CHAPTER 4

# The Teaching/ Learning Process

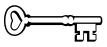
This chapter begins with key guidelines to the LD teaching/learning process. It continues with a discussion of specific LD-appropriate strategies for reading, spelling, reading comprehension, and math.

## Guidelines to Effective LD Teaching Practice

*Bridges to Practices: Guidebook 4* discusses several guidelines for working with adult learners with learning disabilities. We have focused on the three key guidelines that are wide-reaching and encompass the others.

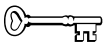
**As you read through the information in each key, ask yourself,**

- **In what ways am I already doing this?**
- **What more could I do in this area?**



### Key #1: Create an Appropriate Learning Environment That Promotes Learner Independence

- Guide learners to be active and independent by asking such questions as
  - — So…how would you do that?
  - — How would you find that information?
  - — How would you remember that information?
  - — How did you figure that out?
- Involve learners in how they learn.
- Design instruction around the interests and everyday needs of learners.
- Remember that adult learners bring knowledge and past experience with them. They have insight into how they learn, compensate for difficulties, and find success.
- Encourage learners to keep track of their progress.
- Reinforce the learning by providing continuing opportunities for practice and by giving immediate and frequent feedback.



## Key #2: Provide Instructional Adaptations and Accommodations

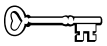
These two terms often apply to the same tools and approaches that make a learning task more manageable. The distinction between the terms is a legal one.

- **Accommodations** are adaptations to which a person diagnosed with LD has a legal right. They include a wide range of tools and changes in the way a task is done, including all those listed below under adaptations. For people struggling with an essential life function due to a learning disability, specific accommodations can move them from frustration and failure to achievement and productivity! The possibility of such a change is one of the strongest reasons for getting a diagnostic evaluation.

**Some examples of adaptations (which could be accommodations if legally required) are:**

- extended time for completing a task or test or break it into manageable chunks
- writing directly on the test, rather than on an answer sheet
- reading or planning aloud or with a partner
- using mind (semantic) mapping when prewriting or taking notes
- writing on alternate lines when writing a paragraph or essay
- using legal pads turned horizontally when doing arithmetic processes that require figures in straight columns
- using large print with a lot of white space, particularly around math problems
- trying environmental changes: frequent breaks, quieter space, white noise, different lighting
- using organizational aids: day planners, color-coded materials, watches with alarms
- using assistive technology and compensatory devices: books on tape or disc, calculators, alternate forms of tests, hand-held spell checkers, speech synthesizers; talking word processors and text readers, software for speech recognition, outlining, brainstorming, proofreading, or semantic mapping

- **Adaptations** may be identical to accommodating, but when there is no LD diagnosis, there is no legal right to use them (e.g., in a testing situation or on the job). Many of us have stumbled onto some helpful adaptation in life without thinking of it as such: color-coding, reading out loud when we're trying to digest a complicated article, or taking frequent breaks. Adaptations that involve assistive technology are part of our everyday lives: hearing aids, glasses, computers, magnifying glasses.



**Key #3: Implement LD-Appropriate Instruction**

## Characteristics of LD-Appropriate Instruction

*What do we mean by LD-appropriate instruction? There are important characteristics described in* Bridges to Practice: Guidebook 4*. LD-appropriate instruction is*

■ **Structured** – involves systematically teaching information that has been chunked into manageable pieces.

■ **Connected** – shows the learner how information in and among units and lessons are linked to the learning process and to the learner's goals.

■ **Informative** – involves making sure that the learner is informed about how the learning process works, what is expected during the instructional situation, and how she can improve learning and performance.

■ **Explicit** – involves providing detailed explanations and models to the learner about how to approach, think about, perform, and evaluate learning and performance.

■ **Direct** – is characterized by high rates of teacher or tutor leadership and control during the initial stages of information acquisition, followed by careful monitoring of the learner's performance as she gradually assumes control of and masters the information.

■ **Scaffolded** – involves the frequent use of connected questions and collaboratively constructed explanations to create a context for learning that is based on the learner's prior knowledge.

■ **Intensive** – involves helping learners to maintain a high degree of attention and response during instructional sessions that are scheduled as frequently as possible.

■ **Process-sensitive** – involves re-shaping the activities within the instructional sequence to take into consideration various cognitive barriers that might inhibit learning.

■ **Accommodating** – involves providing specific and general adaptations that are legally required to reduce or eliminate the impact a learning disability might have on successful learning and performance.

■ **Evaluated** – involves adapting instruction based on an assessment of the learner's progress and his or her response to previous attempts at instruction.

■ **Generalizable** – involves using activities before, during, and after information has been mastered both to ensure continued application of the information and to increase the learner's success outside of the literacy setting.

■ **Enduring** – means that the program providers acknowledge and commit the time necessary to ensure that learners master the information and use it to increase their successes in life.

**A list of characteristics from a NIFL monograph (Hughes, 1998) is compared with the list of characteristics from *Bridges to Practice: Guidebook 4* in the following table. As you read the table developed by Amanda Keller, identify which characteristics are already present in your teaching and which ones might be your next steps on this journey.**

| Effective instruction for adults with learning disabilities | Characteristics of LD-appropriate instruction from *Bridges to Practice: Guidebook 4* |
|---|---|
| **Teach important skills:** Deciding what is important to teach is critical given the limited amount of time for instruction in most literacy programs. Adults with LD should be involved in deciding what is important, and skills should be as functional as possible. | **Connected** |
| **Teach less better:** Most adults with LD need explicit, intensive instruction combined with numerous practice sessions to truly master a skill or strategy. It is more effective and efficient to pick fewer (but important) skills and teach them to mastery rather than trying to teach a wide range of skills in a cursory fashion. | **Intensive**<br>**Explicit**<br>**Enduring** |
| **Teach explicitly:** Because of the learning characteristics of many adults with LD, a direct and explicit approach to teaching is more effective than more "discovery" types of approaches. | **Explicit**<br>**Direct**<br>**Informative** |
| **Teach contextually:** Literacy skills and strategies should be taught and practiced in the context of "real-life" situations. | **Connected**<br>**Generalizable** |
| **Explain what is to be learned and why it is important:** Briefly explaining the purpose of the skill, strategy, or activity prior to teaching it clarifies expectations for the adult with LD. Further, discussing the relevance of what is to be learned can increase learner motivation. | **Connected**<br>**Generalizable** |
| **Check the old before teaching the new:** Before beginning instruction on a new skill or strategy, verify whether the adult with LD has retained any prerequisite skills or knowledge needed to perform the new skills. This type of review is best conducted by requesting that the adult demonstrate performance of the prerequisite skills rather than merely inquiring whether or not he or she can perform them. | **Connected**<br>**Structured**<br>**Evaluated** |

| Effective instruction for adults with learning disabilities | Characteristics of LD-appropriate instruction from *Bridges to Practice: Guidebook 4* |
|---|---|
| **Model what is to be learned:** A clear demonstration of the skill or strategy is a must prior to practicing it. Effective modeling includes both a clear and exaggerated demonstration as well as a comprehensive description of any covert thinking or decision-making. | **Direct**<br>**Explicit**<br>**Scaffolded**<br>**Structured** |
| **Use supported practice:** After viewing a demonstration/ model, adults with LD benefit from supported or guided practice in a new skill or strategy. Via a series of prompts and/or questions, they are guided through the skill as a way of providing a high level of initial support and success. | **Scaffolded**<br>**Process-sensitive** |
| **Use controlled materials:** During initial stages of practice, it is sometimes effective to control the difficulty of the task in which the new skill or strategy is practiced. Initial practice in "easy" materials allows the adult with LD to focus on learning the new skill. Task difficulty can be added when success is achieved in controlled material. | **Structured**<br>**Scaffolded**<br>**Enduring**<br>**Evaluated** |
| **Provide practice, practice, practice (and more practice):** Adults with LD need multiple practice opportunities over time to retain new skills or information. Independent practice (with no guidance or prompting) should be provided only when a high level of success has been achieved during prompted practice. | **Enduring**<br>**Intensive** |
| **Require frequent responses:** Adults with LD learn better when they stay involved during instructional sessions. One effective way to do this is to ask frequent questions related to the information being taught. This facilitates involvement and provides important information about the adult learner's level of understanding. | **Generalizable**<br>**Intensive** |
| **Provide corrective feedback:** Adults with LD should receive corrective feedback as soon as possible in a matter-of-fact manner. Learning rate is enhanced when feedback about quality and correctness of performance is provided in this way. | **Evaluated**<br>**Informative** |

| Effective instruction for adults with learning disabilities | Characteristics of LD-appropriate instruction from *Bridges to Practice: Guidebook 4* |
|---|---|
| **Promote generalization:** Often adults with LD have difficulty transferring what they learn to different settings or to different, but related tasks. It is, therefore, imperative that activities and techniques designed to promote skill or strategy generalization is built into literacy instruction. | **Generalizable** |
| **Be prepared:** Implementing the above principles requires preparation. Good teaching may appear "spontaneous"; however, that impression is illusory. The amount of time put into planning is directly related to the quality (effectiveness and efficiency) of instruction. | **Structured**<br>**Scaffolded** |
| **Use accommodations only when necessary:** While reasonable accommodations are required by law and are necessary for appropriate instruction and assessment under certain circumstances, two important warnings apply regarding their use: (a) creating a situation where adults with LD become dependent on others versus becoming independent learners and (b) not providing the instruction needed to benefit fully from the accommodation | **Accommodating** |
| **Use caution when selecting instructional techniques and programs:** Many products and approaches purport to be effective with adults with LD. While some may have intuitive appeal and make grandiose claims, there may be no empirical support for their use. Become a cautious consumer. Adults with LD should not be the victims of poor instruction as a result of instructors' jumping on educational bandwagons. | **Scaffolded**<br>**Structured**<br>**Process-sensitive** |

## Tools and Strategies for LD-Appropriate Instruction

The focus of the Tennessee action research project was to become familiar with and try out specific teaching/learning strategies that were consistent with *Bridges to Practice*. The table below lists the tools and strategies to be used as part of LD appropriate instruction, including some that were tried by the LD Action Research Project teachers. Each was chosen because it has several—or all—of the characteristics of LD-appropriate instruction. As each strategy or tool is later described, the pertinent characteristics are pointed out.

