Module C: #7: Scaffolding

What is Scaffolding?

Instructional scaffolding is a process through which a teacher adds supports for students in order to enhance learning and aid in the mastery of tasks. The teacher does this by systematically building on students' experiences and knowledge as they are learning new skills. Just like the scaffold on a building, these supports are temporary and adjustable. As students master the assigned tasks, the supports are gradually removed. There are two critical elements to keep in mind when using instructional scaffolding:

- Modeling: Throughout the learning process, students should be able to watch their teacher model, or demonstrate, each step in the task or strategy multiple times. Such modeling and repetition allow students to understand both how to perform each step and why each step is important. Knowing *how* and *why* leads to students' successful performance of the task or strategy.

- Practice: Students, either individually or as a group, must have the opportunity to work collaboratively with the teacher to practice the task or the strategy.

There are three types of instructional scaffolding (from the IRIS Center https://iris.peabody.vanderbilt.edu/module/sca/#content):

- Content: content scaffolds involve the selection of content that is easy, familiar or highly interesting in order to learn a new skill.
- Task: task scaffolds begin by specifying the steps in a task or instructional strategy. The steps in the task are modeled, while verbalizing the thought processes for the students. In other words, the teacher thinks aloud and talks through each of the steps he or she is completing. Once students are able to understand the steps in the task or instructional strategy, they practice the task independently. The teacher observes their performance and may coach students who experience problems. The teachers then gradually release responsibility for the tasks.
- Material: Material scaffolding involves the use of written prompts or cues to help the students perform a task or use a strategy. This may take the form of cue sheets or guided examples that list the steps necessary to perform a task.

"When scaffolding, teachers typically provide high levels of initial guidance and then systematically reduce support as students respond with greater accuracy." Archer and Hughes, 2011

Six Strategies for Scaffolding

1. Partnering

2. Chunking

3. Sequencing/Progress in complexity
4. Demonstrations and completed models
5. Provide hints and prompts
6. Provide aids such as cue cards and checklists

Partnering

Partner Reading – Content Area Textbooks

Description: Before reading a section of a content area textbook, students receive instruction on the difficult to pronounce words, the unknown vocabulary terms, and background knowledge for the passage. The teacher then guides students in reading the initial portion of the section, generally one or two pages of the selection. Students read the remainder with their partners.

Partner #1	**Partner #2**
Partner #1 decides to read the paragraph alone (me) or with a partner (we).	
Partner #1 says "me" or "we." If partner #1 says "me," he/she reads a paragraph to partner #2. If partner #1 says "we," he/she reads with partner #2.	If partner #1 says "me," partner #2 follows along and corrects any reading errors. If partner #1 says "we," partner #2 reads WITH his/her partner.
Partner # 1 answers the questions, referring back to the chapter as necessary.	Partner #2 asks Partner #1 the following questions based on the *Paragraph Shrinking Strategy* (Fuchs, Fuchs, Mathes, & Simmons, 1996; 1997). 1. **Name the who or what.** (The main person, animal, or thing.) 2. **Tell the most important thing about the who or what.** 3. **Say the main idea in 10 words or less.**

Note: On the next paragraph, the partners switch roles

Partner Vocabulary Study

Description: When vocabulary terms are introduced, students write the word on one side of an index card and the part of speech and meaning on the other side. The new vocabulary cards are placed in an envelope labeled **Study**. Each student also has an envelope labeled **Mastered**.

Tutor	Tutee
	Tutee hands tutor his/her two envelopes.
Tutor removes an index card from tutee's **Study** envelope, shows and reads the word to the tutee, and asks the following questions: 1. What is the part of speech? 2. What does the word mean? 3. Say a sentence using the word.	Tutee answers the questions.
If the tutee answers all the questions correctly, the tutor puts a plus + sign on the back of the card. If the tutee misses any of the answers, the tutor puts a minus – sign on the back of the card.	
When the card has three consecutive plusses, it is placed in the **Mastered** envelope.	
This process continues with additional words until the end of the study period, generally 10 to 15 minutes.	

Note: The roles of tutor and tutee are reversed for the next practice period.

Note: Alternate content can be studied using this same procedure. For example, partners could study math facts, information on countries, sight vocabulary, or science terms.

*Note: A review test can be given and all items missed can be returned to the **Study** envelope.*

Partner Repeated Reading

Directions: Repeated Reading, in which students read a short passage a number of times, is a viable procedure for increasing students' oral reading fluency. The following partner procedure is adapted from *Six-Minute Solution* (Adams & Brown, 2007).

Partner #1	Partner #2
Partners take out necessary materials: two copies of a passage at their independent or instructional reading level and two graphs. The passage has the cumulative number of words written in the left margin to facilitate determining the number of words read in one minute.	
Partner #1 reads for one minute. When the teacher says, "Stop," the partner stops reading.	Partner #2 follows along as his/her partner reads, underlining any word errors and circling the last word read.
	Partner #2 provides feedback to his/her partner, saying the number of words read correctly in a minute and going over any word errors.
Partner #1 follows along as his/her partner reads, underlining any word errors and circling the last word read.	Partner #2 reads for one minute. When the teacher says, "Stop," the partner stops reading.
Partner #1 provides feedback to his/her partner, saying the number of words read correctly in a minute and going over any word errors.	
Both partners record the number of correct oral words read on their own graphs.	

