals using momentary time sampling; includes reading aloud, answering an academic question, asking an academic question, writing in response to teacher request, and silent reading (eye movements indicate student is scanning text).

Problem Behavior (P): Record student problem behavior (if necessary) using partial interval recording. Definition of problem behavior:

Every two minutes observe the behaviors of a peer.

|       | PB | AE | PB | AE | PB | AE | PB | AE | PB | AE | PB | AE | PB | AE | AE | PB | AE |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Target | 1-19 | 20 | 21-39 | 40 | 41-59 | 1 | 1-19 | 20 | 21-39 | 40 | 40-59 | 2 |
| Peer   | 1-19 | 20 | 21-39 | 40 | 41-59 | 3 | 1-19 | 20 | 21-39 | 40 | 40-59 | 4 |
| Target | 1-19 | 20 | 21-39 | 40 | 41-59 | 5 | 1-19 | 20 | 21-39 | 40 | 40-59 | 6 |
| Peer   | 1-19 | 20 | 21-39 | 40 | 41-59 | 7 | 1-19 | 20 | 21-39 | 40 | 40-59 | 8 |
| Target | 1-19 | 20 | 21-39 | 40 | 41-59 | 9 | 1-19 | 20 | 21-39 | 40 | 40-59 | 10|
| Target | 1-19 | 20 | 21-39 | 40 | 41-59 | 13| 1-19 | 20 | 21-39 | 40 | 40-59 | 14|

Sum of each ‘Total’ Column = _____ _____ _____  

Target Student:  Peer Student:  
Minutes of Observation X 2.5 = _____ Observation Intervals for Target  
Minutes of Observation/2 = _____ Observation Intervals for Target  
Sum of AE Column / Observation intervals = _____% AE  
Sum of AE Column / Observation intervals = _____% AE  
Sum of PB Column/ Observation intervals = _____% PB  
Sum of PB Column/ Observation intervals = _____% PB
Intervention Examples

- Guided notes
- Cover-Copy-Compare
- Flashcard Intervention
- Response Cards
- Phoneme Segmenting and Blending Protocol

Cover-Copy-Compare

- An efficient method for delivering learning trials
- Appropriate for math computation, spelling, factual content material
- Student covers correct answer, writes answer, compares answer to correct, and either (a) moves on, or (b) corrects error by practicing correct answer.

Sequential Learning Trials Flashcard Format

- Overview of the first session protocol
  - First, you teach two items through modeling, practice, and corrective feedback.
  - Then, you have the student practice those items.
  - Finally, you add items according to how they did with previously practiced items.
Sequential Learning Trials Flashcard Intervention
Session #1

Preparation

- Place instructional items (letters, numbers, words, concepts, etc.) on individual flashcards. Instructional items should be unknown instructional material.

- Have multiple items/flashcards available for the instructional session. You will begin with two items and add to them as the student increases his or her correct responses. You only begin adding items to the instructional pile at step 9. Keep the others in a reserve pile.

Modeling and Prompting of First Two Instructional Items

1. **Present** the *first* instructional item. **Model** the correct response (i.e., “The _____ is ______.”). **Prompt** the correct response (i.e., “Say the _____!”).
   - If the student repeats correctly, praise the student (e.g., “Good!”).
   - If the student makes an error, say, “No, the correct response is ______. Say it!” Repeat as necessary.

2. **Present** *second* instructional item. **Model** the correct response. **Prompt** the correct response.
   - If the student repeats correctly, praise the student.
   - If the student makes an error, say, “No, the correct response is ______. Say it!” Repeat as necessary.

3. Shuffle the 2 instructional items that have been presented and put them into one instructional pile.

4. Repeat steps 1 to 3 at least one more time. Repeat more often if responses are complex or long or there is reason to believe the student needs more modeling.

Practicing Instructional Items with a Prompt Delay Procedure (Modeling Prompt)

5. **Present** the *first* instructional item and **prompt** the student to give the correct response.
   - If the student does not say the correct answer in 2 seconds, **model** the correct response and **have the student repeat** it.