**To further anchor these concepts in real life, turn back to Chapter 2, "Example Four: Joe Spoon's Story - Weaving Together Observation, Trial Teaching, and Planning." What characteristics of LD-appropriate instruction are revealed as Spoon describes his teaching and relating to students? As you recognize them, make notes in the margins of those pages.**

| CURRICULAR AREA | SUB-SKILL | TOOLS AND STRATEGIES |
|---|---|---|
| *All* | *All content areas* | *Direct instruction model* |
| Basic skills and critical content | 1. Reading (decoding) and spelling (encoding) | Color coded letter/sound manipulative cards, finger tapping |
| Basic skills and critical content | 2. Sentence structure | Word shapes used to build sentences |
| Basic skills and critical content | 3. Reading comprehension | Visualization, relating to prior knowledge (think-a-louds and mapping), learning strategies (RAP, K-W-L) |
| Basic skills and critical content | 4. Critical-thinking skills | Graphic organizers |
| Basic skills and critical content | 5. Math: concepts, algorithms and math processes | Hands on examples, direct instruction model |
| Self-advocacy | 6. Written and oral expression, new behavior and attitude | Discuss-write-read model, direct instruction model |
| Learning strategies | 7. How to learn | Various |

### Direct Instruction: A Model (Framework) for LD-Appropriate Instruction

Direct instruction is simply a map for teaching that incorporates all the characteristics of LD-appropriate instruction. Later in the chapter, you'll see this framework used in a variety of content areas.

As teaching based on direct instruction is being carried out, it will incorporate the characteristics of LD appropriate instruction: structured, connected, and so forth. Even though each person with LD has slightly different struggles with learning, all benefit from instruction that has the characteristics previously described. Why? Each one helps with processing information, the underlying difficulty in all learning disabilities.

The Direct Instruction Model below was adapted by Amanda Keller from *Instruction: A Models Approach* (Gunter, Estes & Schwaab, 1995)

## Direct Instruction Model

**I. Set: Provide Objectives, Establish Expectations, and Introduce the Skill**

A. Activate background knowledge
B. Involve all students
C. Relate to real life
D. Label the learning and set goals

**II. Instruction: Introduce and Model the Skill**

A. Teacher does it. (Students use eyes and ears.)
B. Teacher does it; students help. (Students use eyes, ears, and voices.)
C. Students do it; teacher helps. (Students use eyes, ears, voices, and pencils.)
D. Students do it. (Students use pencils.)

**III. Guided Practice With Feedback**

Students have the opportunity to practice their new skills under the teacher's supervision. This is a good opportunity for peer tutoring or cooperative learning, especially in the context of word problems.

**IV. Closure**

A. "Tell me (or someone else) what you learned."
B. "Show me what you learned."
C. "Do one more."

**V. Independent Practice and Generalization**

A. Have student practice his or her new skill independently.
B. Have student do a problem every day.

Discuss: "How can you use this skill at home…or at work?"

Direct instruction is an effective way of weaving in all those crucial elements of instruction for adults who are struggling with learning and may have LD.

## CONTENT AREAS

### 1. Reading (decoding) and Spelling (encoding)

Current research stresses the need for phonemic awareness and systematic instruction in phonology (the structure of language) for those with dyslexia (reading disability) (Brady and Moats, 1997). To try out this instructional approach, the action research teachers used the Wilson Reading System (WRS), originally developed for adults and based on Orton-Gillingham principles (Wilson, 1998).

***The teaching/learning is extremely multi-sensory in nature, involving speaking, hearing, touching (cards and fingers), and moving cards around to construct words.***

#### Description of Approach

Color-coded cards for each sound (phoneme) are used to gain automaticity in saying individual sounds, then combinations of sounds as syllables, then words. The teaching/learning is extremely multi-sensory in nature, involving speaking, hearing, touching (cards and fingers), and moving cards around to construct words. It incorporates **all** characteristics of LD-appropriate instruction. Most are obvious: it is highly structured, explicit, and direct. Evaluation threads throughout the teaching/learning with a question-response component that is intensive and scaffolded. Automaticity at each stage is stressed so that learning is *enduring*.

Reading (decoding) and spelling (encoding) are taught as complementary processes. Blending sounds (to read) and pulling a word apart into separate sounds (to spell) are learned through hands-on activities. The teacher (and later the student) puts sound cards together and sound-taps the word to read it (e.g., "t-a-g , sh-o-p"). To spell, the teacher (then the student) says the word slowly, identifies each sound through the sound tapping process, picks up the cards for the sounds, constructs the word, then writes it. Paper and pencil activities come last, after multisensory connections have been made.

**Surprises, questions, and challenges.** The original intent was that each teacher would identify students who had very low TABE reading scores or who were obviously struggling with reading and pretest them with *WADE*, the *Wilson Assessment of Decoding and Encoding*. (Wilson,1998). Then, after several months of instruction, the students would be post-

**Carol Simmons and Joe Spoon practice WADE, Wilson Assessment of Decoding and Encoding.**

tested. We knew it would be difficult to measure other strategies (quantitatively, at least), but, with this one, we hoped for some hard numbers, if only for the 6 months of our project.

The first surprise was the difficulty that *many* students had with phonemic awareness and sound blending, even those who appeared to be good readers in some ways.

> "I decided to test all my students, so I would have a baseline for future comparisons. When I started testing, I was truly surprised! I realized that two students, who I had felt were good readers, had extreme problems with sounds and with nonsense words. These students did fairly well on the TABE test, but, at times, they seemed to struggle with the pre-GED test.… In further discussions with these students, they informed me that they would memorize words so they could read, but a lot of times they did not understand what the words meant." *—Dana Clark*

Did these weaknesses help to explain why they had reached a plateau in reading?

There were also some surprises with spelling.

> "I found my students had difficulty with the spelling, too. Sometimes I don't think they could hear specific sounds; thus, they would write down a word totally different from the one I read—even though they repeated what I said." *—Dana Clark*

Such struggles with very basic phonemic awareness and sound blending have come to be recognized as the essence of dyslexia. What teachers were seeing certainly encouraged them to move forward with the Wilson program.

The pre-testing, while very revealing, took individualized time that teachers often did not have. Unpredictable attendance also presented a difficulty for testing and sustained instruction. Volunteer assistants would have been so helpful! Most of the teachers did manage to test at

least a few students, but they saw the lengthy testing as a challenge to implementing this kind of program.

There were two other significant challenges. Most of the teachers taught groups with a wide range of reading abilities. In addition, the structure of their classes, like most adult education, was open entry, open exit. Given these two limitations, they wondered how they could carry out a structured program that assumed mastery of skills before moving to the next step

> "It takes time to prepare yourself to teach Wilson, and it takes time to develop a pattern of use on a daily basis; but, in the long run, it will definitely pay off." —*Charlene Feuchtinger*

The members of the LD Action Research Project wondered how they could individualize as intensely as they needed to do for different skill levels. They wondered if they would have any one student for a long enough period to make a difference.

> "Overall, the use of Wilson as a whole program, starting at the beginning and going to the end, is not feasible in an open-entry classroom…[but] I found some of the Wilson program to be extremely helpful. I loved using the cards to help them sound out words. I had students say they were reading better and learning new words. I used these cards with all my students, whether LD or not, and they loved them. Some of my students began making word games using these cards." —*Rebekah White-Williams*

> "Wilson is a very structured reading program that requires full student participation, attendance, and interest. [As such] it did not work in my FF class. However, elements of Wilson can be used. Sounds and syllables can be taught along with our regular curriculum and also finger tapping. I fell in love with Wilson; but, to use it effectively in AE, I believe it needs to be a Wilson class with a definite class enrollment, meeting at a specific time, and on predetermined days of the week." —*Carol Clamon*

This mixed review was consistent among all eight teachers. The approach seemed on target, but the class structure and attendance patterns of this particular program were real barriers to implementing it.