Note: This procedure is usually repeated five times using the same passage. Thus, students are able to visually track reading rate growth on their graphs.

Chunking: The breaking up of information into small, digestible bites and/or grouping pieces of information. Chunking supports comprehension and retention of information.

Compare/Contrast Think Sheet

Subject:

SAME Groups

Categories	St. Bernard	Newfoundland
Use	Rescue	Rescue
Height	Full grown males same	Full grown males same
Type of Fur	Smooth dense that protects from cold	Smooth dense that protects from cold

DIFFERENT Groups

Categories	St. Bernard	Newfoundland
Weight	155 – 170 pounds	140 – 150 pounds
Place of Origin	Swiss Alps	Newfoundland
Different Clients	Climbers and skiers	People in Atlantic Ocean

Sequencing/Progressing in Complexity

Example: Writing Frames

Guessing what will happen next based on information or illustrations in the story.

1. Because the main character_____, I predict s/he will_____. (Because the main character ran away from home, I predict that he will.....)

2. At first I thought _____, but now I believe _____.
3. I think ___will___because _usually_____.
4. Since___, I can assume that_____will___. (Since it's been raining all week, I can assume that the game will be cancelled.)

Demonstrations and Completed Models

Interleaved Solutions and Problems to Solve (Team Processing)
This strategy/practice is evidenced in the What Works Clearinghouse Practice Guide for *Organizing Instruction and Study to Improve Student Learning*. It is Recommendation 2 and has been determined to have moderate evidence.
Source: https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/20072004.pdf#page=20

Quoted Definition (from practice guide above):
"Recommendation 2: Interleave worked example solutions and problem-solving exercises. When teaching mathematical or science problem solving, we recommend that teachers interleave worked example solutions and problem-solving exercises—literally alternating between worked examples demonstrating one possible solution path and problems that the student is asked to solve for himself or herself—because research has shown that this interleaving markedly enhances student learning."

Sample Scenarios:
What could this evidence-based practice look like in **core instruction**?

- One teacher uses a constructivist model to engage students in mathematical thinking, introducing problems to generate math talk. After several lessons exploring a concept through concrete experiences and visual representations, she uses interleaved solutions as she opens the abstract phase of her instruction.

- Another teacher teaches the same concept but introduces very explicit instructional routines even as the students explore the initial problems. Interleaved solutions are used at each phase of instruction, sometimes orally instead of written – telling stories as manipulatives/drawings are used to represent problems.

What could this evidence-based practice look like **when core instruction is differentiated**?

- A teacher uses interleaved solutions during whole class instruction.

- During small group work, one group of students who needs additional scaffolding to be successful meets with the teacher to practice with interleaved solutions.

- Other strategies/ways to practice are utilized with students who are on track with their mastery of the concept/skill.

Providing hints and prompts

Types of Cues for Mathematics
Adapted from Hattie, Fisher, Frey Visible Learning for Mathematics

Type of Cue	Definition	Example
Visual	Graphic hints to guide thinking or understanding	Highlighting areas in the text where students have made errors Creating a graphic organizer Asking students to take a second look at a graphic or visual
Verbal	Variations in speech to draw attention to something specific, attention getters	"This is important...." "This is tricky....Be sure to....." Changing voice volume or speed for emphasis
Gestural	Body movements or motions to draw attention to something that has been missed	Making a predetermined hand gesture Placing thumbs or hands around a key idea that the student is missing
Environmental	The use of classroom surroundings to influence student understanding	Using Manipulatives Moving an object or person to change perspective

Create a chart of your most used hints and cues.

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Environmental	The use of classroom surroundings to influence student understanding	

Provide aids such as cue cards and checklists.

Example #1 Rubric for Descriptive Paragraph
Descriptive Paragraph

Critical Attribute	You	Teacher
Organization		
The first sentence tells what is being described.	0 1 2 3 4	0 1 2 3 4
All the other sentences tell more about what is being described	0 1 2 3 4	0 1 2 3 4
The length is adequate.	0 1 2 3 4	0 1 2 3 4
Sentences		
Complete sentences are used.	0 1 2 3 4	0 1 2 3 4
The sentences begin with different words.	0 1 2 3 4	0 1 2 3 4
The sentences vary in length.	0 1 2 3 4	0 1 2 3 4
Word choice		
Descriptive words are used.	0 1 2 3 4	0 1 2 3 4
Overused words (e.g., nice, big, little) have been replaced with more precise or interesting words.	0 1 2 3 4	0 1 2 3 4
Content		
The description paints a clear and accurate picture of what is being described.	0 1 2 3 4	0 1 2 3 4
The description is easy for the reader to understand.	0 1 2 3 4	0 1 2 3 4