6. **Present** *second* instructional item and **prompt** the student to give the correct response.
   - If the student does not say the correct answer in 2 seconds, **model** the correct response and **have the student repeat** it.

7. Shuffle the flashcards that have been presented and put them into one instructional pile.
8. Repeat these steps until the student responds correctly to both items without the delayed prompt (i.e., within 2 seconds and no model provided) on either item.
   - When the student responds correctly to both items without the delayed prompt, begin folding in new instructional items (see next steps).

**Folding New Instructional Items into Acquired Items**

9. Put a *new instructional item* (from the reserve pile) at the beginning of the instructional pile.

10. **Present** the *new instructional item*. **Model** the correct response. **Prompt** the correct response.
    - If the student repeats correctly, praise the student.
    - If the student makes an error, say, “No, the correct response is ______. Say it!” Repeat as necessary.

11. **Present** the *remaining instructional items* one at a time and **prompt** the student to give the correct responses.
    - If the student does not say a correct answer in 2 seconds, **model** the correct response and **have the student repeat** it.

12. Shuffle all the instructional items presented up to this point and put them into one instructional pile.

13. **Present** *all instructional items* from the instructional pile one at a time and **prompt** the student to give the correct responses.
    - If the student does not say a correct answer in 2 seconds, **model** the correct response and **have the student repeat** it.

14. Repeat steps 12 and 13 until the student responds correctly to all items without the delayed prompt (i.e., within 2 seconds and no model provided) on any item.

Steps 9 – 14 can be repeated for new instructional items during the instructional session by adding them according to step 9 and following steps 10 to 14 until time has run out.
Sequential Learning Trials Flashcard Intervention
All Other Sessions

Preparation

- Organize instructional flashcards into two piles—those that have already been instructed (instructional pile) and those that have not yet been instructed (reserve pile).
- You will begin by reviewing items from the instructional pile and only add items from the reserve pile if and when you get to step 5.

Practicing Instructional Items with a Prompt Delay Procedure (Modeling Prompt)

- 1. Shuffle all items from the instructional pile (i.e., those presented from the last instructional session).
- 2. Present all instructional items one at a time and prompt the student to give the correct response.
  - If the student does not say the correct answer in 2 seconds, model the correct response and have the student repeat it.
- 3. After the instructional cards have been presented once, shuffle the flashcards and keep them in one instructional pile.
- 4. Repeat these steps until the student responds correctly to all items without the delayed prompt (i.e., within 2 seconds and no model provided) on any item.
  - When the student responds correctly to all items from the instructional pile without the delayed prompt, begin folding in new instructional items (see next steps).

Folding New Instructional Items into Acquired Items

- 5. Put a new instructional item (from the reserve pile) at the beginning of the instructional pile.
- 6. Present the new instructional item. Model the correct response. Prompt the correct response.
  - If the student repeats correctly, praise the student.
  - If the student makes an error, say, “No, the correct response is ______. Say it!” Repeat as necessary.
- 7. Present the remaining instructional items one at a time and prompt the student to give the correct responses.
  - If the student does not say a correct answer in 2 seconds, model the correct response and have the student repeat it.
8. Shuffle all the instructional items presented up to this point and put them into one instructional pile.

9. Present all instructional items from the instructional pile one at a time and prompt the student to give the correct responses.
   - If the student does not say a correct answer in 2 seconds, model the correct response and have the student repeat it.

10. Repeat steps 8 and 9 until the student responds correctly to all items without the delayed prompt (i.e., within 2 seconds and no model provided) on any item.

Steps 5 – 10 can be repeated for new instructional items during the instructional session by adding them according to step 5 and following steps 6 to 10 until time has run out.

**Criterion for Removing Instructional Items:**

- When a student has responded correctly to an item without a delayed prompt (model) in 3 consecutive instructional sessions (i.e., across 3 different days), the item can be removed and placed into a “maintenance” group of items.

**Periodic Probing for Maintenance:**

- Periodically (e.g., a couple of times a week), probe for maintenance with the maintenance item set following the procedure described in the following steps. Do this separately from the presentation of instructional items.