## 2. Sentence Structure and Grammar Using "Word Shapes/Sentence Builders"

*Many people with LD are experiential and visual learners. "Sentence Builders," like other manipulatives, build on those ways of learning.*

This multisensory approach to teaching/learning sentence structure and grammar is one that was created by teachers working in a Tacoma, Washington, clinic addressing learning problems. One of their valuable tools and strategies, *Word Shapes/Sentence Builder* (Stockdale and Possin, 2000), has been preserved through the ARK Foundation. In addition to being very multisensory, this tool is used in a way that incorporates many LD-appropriate characteristics.

### Description of Activity

"Sentence Builders" are plastic shapes that can be manipulated to represent parts of speech and syntactic patterns. Through practice manipulating these shapes to build sentence patterns, the student learns the rules of sentence structure. This is a visual representation of syntax, which simplifies learning for people with language problems." (Stockdale and Possin, 2000, p. 136)

***Word Shapes/Sentence Builders* illustrate:**

- the function of each word in a sentence
- different sentence patterns
- complete and incomplete sentences
- clauses and phrases
- active and passive sentences
- how the same word can be used for different functions
- when punctuation marks, such as commas, are needed
- how to combine sentences
- how to rearrange words in sentences to create questions
- foreign language patterns

(Stockdale and Possin, 2000, p. 136)

Many people with LD are experiential and visual learners. Sentence builders, like other manipulatives, build on those ways of learning.

*The student will be constructing a sentence, visualizing it.* This is the key. Starting with concrete and representational versions of a sentence, she can later move on to the symbolic version of written words.

# Word Shapes (pieces for creating the sentence patterns of language)

dog
school
Mary

I name people, places, and things.
*Noun*

I
he
she
you

I take the place of naming words.
*Pronoun*


big
green
beautiful

I describe naming words.
*Adjective*

run
sing
write

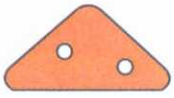
I am a doing word.
*Verb*

am
is
are
were
was

I am a quiet doing word.
*Helping or Linking Verb*

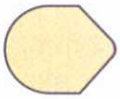

quickly
softly

I describe doing words or quiet doing words.
*Adverb*



because
although
since
as long as

I hook together groups of words and show how they are related.
*Conjunction (subordinating)*



the
a
an

I point to naming words.
*Article*

over
under
around
on
in

I tell where or when the action happened.
*Preposition*

who
that
which

I point back to naming words.
*Relative Pronoun*

and
but
or

I connect words or groups of words.
*Conjunction*

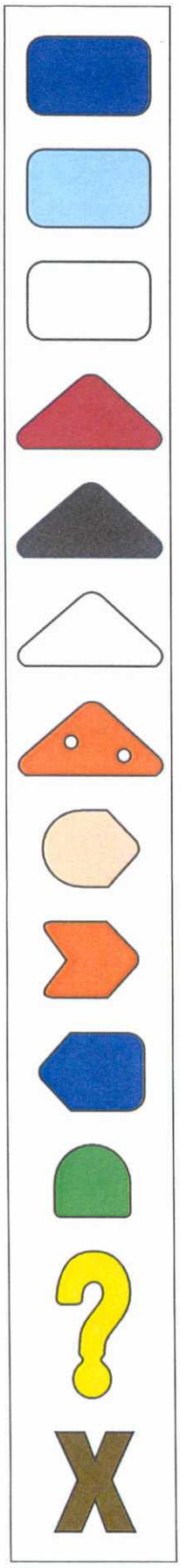
who
where
what
why
when
how

I am an asking word.
*Relative Pronoun (questioners)*

No!
Not!
Nope!

I say, "No." I say, "Not."
*Interjection (negative)*

**From *The Source for Solving Reading Problems* by Carol Stockdale and Carol Possin (2000) . Permission to reprint pages 137-138 granted by LinguiSystems, Inc. http://www.linguisystems.com/**



# Word Shapes, *continued*

## Syntax Exercises

The following sequence of exercises helps the student understand language structure. The pieces can be manipulated to expand and practice syntax in a variety of ways. It is unnecessary to label the shapes as parts of speech such as "verb." Instead, one can label the word's function in a sentence such as "doing word."

### Finding the Focus of a Sentence

The focus is the actor (subject) and its action (verb). The student can place the blue  on the actor and the red  on the action in a picture. He can then be asked to say what is "blue" (actor) and "red" (action) in the picture. This same exercise can be done with sentences.

### Practice with Simple Sentences

The student can practice making symbol strings to represent a picture with only one actor and one action. For example, presented with a picture of a cow in a field, the student can say the sentence and then construct the following string with the symbol shapes:

The cow ate grass.

The student can then construct several similar sentences to rehearse this pattern.

A man sang in the shower.

If the teacher rearranges the symbols, the student can practice variations in word order such as, "In the shower, the man sang." Students see that the same meaning can be expressed with a different word order. Also, various arrangements that do or do not work soon make it apparent that order is important for meaning and the smooth flow of a sentence. The student quickly sees that some pieces go together in phrases such as "in the shower." For homework, the student can compose simple sentences and reorder these sentences.

***Beginning steps are:***

1. Choose a picture (from magazines or any source) that has one actor (subject) and its action (verb). Present it to the student and ask who (or what) is the actor and what is its action. *It is not necessary—or even advisable at this point—to use the terms for parts of speech.*
2. As the student responds, you model the beginning construction of the sentence with a blue rectangle for the subject and a red triangle for the verb.
3. Following the steps from the Direct Instruction Model, lead the student through sufficient practice with many sentences to independence at this level:
   - Teacher does it.
   - Teacher does it; student helps.
   - Student does it; teacher helps.
   - Student does it.

"cat" "climbs"

Many students will verbalize the sentence as they are constructing it, adding another modality. If this does not happen automatically, model and encourage it.

After the student is constructing simple sentences with ease, start writing sentence strips to match the visual sentence. These may be torn apart into words for easy matching and, later, for changing the form of a sentence, such as statement to question. (Adding-machine paper is handy, inexpensive, and tears easily into strips.)

cat climbs

This activity can progress to a rather complex level of sentence structure, as noted above. Even a student who understands simple and compound sentences can stumble in trying to master complex ones.

> "These shapes are wonderful in teaching parts of speech and showing how the parts go together to make the whole. I used these everyday when I was teaching pronouns and verbs. The entire class did these activities and seemed to enjoy them. Some students said it helps—that they understand for the first time."
>
> —Carol Clamon

***Unless a student is manipulating the shapes herself, she is losing much of the learning.***

Although this tool, *Word Shapes/Sentence Builders,* can be modeled and even taught with a small group of students (2–4), it is used to its maximum benefit in a one-to-one setting. Unless a student is manipulating

the shapes herself, she is losing much of the learning. Also, in a multilevel class, students may need to progress at very different rates. It would be helpful to have teaching assistants or partners. (See Appendix G for a lesson on sentence structure for use with *Word Shapes/Sentence Builders.*)

## 3. Reading Comprehension

When students read haltingly or don't seem to comprehend or remember what they read, reading is no fun or use to them. To help, we have to do some detective work to find out where the problem lies. The steps to follow are described below:

| Finding the Problem | Teaching Strategy |
|---|---|
| **Can she decode the words?** | If not, she probably needs an intensive decoding and syllabication program similar to the one described in the previous section. |
| **Is she decoding words slowly, but failing to read fluently enough to grasp the meaning?** | If she decodes slowly and has much better listening comprehension than reading comprehension, she may need intensive work with *measures that improve fluency*. She may benefit from *intensive instruction and practice with all cueing systems* (syntactic and semantic as well as grapho-phonic) so she can better monitor the accuracy of what she is reading. |
| **Does she decode well and read with some fluency, yet have poor memory or understanding of what she reads?** | If so, she may need:<br>• assistance in learning to *visualize* what she is reading<br>• a method of *relating what she's reading to her prior knowledge*<br>• *a learning strategy to help her remember* steps in comprehension strategies<br>• *a graphic organizer for understanding how the pieces fit together into the whole*<br>• or several of these strategies |

"My students seem to read well as far as being able to pronounce words; yet, when they are asked to discuss the meaning of the words or sum up what the paragraph means, they draw a blank."
—*Dana Clark*

## Visualizing to Improve Comprehension

If you read well and enjoy it, you probably have vivid mental pictures of the people and situations you're reading about. What if, when you read words, no pictures came to mind? Understanding and remembering those words and the meaning of the article or story would be much, much harder. Images and other sensory cues (e.g., descriptions of how something feels or sounds) give us hooks on which we hang meaning and memory. They contribute to the mental frameworks of our prior knowledge and experience that are vitally important to understanding what we read.

***"I've found that reading comprehension was one of the greatest problems my students faced. They couldn't seem to process what they read. But when I read to them, they could visualize the story."***

If a student finds it difficult to visualize what she is reading, she needs explicit instruction in forming mental pictures of the meaning. To do this ask students to listen, make mental pictures, and describe. Whether a person decodes well or not, she can have difficulty visualizing the meaning of a phrase or passage.