- Present the flashcards one at a time from the maintenance group of items, prompt the student to say the response.
  - If the student does not say the correct answer in 2 seconds, model the correct response and have the student repeat it.

- If the student does not give the correct response in 2 seconds or gives an incorrect response on an instructional item, set it in a separate pile for incorrect responses during the session.

- At the end of the session, place items from the incorrects pile back into the instructional pile that will be used in future sessions.
Response Cards

- Students write responses and simultaneously display their responses.
- Allows for easy detection of student responses.

Types of Cards

- Preprinted:
  - E.g., Yes-No, True-False, Numbers, Colors, Traffic signs, molecular structures, parts of speech, etc.
  - May contain multiple responses.

- Write-On:
  - E.g., white laminated “bathroom” board, chalkboards, or custom made.
  - Can be used for Q’s with multiple correct answers, more demanding than recall responses.

Guidelines

- Model and let students practice.
- Maintain a lively pace.
- Provide clear cues when students are to hold up cards.
- Provide feedback based on the “majority response.”
- Represent items that result in too many errors.
- Students can benefit from watching others!
  - Heward (1994)

Phoneme Blending and Segmenting Protocol

- Training sounds by rearranging sounds in words…
  - Real words become nonsense words

- Learning trials with sounds in nonsense words to teach the sounds

- Reward correct reading of sounds in real words

- Assess mastery of real words
Segmentation-Blending Protocol

Materials Checklist:

- Instructions for Administration
- Instructional Words Flashcards
- Assessment Words Flashcards
- Point Recording Sheet
- Blank Flashcard
- Tape Recorder
- Tape
- Stopwatch
- Pen or Pencil
- Sounds sheet

Part 1: Segmentation-Blending Lesson

- 1. Shuffle the four instructional cards.
- 2. Turn on the tape recorder.
- 3. Say, "TODAY, WE ARE GOING TO LEARN HOW TO READ NONSENSE WORDS. NONSENSE WORDS ARE PRETEND WORDS THAT DON'T MEAN ANYTHING. LEARNING TO READ THESE PRETEND WORDS MIGHT HELP YOU TO READ REAL WORDS. WE ARE GOING TO PRACTICE BREAKING APART AND PUTTING TOGETHER PRETEND WORDS. AFTER WE ARE DONE, I WILL LET YOU READ REAL WORDS TO TRY TO EARN A REWARD FOR READING WELL. DO YOU HAVE ANY QUESTIONS?"
- 4. Present the first flashcard, covering the word with the blank flashcard. Say, "I WILL SHOW YOU SOUNDS IN A WORD, TELL YOU THE SOUNDS AND HAVE YOU READ THE SOUNDS."
- 5. Expose the first phoneme and say, "THE SOUND IS ___." Wait for a student response and say, "GOOD!" [If the student makes an error, say, "NO. THE SOUND IS ___. SAY THE SOUND. GOOD!"]. Repeat this step for all phonemes in the words, successively exposing each phoneme until the student can see the whole word.
- 6. Say, "LET'S SAY THE SOUNDS TOGETHER AS A WORD. SAY THEM TOGETHER REAL FAST. THE WORD IS ___."
- 7. Repeat steps 4, 5, and 6 for the second flashcard.
- 8. Repeat steps 4, 5, and 6 for the third flashcard.
9. Repeat steps 4, 5, and 6 for the **fourth flashcard**.
10. Shuffle the instructional cards.
11. Say, "NOW, I WANT YOU TO READ THE SOUNDS AND WORDS TO ME. IF YOU ARE NOT SURE OF A SOUND OR WORD, I WILL HELP YOU."
12. Present a flashcard to the student, exposing one phoneme at a time. If the student does not read a phoneme within **three** seconds, say the phoneme for the student and have the student repeat the sound (saying "REPEAT AFTER ME!" if the student does not repeat the sound spontaneously).
13. At the end of the word, say "PUT THE SOUNDS TOGETHER TO MAKE A WORD."
14. Repeat steps 12 and 13 for the **second flashcard**.
15. Repeat steps 12 and 13 for the **third flashcard**.
16. Repeat steps 12 and 13 for the **fourth flashcard**.
17. Shuffle the instructional cards.
18. Say, "LET'S PRACTICE ONE LAST TIME."
19. Repeat steps 12 through 17 once more for each word.