- To strengthen this ability, read aloud to your students: a phrase, a paragraph, poetry, fiction, or a factual account. At first, do very short segments.

  "I've found that reading comprehension was one of the greatest problems my students faced. They couldn't seem to process what they read. But when I read to them, they could visualize the story."
  —*Charlene Feuchtinger*

- Ask them to transfer the words into a mental picture. You may have to help with this at first: "Describe what you 'see.' What is the woman wearing? What expression does she have on her face?"

- Model the process of visualizing and retelling. Work with your students to do this, helping them to link the mental image and the retelling.

## Building on Prior Knowledge

There are several ways to teach students to build on prior knowledge. *Think alouds* (Gillet and Temple, 1994) and mapping (or webbing) are two strategies that are especially suited for adults with learning disabilities because they use several sensory channels.

**Think alouds:**

- **Teacher modeling:** A *think aloud* is taught quite effectively by the teacher modeling the thinking that accompanies active reading. Explain that you are going to demonstrate an activity that helps you to remember what you're reading and to understand it better. As you read, connect to prior knowledge, guess, predict, and retell the story (thus far) out loud.

  *Example:* "Oh, this article is about diabetes! That's what Aunt Barb has. I thought all you had to do was watch what you eat, but she says there's lots more to it than that. I wonder if this article gives the latest information. It runs in our family, so I'd better learn what I can."

  *(After reading a couple of paragraphs)* "Well, it's explained the difference between types of diabetes, and I can tell that Aunt Barb has Type I. But, I didn't know this! It sounds like I might keep from getting it, at least for a long time, if I keep my weight down. Hmm. I wonder if there's anything else I can do." *(reads on)*

Teacher modeling will probably be most effective if it is done as an ongoing teaching strategy. Adults may find this a foreign concept at first and need to be reassured that this is what good readers do!

- **Guided practice as a group:** Explain that you'll read a selection and periodically stop for them to retell the story so far. A different person may retell each time you stop reading.

- **Guided practice with a partner:** Both partners read a paragraph (or several), then one retells it to the other. Alternate between the two partners. Teacher monitors, helping as needed.

- **Independent practice:** As adult learners are encouraged to do this individually, they may be more comfortable talking just under their breath. Probably the more audible the practice is, the better, since more senses

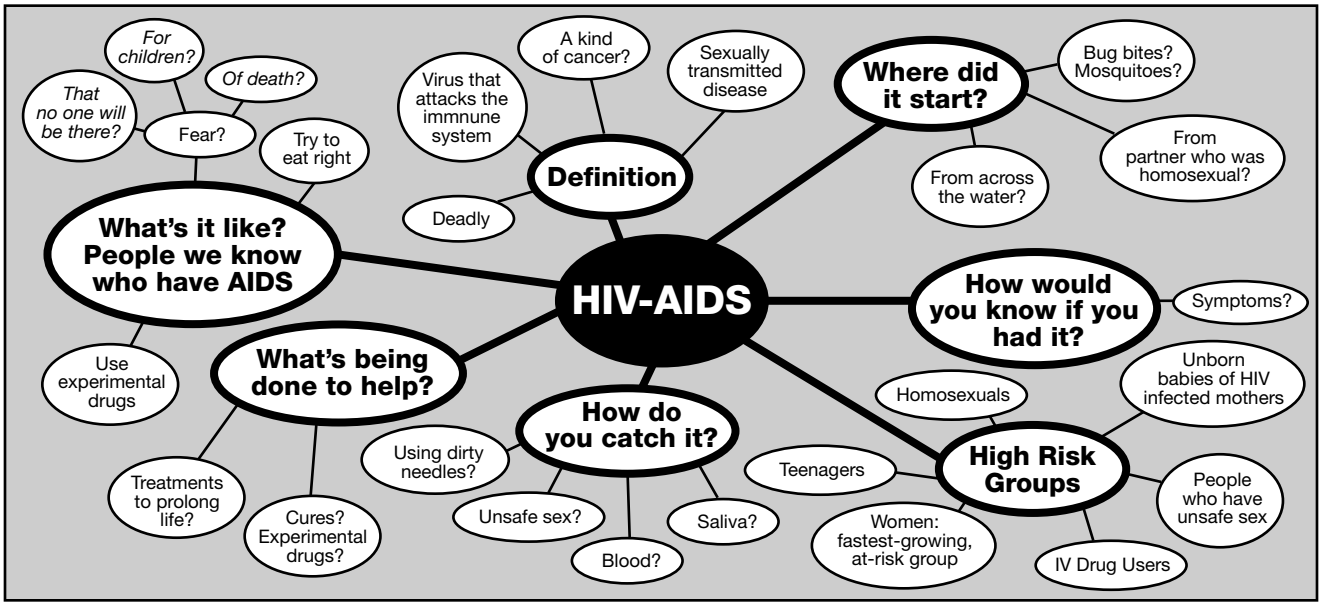
are involved: speaking and hearing as well as seeing.In the next section, note that the K-W-L strategy is another take on "think alouds," with the added sensory channel of touch, since the learner is writing.)

**Mapping (or webbing):** *One tool; many uses! Mapping is an especially useful tool for any adult with LD.* Not only is it useful in accessing prior knowledge for reading comprehension, it is an alternative way of taking notes in a lecture. Further, it is an organizational tool when preparing for writing or a research project. The following map was one actually done by a group of adult learners preparing to learn about AIDS.

The teacher, Margaret Lindop, drew the map as they discussed what they already knew (prior knowledge). In some cases, they put forth "knowledge" that was inaccurate, but these suggestions were recorded. After the map was complete, the teacher asked, "Are there other things that you would like to find out? Are there things here on the map that you would like to check on?" Those things identified were color coded as possible research questions.

As well as being multisensory (speaking, listening, writing, using a graphic), this strategy is quite versatile in its uses. This same activity could be a solid lead-in to reading an article or story about AIDS, to writing an essay relating to AIDS or making a plan for a research project. It could also be revisited after reading an article with the intent of checking for accuracy of information, correcting the map, and using it as a summary note for the article.

**This map was done by a group of adult learners preparing to learn about AIDS.**



- **RAP:** ***A Paraphrasing Strategy for Reading Comprehension.*** This strategy uses an acronym to help a person remember the steps. (Hollander and Palamar, 1990)
  **R** – **Read** a paragraph.
  **A** – **Ask** yourself: "What were the main idea and two details?"
  **P** – **Put** the main idea and details in your own words.

- **K-W-L:** A general comprehension strategy that activates prior knowledge, helps in thinking about what a reader wants to know, and summarizes what has been learned. (Carr and Ogle, 1987)
  **K** – What I already **KNOW**: brainstorming ideas
  **W** – What I **WANT** to know: predicting
  **L** – What I **LEARNED**: summarizing

A way to record thoughts is shown below:

| KNOW | WANT TO KNOW | LEARNED |
|---|---|---|
| | | |

**Learning Strategies:** The two strategies described here, RAP and K-W-L, are samples of many such learning strategies that assist memory, comprehension, approach to task, organization, and other facets of learning.

Before going further, let's make a connection between chapters. In Chapter 3, Planning, we noted that five curricular options are suggested in *Bridges to Practice*: basic skills, critical content, social skills, self-advocacy, and learning strategies. Learning strategies, then, is an instructional priority for adults with learning disabilities. (See the section on Learning Strategies a bit later in this chapter.).

*(Note: The following strategies for use in teaching critical thinking skills, reading skills, and math skills were written by Amanda Keller.)*

## 4. Critical Thinking Skills

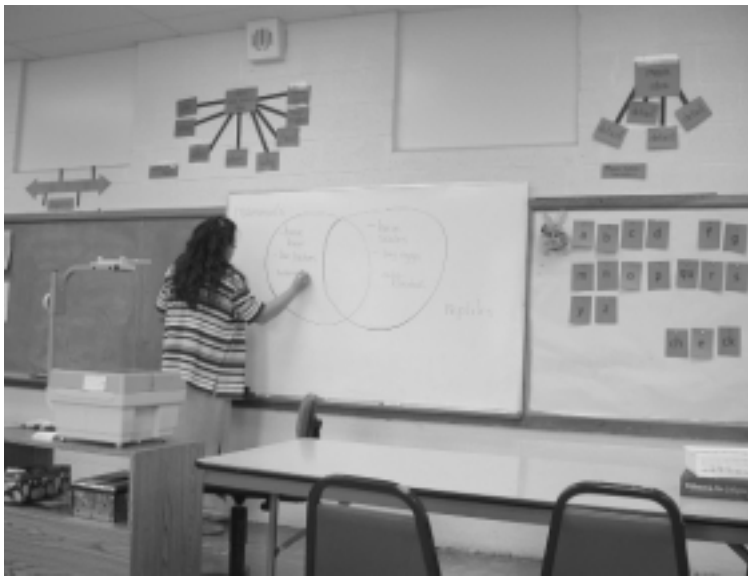
### Teaching critical thinking skills with graphic organizers

Critical thinking skills are related both to reading and to activities in many aspects of life. If a student can master these skills, he or she will be able to apply them in various circumstances.

The critical skills can be taught with graphic organizers to help students visualize the steps in applying the skill. The graphic organizers help students to see how their brains must categorize and break down information in order to understand it. The organizers provide a *scaffold* from which to work until they internalize the skill.

This is a progressive and structured method of teaching critical skills. Students must master the basic skills in order to comprehend more difficult ones. Skills are taught directly and explicitly from the beginning, with the graphic organizers giving students a foundation on which to stand.

Gradually, as students begin to internalize the skills, the graphic organizer does not play such a vital role on paper. Instead, the student is able to "see" the organizer without the time-consuming act of constructing it. The teacher initially constructs the organizer for them and tells them when to use it. As they sharpen their skills, they construct their own organizers at my direction. Once the skill is internalized, the students must decide for themselves when they are being asked to call on a certain thought process, and they have the organizer as a tool if they choose to employ it.



**Having graphic organizers displayed on the wall serves as a constant visual reminder.**

Evaluation is crucial at every step and substep to determine a student's level in this process. Mastery of each skill is dependent on a solid foundation and intensive practice. Success with more advanced skills is dependent upon mastery of the most basic ones.

## Steps to Follow in Teaching Critical Thinking Skills

**Characteristics of LD Appropriate Instruction**

To help my students understand the skills, I teach them one skill at a time, beginning with the most basic ones. As they master each skill, we move to another, more difficult skill. The more basic ones are continually practiced as others are added.

**Structured**
**Enduring**
**Explicit**

I begin by explaining and discussing with the students the meaning of critical skills and why they are important to learn. We examine the meanings of the words *critical* and *skills* and give real-life examples of these words. If students can relate the term "critical skills" to something they already understand, they will remember the term and its significance to reading and other subjects.

**Connected**
**Informative**
**Generalizable**
**Explicit**
**Direct**
**Scaffolded**

I tell the students that we will learn the critical skills one at a time. I want them to understand that these skills apply in all contents, from GED

materials to materials they may see on the job. Then, instruction begins on each skill, following a consistent pattern. (With each of the critical skills discussed later in this chapter, examples of the following pattern will be illustrated.)

**Process-Sensitive**
**Scaffolded**
**Explicit**
**Connected**
**Intensive**
**Generalizable**
**Enduring**
**Evaluated**

First, students learn the definition of a skill. They learn the concept of the skill by practicing it at a very basic level, perhaps even with words or symbols instead of actual sentences and paragraphs.

After evaluation of the basic level of understanding, students are introduced to the graphic organizer, or the "skill picture," that accompanies the skill. Students work with the organizer until they know it well, and a color-coded, completely labeled, large version is posted in the classroom. Students spend a lot of time just becoming acquainted with the graphic and how it relates to the skill. By the time they are presented actual text to read, the concept of the skill and the understanding of the graphic are in place. Instructions at this level, as with all levels, should be given visually and orally.

**Process-Sensitive**
**Scaffolded**
**Explicit**
**Connected**
**Intensive**
**Generalizable**
**Enduring**
**Evaluated**

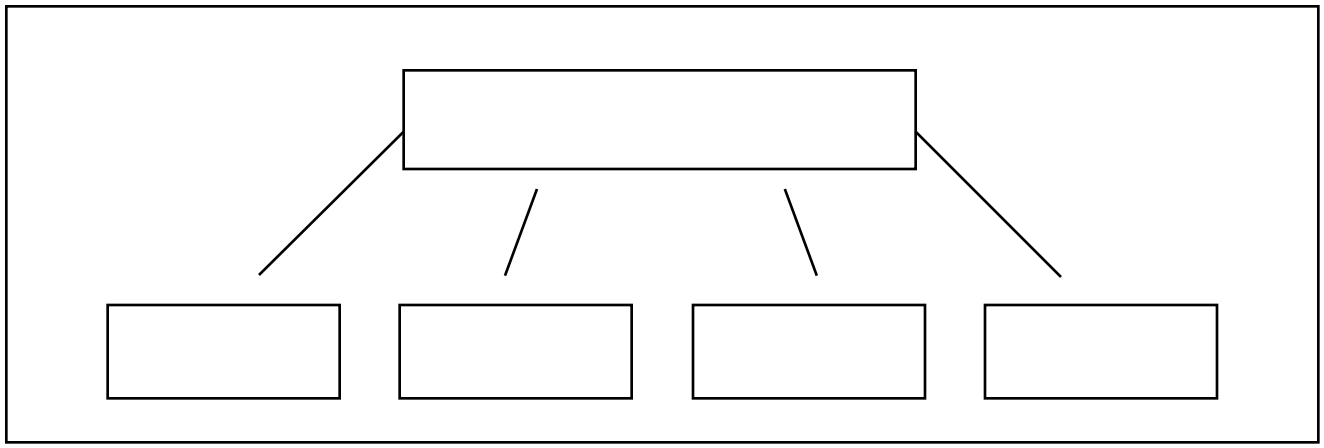
Gradually, the written material from various contexts gets more difficult, but the skill being practiced is the same. We move progressively from words to phrases/sentences to paragraphs and eventually to several paragraphs in one piece of writing. We practice our skill in various contexts, and students have time to make up their own examples of the skill. Very often, I ask them to bring in examples from their everyday lives.

After the skill is mastered, another is introduced, gradually working toward the more advanced skills. With each skill, a new graphic is added to the student's repertoire, and any key words and ideas that accompany a skill are taught, as well. (I like to draw connections to the parts of speech whenever possible to help students see the link between English grammar and reading.) Once the foundation has been laid for reading comprehension, students begin to see how they can "work backwards" to write paragraphs and essays. The graphic organizer allows the student to map the skill on paper, and allows them to extend that critical skill to various contexts.

*Examples of teaching specific critical reading skills are described below.*

**A. Main Idea and Details**

When I think about critical reading skills, the first one that comes to mind is ***main idea*** and ***details***. This is the first skill I teach my students, and it is one that they seem to acquire well. The main idea and details picture looks like this:



To teach main idea and details, I follow these steps:

1. In teams I ask the students to sort a large number of words into categories. An example of the word list might look like this:

| fruit | school subjects | colors |
|---|---|---|
| apple | math | red |
| pear | spelling | green |
| banana | English | orange |
| mango | science | white |

I ask the teams to sort their groups. I give common examples and uncommon examples, such as mango, and words that could fit into more than one group (like orange). I have the students to group their words and then explain to the class why they grouped them a certain way.

**Connected**
**Process-Sensitive**

2. Then I ask the teams to decide which item in the list names the "big picture" or the main theme of the group. We do an example, using the graphic of placing the main idea in the top box and the representatives of the categories in the lower boxes, and we then label the graphic with the terms of main idea and details. The main idea is the one that

names the entire group, while the examples of each category simply explain a little more.

3. We experiment with removing certain components of our graphic, and decide which pieces we can remove and which one cannot be removed.

---

**Connected**
**Structured**
**Scaffolded**
**Enduring**
**Informative**
**Intensive**

4. In the next phase, students repeat the process with sentence strips instead of words. Initially, the paragraphs they work with are ones I have written and cut apart. At first, I want the main idea to be obvious. The teams assemble the paragraphs, copy them onto chart paper, and read them aloud to the group. Invariably, each group will arrange their details in a different order under the main idea, and this provides a perfect opportunity to review the fact that details may be omitted or moved around, but the main idea cannot.

---

**Connected**
**Informative**
**Generalizable**
**Explicit**
**Direct**
**Scaffolded**

5. In the next phase, I ask students to look at controlled examples and color code the main idea and details. Then I have them transfer the components to a graphic organizer. At this point, I give them basic questions about the reading to help them understand how the reading skill is tested.

---

**Connected**
**Generalizable**
**Enduring**
**Intensive**

6. For level-one students, I progress them to another skill. For more advanced readers, I move to more advanced content and main-idea topics, such as finding the main idea in a short story or the main idea and details in a cartoon or bar graph.

### Other Ideas for the Main Idea Graphic

- **Reading tables, charts, graphs, and diagrams:** The title or purpose of the illustration goes into the top box of the graphic, and facts from or about the illustration become the details.
- **Writing a paragraph:** Main idea is developed first, and then details are added to support it. I always use direct instruction to teach students to do this exercise before asking them to begin doing it alone.
- **Concepts in math:** Students can learn various concepts in math with this organizer. For example, we might allow the main idea to be 12 and then list all the 'details' that make up 12 (i.e., 3x4, 6x2, 6+6, etc.)
- **With more advanced students,** several main idea graphics can be sequentially linked to make an essay model.

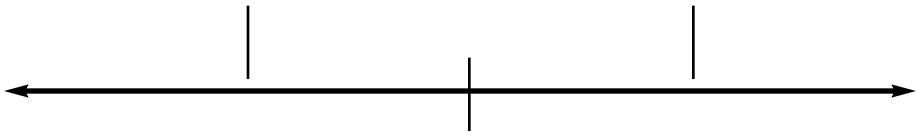
**B. Sequencing**

The next skill we do is sequencing. The graphic for this skill is a sequence line. To teach sequencing, I follow these steps:

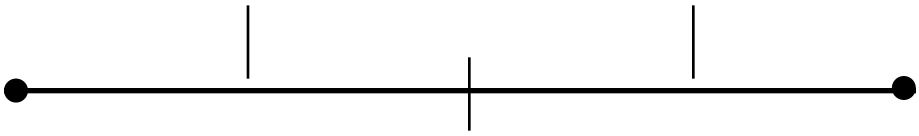
1. To begin this skill, I ask students to list five things they have done in the day.