**Part 2: Assessment (real words)**

- Shuffle all of the assessment words.
- Say, "YOU ARE GOING TO HAVE A CHANCE TO EARN REWARDS LIKE THESE (display reward items). TO EARN REWARDS, YOU HAVE TO GET POINTS FOR READING WORDS CORRECTLY. I'M GOING TO SHOW YOU SOME WORDS ON FLASHCARDS AND FOR EACH WORD YOU READ CORRECTLY, YOU WILL GET 1 POINT. WHEN YOU EARN 5 POINTS, YOU CAN CHOOSE ANY ITEM FROM THE BOX. IF YOU GET SOME POINTS TODAY BUT NOT ENOUGH TO EARN A REWARD, YOU CAN KEEP THOSE POINTS FOR NEXT TIME WE WORK TOGETHER."
- **[The first time only**, say, "DO YOU HAVE ANY QUESTIONS? LET'S MAKE SURE YOU UNDERSTAND. WHAT ARE THESE FOR? (show reward box) HOW CAN YOU EARN REWARDS? HOW MANY POINTS DO YOU NEED TO EARN 1 REWARD? HOW MANY WORDS DO YOU HAVE TO READ CORRECTLY TO EARN A REWARD? WHAT HAPPENS IF YOU ONLY GET 2 POINTS TODAY?" Correct the student and reexplain as necessary.]
- Say, "I WILL GIVE YOU 5 SECONDS TO READ EACH WORD. IF YOU GET
THE WORD RIGHT, I WILL PUT IT HERE (point to a spot to your right on the table). IF YOU GET THE WORD WRONG, I WILL PUT IT HERE (point to a spot to your left on the table). WHEN WE ARE DONE, WE WILL COUNT THE NUMBER OF CORRECT WORDS YOU GOT AND MARK YOUR POINTS ON THIS POINT SHEET (hold up the point sheet with the student's name on it)."

- Say, "I WON'T BE ABLE TO HELP YOU WITH THE WORDS. JUST DO YOUR BEST. DON'T WORRY IF YOU DON'T GET A LOT OF POINTS TODAY. YOU WILL HAVE CHANCES TO EARN POINTS EACH DAY WE WORK TOGETHER."

- Say, "IF YOU DON'T HAVE ANY QUESTIONS, LET'S BEGIN."

- Present the first word to the student and say, "READ THE WORD."

- If the student hesitates on a word for more than five seconds, put the word in the error pile (to your left). Errors include omissions, mispronunciations, substitutions, transpositions of words, and hesitations for more than five seconds. If the student reads the word correctly within five seconds, put the word in the correct pile (to your right).

- If the student says the individual sounds of the word without blending them together, say, "PUT THE SOUNDS TOGETHER TO MAKE A WORD."

- When you are done with all of the words, say, "LET'S COUNT HOW MANY CORRECT WORDS YOU READ." Count the words in the correct pile and say to the student, "YOU GOT __ WORDS CORRECT. SO, THAT MEANS YOU GOT __ POINTS."

- **A.** If the student got at least 5 points, say, "YOU CAN CHOOSE A REWARD FROM THE BOX." Have the student choose and name the reward (for the benefit of the person listening to the tape). Say, "YOU CHOSE ___."

- **B.** If the student got more than 5 points, do all of the above and say, "PLUS YOU HAVE SOME POINTS LEFT OVER. LET'S MARK THEM ON THE SHEET SO THAT YOU CAN USE THEM NEXT TIME WE WORK TOGETHER."

- **C.** If the student did not get 5 points, say "EVEN THOUGH YOU DID NOT GET THE REWARD TODAY, YOU DID EARN __ POINTS. LET'S MARK THE POINTS YOU GOT ON THE SHEET SO THAT YOU CAN USE THEM NEXT TIME WE WORK TOGETHER."

- Turn off the tape recorder and dismiss the student.