**Connected**
**Generalizable**

2. I then introduce the sequence line and work an exercise with the class. We map our five events and discuss the concept of sequencing. We note that this line shows events as a section of time, and that this line has a "past" and a "future" that I cannot see.



A variation of this line would be :



In this picture, items have a definite beginning and end. This line would be appropriate for events that do not deal with the passing of time or events in history (e.g., steps in a math problem or following directions).

3. The next step for sequencing is to make a list of keywords that helps us to identify points on a sequence line, such as first, then, next, and last. (For students who know about the parts of speech, I tell them that adverbs go along with sequencing.)

**Connected**
**Informative**
**Explicit**
**Direct**
**Generalizable**

4. I let students practice this skill with hands-on activities. At the most basic level, I have students make a number line or sequence the alphabet. Have them put words in alphabetical order and, after they have a list in place, add more words to see where they belong on the line. They can write out steps in a favorite hobby or recipe and sequence them. I usually have them work in teams at the early levels of the skill.

**Connected**
**Generalizable**

5. Give them events in a story and have them to put them in the correct sequence on a time line. Allow them to work in teams and, when they have finished, read their sequenced story to the class. From that point, have them write their own stories and map them on a timeline before having them to read written material and detect sequence. We also draw connections to English grammar by recognizing that words in a sentence are sequenced, that paragraphs in a story are sequenced, and that essays are sequenced in a certain way.

**Connected**
**Informative**
**Explicit**
**Direct**
**Intensive**
**Generalizable**
**Enduring**
**Process-Sensitive**

6. When students have mastered the skill, we look at example of various contents and different questions that ask for sequence. We also note the different ways to show sequence, (i.e., timelines, numbering, etc.) We look at pieces of material from all GED subjects and at sample questions. Students need to see the format of sequencing questions, so they will recognize when they are being asked to draw upon the skill.

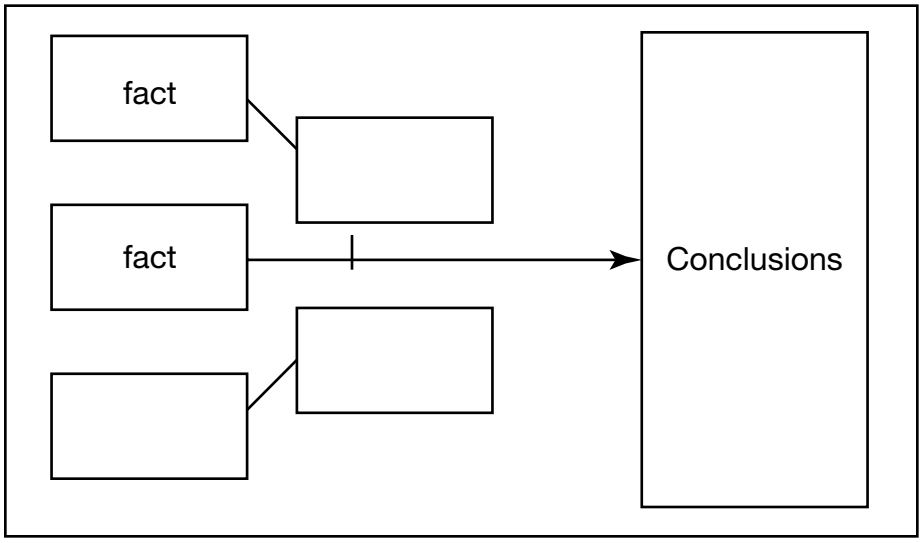
### Other Ideas for Using the Sequence Graphic

- **Order steps in a math problem:** Use a sequence line to show me how you solved a problem in math. Make up problems for classmates to solve and a sequence line to help them.
- **Make a sequence line for a specific event in history.** Use dates as markers on the line.
- **Make a sequence line for a story you have read.**
- **Conduct a science experiment and record the steps/results on a sequence line.**
- **Explain how to do something you do well.**

*** For variations of the sequence line, see Appendix E.*

### C. Drawing Conclusions

The third critical skill I teach is drawing conclusions. The graphic we use for conclusions looks like this:




1. To teach students about conclusions, we play a game as a class. I give them clues to a certain person, event, or object; and they try to guess who or what I am describing. As I give them clues, I begin to construct the conclusions graphic, using small boxes for given facts and a large box for the "educated guess" they are to make. After some examples, I tell the students that the new critical skill is called drawing conclusions. It is also important to note that a series of facts can lead to more than one conclusion. I use the terms fact and conclusion to set up the examples, and I gradually make the clues harder. I explain to the students that this skill requires some "reading between the lines" and using information they might already know. We sometimes refer to conclusions as educated guesses and contrast them to wild guessing. After demonstrating many of these exercises, I ask teams to write their own clues and present them to the class, so the students can see me drawing conclusions, as well.

**Connected**
**Structured**
**Informative**
**Explicit**
**Direct**
**Scaffolded**
**Process-Sensitive**
**Intensive**
**Generalizable**
**Enduring**
**Evaluated**

2. When they are ready to move to the written exercises, I ask them first to underline facts in the story as they find them. For some students it is hard to identify information that is important, so I ask them to look for nouns first. I also ask them to look for information that is repeated. I guide them through the steps in extracting facts at first. Some students find it helpful, especially in history exercises, to develop a habit of highlighting people, places, things, and dates in different col-

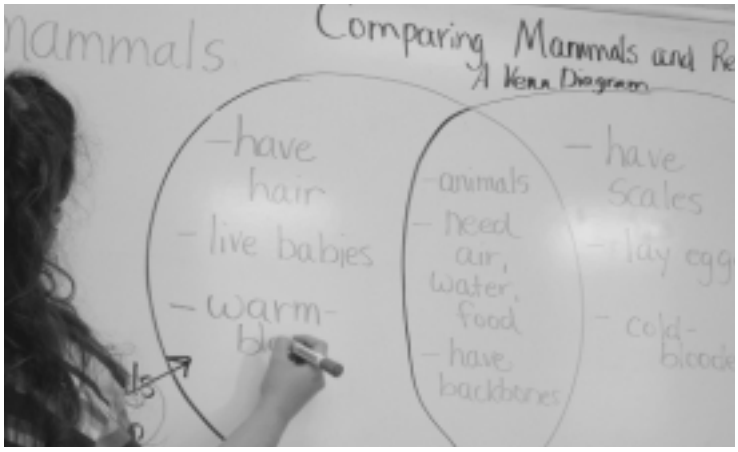
**Structured**
**Scaffolded**
**Enduring**
**Direct**
**Informative**
**Explicit**
**Accommodating**

ors. The key for them is to consistently use the same color for each category.

**Structured**
**Enduring**
**Generalizable**

3. Gradually we look for more complicated pieces of information, and the reading materials get more difficult. We look at questions that ask for conclusions so students will recognize when they are being asked to draw upon the particular skill.

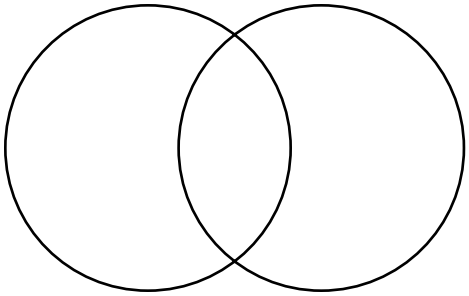
I have found that conclusions are hard for some students. I try to deal with conclusions in math class, as well, with logic exercises and extra information problems. I have found that students seem to do better with conclusions if they (a) associate it with the idea of educated guessing and (b) see that they draw conclusions on a daily basis about things they do in their everyday lives.




**Amanda Keller uses a Venn Diagram to teach a science lesson comparing and contrasting mammals and reptiles.**

**D. Compare and Contrast**

The final critical skill that I consider to be basic is the skill of comparing and contrasting. The graphic that I use to teach this skill is the Venn diagram.



To teach comparing and contrasting, I follow these steps:

**Direct**
**Explicit**

1. I begin by establishing meaning for the terms compare and contrast. I do this by explaining and discussing with the class, and by using common examples, such as comparing prices at the store or comparing the qualities of dogs and cats.

2. I teach the students how to use the Venn diagram. We label each circle with one animal, and I tell them that the center region is reserved for common attributes of the two. I ask the students to give me characteristics of cats and dogs; and, with their help, I put them into the appropriate spaces.

**Direct**
**Explicit**
**Informative**
**Scaffolded**
**Generalizable**

3. In teams I have students create Venn diagrams for several examples. I have them present their diagrams to the group. I ask them to create their own examples to share with the group, as well.

4. The next step is controlled reading passages: Students must identify attributes of two subjects and extract the similarities and differences of the two. After having time to create a Venn diagram, first in teams and then individually, I ask them to explain to me. Students sometimes find it helpful to use highlighters to do this process, where similarities might be highlighted pink and differences blue.

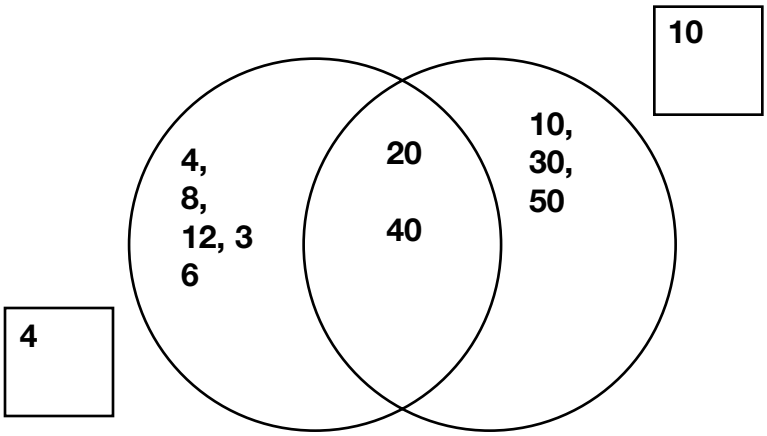
**Generalizable**
**Evaluated**
**Process-Sensitive**

5. Reading passages would get progressively harder with students' mastery at each level, and the content would vary as much as possible.

**Structured**
**Evaluated**
**Intensive**

## Other Ideas for Using the Compare/Contrast Diagram

Use the Venn diagram to find common denominators. For example, if I need to find the lowest common denominator (or lowest common multiple of 10 and 4, I might develop such a Venn:



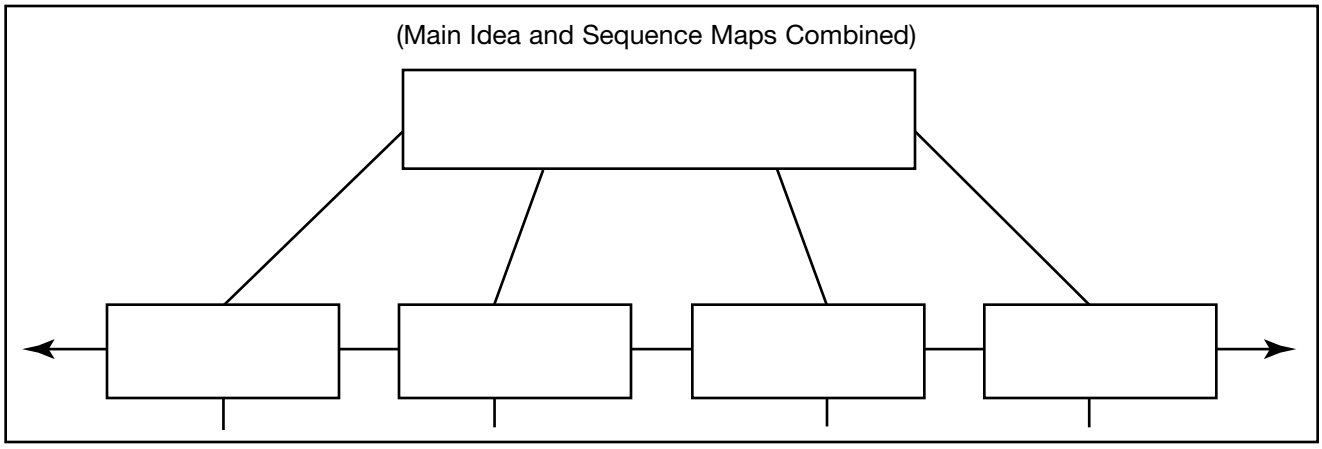

By listing some multiples of 4 and 10, I can see that 20 is the lowest common multiple.

### Using Several Skills Together

Once we have learned basic skills, we do exercises that pull on several skills at one time.

**Connected**
**Intensive**
**Generalizable**
**Enduring**

- Have the students read a paragraph where the details are sequential. We might construct a graphic like this one:




- I give students a completed Venn diagram and ask them to write a main idea sentence or draw a conclusion based on the facts in the Venn.

- I teach the students that the graphics will help them organize writing, as well. Depending on the type of writing they need to produce, they can select the appropriate graphic, fill in the spaces with information, and transfer that information into sentence/paragraph form. Other students can use the same graphic to understand what they have written.

Once students have mastered main idea, sequencing, drawing conclusions, and compare/contrast, they are ready to progress to more difficult skills. Each skill has an accompanying graphic, and students begin to develop a "toolbox," and find uses for their tools in ways that surprise me! They soon learn that the toolbox can travel with them to other classes, to work, and to their homes.

The graphics help to shape the way they think about certain problems they encounter. The organizers give students a concrete strategy on which to rely when they are "stuck" on a test question. My job in the classroom is not to teach them to decipher one particular piece of material. My goal is to teach them the skills that are necessary to decipher any piece of material by being able to recognize when a particular skill is called for and how to use that skill to understand and answer the questions at hand.

**Connected**
**Informative**
**Explicit**
**Direct**
**Intensive**
**Generalizable**
**Enduring**
**Process-Sensitive**

*(See Appendix E for a complete set of reproducible graphic organizers and suggestions for using each one.)*

## 5. Fundamental Principles of Teaching Math

First, **concepts** must be established at the concrete level. Before students can understand the abstract symbolism of math, they must understand the concepts that underlie theory. Those concepts must be taught concretely if students are to understand abstractions. Second, **algorithms and math processes**, in most cases, are best taught with direct instruction.

**To teach math concepts, I always begin with the concrete and work toward the abstract.** For example, if I want students to understand the definition of a fraction, I begin with hands-on examples. I follow these steps to teach the concept of a fraction:

1. Students sort items in teams according to their similar attributes. In our class, we use colored building blocks in four colors (red, green, blue, and yellow) and in various rectangular sizes. Teams are given a large pile of blocks sorting however they see fit. (Each team has an identical set of blocks to begin, and we count the blocks before we begin to sort them.) Some sort by colors and some by shapes, but they inevitably sort items into logical groups. We discuss as a group how they sorted and why they chose to sort the way they did. (*Another item that sorts easily by color is M & M's®, but I, as the teacher, cannot control the examples if we use prepackaged candy.) We sort other items before moving along, and I ask students to tell me where they use sorting in their daily lives.

2. In the next step, I give the teams a set of blocks that are identical in size but different colors.

   - I ask them to sort by colors (red, green, blue, and yellow). We label the group of blocks with the mathematical term *set*. We talk about other things that come in sets. We relate our blocks to something in real life. For instance, I might ask the students to imagine their blocks are cupcakes for a party. Each cupcake is the same size, but there are different flavors. Each flavor or color is one part of the whole group.

   - I then ask the students to put their blocks together to make one continuous region. We label with the term *region* and contrast region and set. I ask them to imagine that this region is a cake with different flavors in one cake. Part of the cake is lemon (yellow), part is strawberry (red), and so on. After discussing how difficult it would be to produce such a cake, we decide how many pieces of each flavor there would be.

   - I ask the students to consider the set again, and I have them tell me the total number of "cupcakes" we have to work with. Then I ask them to tell me how many cupcakes are strawberry. I then tell them that I can write a fraction to show the strawberry cupcakes. The bottom number will tell me how many cupcakes I have in all, and the top number tells how many meet a certain condition, which in this case is strawberry flavor. We then look at the region, and do the same thing, and the students see that for this group of blocks, it does not matter if they are in a set or a region, the fraction of red is the same.

   - Then I introduce the math terms *numerator* and *denominator* and apply them to the example, respectively. We write a fraction for each of our colors and note that the denominator does not change, because the number in the original group has not changed.

   - We then alter the total number and look at our fractions again, labeling numerator and denominator.

   - Finally, I remove the manipulatives and, giving only a symbolic rep-

resentation, ask the students to interpret the fraction for a given example.

- More examples and opportunities to practice follow, and I ask students, as homework, to bring me an example of real-life fractions. I review the concept with them frequently.

**When teaching students to perform a particular *algorithm*, I use the Direct Instruction Model.**

1. I set up the lesson by reviewing concepts (like the one outlined above). The concepts should be in place before algorithms are introduced, so this step should involve recalling concepts. This is a time to recall any relevant skills that have been previously learned. Clearly label the algorithm to be learned, and set goals for the lesson before it begins. Engage all students at this point, and draw some connection to real life situations, as well.

2. The instruction in the new skill involves modeling in four parts. Responsibility for performing the skill gradually shifts from teacher to student. I often use manipulatives in these steps.

- In the first phase, I, the teacher, do the work. Students watch me work and listen to me talk myself through the steps. (This is called a *think aloud.*) Students should be aware of the fact that they learn a lot by watching and listening. Writing and doing page after page of examples is not where true learning takes place. Students watch and listen only.

**I do it.**
**Students use eyes and ears.**

- In the second phase, **students add one more sensory action to the mix—they talk me through the examples.** They still do not write, but they tell me how to do the example.