Daly, Chafouleas, Persampieri, Bonfiglio, & LaFleur (2004)
Academic Intervention &
Problem Behavior

- Make doing the work more rewarding than acting out…
  - Example of Improving Problem Behavior by Rewarding Academic Performance

Improving Problem Behavior by Rewarding Academic Performance

The Consultant: Christina, 1st Year School Psych Student

Description of the Problem

- Jocelyn was referred because of her off-task behavior. Jocelyn had a hard time staying focused for more than a couple minutes, according to teacher report.
- She often would fiddle with her clothing or other objects.

Setting

- During half an hour reading session with reading teacher
- In a small room located in the back of the classroom
- One other child in the small group
- Halfway through intervention another child was added to the reading group

Intervention

- Needed to increase positive attention from teacher such as praise
- Needed a reward contingency focusing on correct
responses

- Strategy used was providing *performance feedback*

The Marble Jar

- The reading specialist implemented this intervention every day during the reading session.
- Sessions occurred during flashcards and the reading activity (included whisper, partner, and/or echo).
- Jocelyn and Corrie had to work together to reach their goal in order to earn a star on their sticker chart.
- Once they had five stars on their sticker chart, they got to pick out a prize.

Flashcard Procedure

- Teacher had Jocelyn and Corrie take turns reading words from a stack of flashcards presented by the teacher.
- Teacher placed every correctly read flashcard in front of the children in piles of five.
- After every fifth correct read flashcard, teacher placed one marble in the jar.
- If Jocelyn and Corrie met their goal, they put a star on their chart under the column “Flashcards.”

Intervention During Reading Instruction

- Teacher presented Jocelyn and Corrie with a short story.
- Teacher had both students read the whole story or participate in the reading activity during the specified time.
- If they stayed on-task the whole time while not fiddling, a marble was placed in the jar for each child.
- If they received the marble during the reading activity then they put another star on their chart under the column “Reading.”

Modification - The Star Chart

- The marbles were faded.
• The child had to read five flashcards correct in a row in order to “save” the pile.

• If the child misread the flashcard, all the flashcards in the current pile were taken away.

• Each child had to get five “safe” piles in order to earn a star on their chart.

• If each child got ten “safe” piles, they received two stars on their chart.

Academic Intervention & Problem Behavior

• Heading off task avoidance
  • Reduce task difficulty level
    • Step back to lower level in curriculum (e.g., move down from 2nd grade to 1st grade materials)
    • Slice back to easier version of the skill (e.g., going back to multiplication tables to 5)
    • Have the student work on problems in isolation
    • Guided Practice (modeling + practice + feedback/error correction)
    • Allow the student to write answers on computer rather than by hand
  • Offer choices: Tasks and/or rewards
  • Intersperse easy items
John’s Teacher Referred Him for Not Doing His Work

- John is a middle school student with a Behavior Disorder.

- The teacher reported that he put his head down, avoided work, and frequently asked the teacher to come over to help him.

John’s Math Behavior Plan…
John’s Math Behavior Plan

<table>
<thead>
<tr>
<th>Steps</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>TR</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Give math assignment.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>2. Demonstrate how to do the first two problems.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3. Have J do the next two problems under your supervision. Praise responses and effort.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>4. Ask him to do the next 4 problems and to call you over to check his work. E.g., “Raise your hand when you are done with problem 8. I’ll come over and check to see how you are doing.”</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>5. Each time he calls you over, praise and give feedback.</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL NUMBER OF STEPS COMPLETED: — — — — —

PERCENTAGE OF STEPS COMPLETED: — — — — —
Implementing the Intervention

- Describe the procedures to follow in a step-by-step plan
- Identify
  - Who is responsible for implementing the intervention
  - When the intervention will be implemented
  - How often the intervention will be implemented
  - Who is responsible for monitoring the student’s progress as well as whether the intervention is being implemented as it is designed

Implementing the Intervention

- Directly observe implementation
  - Ask permission to stop by to see how it’s going
  - Bring written plan
  - Identify steps not being done correctly
  - Offer feedback

Conclusions…
References