**I do it.**
**You help.**
**Students use eyes, ears and voice.**

**You do it.**
**I help.**
**Students use eyes, ears, voice, and pencils.**

- In the third phase, **students pick up their pencils and we talk through the examples together.** They work on paper, and I work on the board. We discuss each step before anyone writes.

**You do it.**
**Students use pencils.**

- In the fourth phase, **students are given examples to try on their own with my help if needed.** Then we discuss their examples, and I encourage them to go to the board to work their problems. This builds confidence and self-reliance, and it also gives me a chance to make the point that mistakes are nothing to be ashamed of.

3. Once the students can complete phase four on their own, I give them some guided practice to be done in class. *This is the working development of the skill; it is **not** the learning of the skill.* I am satisfied they know the skill before I give them any workbook pages. The guided practice is a chance to sharpen the skill with help as needed. This is a good time for cooperative learning and real-life generalizations. I often give word problems to teams in this step.

4. Closure of the lesson is important. The students need time to recall the rules and procedures they have learned and to talk about the examples they have done. We might do one more, aloud or on paper, and review any important steps they have learned. When students have learned how the direct instruction model works, they begin to understand that closure indicates the end of this skill. It allows them to mentally end one skill before trying to learn another while, at the same time, storing away the learned skill for future reference.

5. When I am confident they can perform the skill on their own, I give them independent practice, which often takes the form of homework. I might give them twenty-one problems with instructions (written and oral) to do—*only three problems each day*. Sustained, short practice sessions are good for enduring review, and they are also less overwhelming for students.

***Other notes regarding teaching critical math skills:***

- For each math section, I require my students to keep a notebook. I help them set up a three-ring binder, and I consistently remind them to correctly organize their materials. They learn organization skills, and they have a reference book in their own words and handwriting on which to rely if they need to review something. The notebooks also serve as a portfolio assessment of sorts, and students can see their progress as the notebook is completed.

- I often ask students to write their own word problems to share with the class. I ask them to "teach" the class if they would like. A student who wants to teach can tell me in advance, and I work in time for that student to teach a mini-lesson to the class, provided that I have seen the content first. Students who do this are learning several valuable skills, such as planning ahead and being prepared. They also get experience in speaking in front of a group.

- The manipulatives that we use in class are always in the classroom. Students have access to them when they need them. I have seen students go to the manipulatives when they are stuck on a problem. Sometimes they know the algorithm, but the concept behind a word problem is unclear. The manipulatives can help them to work through the problem concretely. Once they are familiar with the manipulatives, they will often go there before asking for help.

*(See Appendix F for Direct Instruction Model and Appendix H for detailed lesson plans using direct instruction for math.)*

## 6. Building Self-Advocacy Through Writing Activities

The idea of "standing up for yourself" is at the heart of self advocacy. Here are some open-ended questions you may want to use as you encourage your students to think about advocating for themselves. These can lead into discussion, then writing.

- Think of a time when you stood up for yourself and tell us about it.
- Think of a time when you wish you had stood up for yourself. What

would have happened if you had?
- Think of some situation in your life now in which you'd like to stand up for yourself. Write about it.

### Helping Students Develop Self-Advocacy Through the Use of Direct Instruction

When students enter adult education programs, they often struggle with issues of self-advocacy. Many of them have developed a poor self-image and have little confidence in their own abilities to make decisions and to speak out on their own behalves. Adult education classes can help students learn to be self-advocates. They can learn to speak up for themselves and to be comfortable with their decisions.

The Direct Instruction Model lends itself well to building self-advocacy. The model allows for gradual shift of responsibility on a skill-by-skill basis. Over time, as their skill and self-esteem build, students become more comfortable in their own abilities to make decisions. The skills they have learned allow them to make decisions in academic situations, but the confidence they develop supports real-life decision making.

**I do it.** →
- In the Direct Instruction Model, students begin a skill with no pressure on them to perform. They learn to take time and assess a situation before taking any action. The responsibility is on the instructor to perform. Students develop a plan mentally before being asked to take any action.

**I do it; You help.** →
- When students begin to talk through their thoughts, they are beginning to take responsibility for the learning. Emphasis is on talking about the plan before taking action. The opportunity is there to question and reason through ideas without the pressure of having to perform unscaffolded.

**You do it; I help.** →
- When students begin to write down their thoughts, their responsibility grows. However, it is still supervised and guided. They are gaining the confidence they will need to succeed at the skill.

- When the time comes for the students to perform on their own, they are eager to prove to me and to themselves that they can practice the skill. There is satisfaction in knowing that a new skill has been added to that never-ending skill bank. Self-esteem begins to grow, one skill at a time.

**You do it.**

- Direct instruction is a highly organized, structured method of teaching. Students learn quickly what to expect, and they can depend on the pattern to carry through each lesson. They learn to organize themselves around this model, and the organization carries over into other areas as well. When they become organized, they feel more comfortable making decisions.

- Direct instruction works very well for adults with learning disabilities. I do not keep this fact a secret. We discuss as a class the definition of a learning disability, and students begin to accept the idea that a learning disability is not a reason to give up. There are things that can help. We discuss the fact that the way we do our lessons will help make the learning disability easier to manage. Students become as comfortable with the term "learning disability" as they do with "fraction." It is a part of our class, whether we like it or not, and the way to deal with it is to not brush it under the rug. Students work together to help each other overcome their individual needs, and this begins to facilitate confidence in groups. It also helps students to talk about their learning disabilities without feeling ashamed.

***Direct Instruction works very well for adults with learning disabilities. …We discuss the fact that the way we do our lessons will help make the learning disability easier to manage.***

- Direct instruction allows for multisensory input. Students become aware of how their senses are involved in their learning. They begin to utilize their senses in other aspects of their lives. They begin to use their voices more, to ask questions when they need answers, because they are used to doing this in class with no discomfort. They also become aware of other ways to get information. Reading is not the only way to find needed information, and the direct instruction opens their eyes to different kinds of input.

- I try to encourage students to speak in the group as much as possible. I never force them to do it, and I find that very quickly most students want to do it. They see their classmates do it without stress, and they soon are willing to try. Mistakes are corrected, but in a positive way. I

allow students to see and comment on my own mistakes, intentional or not, because they need to see me, their teacher, make mistakes and, more important, react to them. When they begin to understand that mistakes are not bad things, they are less concerned about making them and more focused on learning new things.

- Direct instruction not only provides a nonthreatening environment for learning new skills, it also provides a safe way to practice them. Students can work on their newly acquired skills before leaving to practice them alone. They can make mistakes, ask questions, and hear answers before going home with a workbook page to do. They also learn in the classroom what works for them and what does not. When they go home to do independent practice, their study sessions are simply an extension of an already successful experience.

Students who are successful in the classroom blossom into adults who become successful in other places. Development of self-advocacy skills is a slow process. It is a process that must be planned and implemented with consistency and predictability. It took me a while to learn that my job as an adult educator is not simply the teaching of academic concepts. Students will develop a self-image in my class, and it is my job, to the best of my ability, to see that they develop a positive one.

## 7. Learning Strategies: Learning How to Learn

***Ask learners which strategies work for them and have them share ideas with each other. When a strategy comes from them, they are more likely to remember and use it.***

We are teaching students how to learn. Ideas drawn from the PBS Teleconference, *Serving Adults With Learning Disabilities: Implications for Effective Practice* (2000), in which Dr. Patricia Anderson outlined best practices for LD instruction and suggested the following strategies that can be applied across learning situations:

- Listening
- Paraphrasing
- Test-taking
- Error monitoring
- Paragraph organization
- Memory strategies.

- Ask **learners** which strategies work for them and have them share ideas with each other. When a strategy comes from them, they are more likely to remember and use it.

- Engage learners in learning **processes**, not just the content. For example, if a student believes **her message** is important, she'll have more interest in revising her writing so that it's clearer to others. The writing process, thus, has more meaning to her.

- **Teach methods to enhance the storage of information:**
  — Categorizing information by function, alphabetical order, or size
  — Comparing new information with known information.

- **Teach methods to enhance memory:**
  — Visual imagery
  — Clustering or chunking information into smaller units
  — Mapping
  — Color-coding
  — Verbal rehearsal.

- **Teach methods to enhance the retrieval of information.**
  — Visual imagery
  — Word or idea association
  — Color coding
  — Verbal rehearsal
  — Imagery or dramatic pictures
  — Setting ideas to music
  — Mnemonics, such as the paraphrasing strategy, RAP, described earlier in this chapter.

- **Elicit feedback from and provide feedback to students.**

Many adults with LD do not have an accurate picture of how they are performing on a particular task. Providing immediate and frequent feedback about the quality and appropriateness of work completed—including practical suggestions for revising or refining that work—will help them accurately evaluate and monitor their progress.

**Sit back and take a few minutes to think about the characteristics of "LD Appropriate Instruction." Review the key guidelines, tools, and strategies described in this chapter. Then think about your own teaching practice.**

**What are the next steps you would like to take to be more effective with struggling learners who may have learning disabilities?**