

# The Madeline Hunter Model of Mastery Learning



**Dr.** Madeline Hunter's research showed effective teachers have a methodology when planning and presenting a lesson. Hunter found that no matter what the teacher's style, grade level, subject matter, or economic background of the students a properly taught lesson contained eight elements that enhanced and maximized learning. She labeled eight elements and began two decades of teacher training. The elements, referred to as Lesson Design, Target Teaching, or Clinical Teaching, have stood the test of time - still used today in many teacher colleges and as reference for judging teacher effectiveness in many school districts.

**Within** each element of Lesson Design, there are many sub-skills, methods, and techniques - each demanding training, practice, and review in order to attain mastery of the Hunter model. Simply knowing about or reading about Lesson Design will not produce flawless performance, but will form a basis for decision making.

## Basic Hunter Vocabulary

(Each term has been defined using two related statements)

### 1. Anticipatory Set

The teacher focuses the students' thoughts on to what will be learned. (Tie in yesterday's lesson with today's lesson. Get them interested.)

Anticipatory set is defined as a short activity or prompt that focuses the students' attention before the actual lesson begins. Used when students enter the room or in a transition, anticipatory set might be a hand-out given to students at the door, review question written on the board, two short problems presented on a transparency on the overhead, an agenda for the lesson written on the chalkboard, etc.

### 2. Objective and Purpose

Students learn more effectively when they know what they are supposed to be learning and why. Teachers also teach more effectively when they have the same information. (Tell what/how/why/ the students are going to learn.)

The purpose or objective of the lesson includes why students need to learn the objective what they will be able to do once they have met the criterion, how they will demonstrate learning as a result The formula for the behavioral objective is: The learner will do what + with what + how well?

### **3. Input**

The new knowledge, process or skill must be presented to the students in the most effective manner. This could be through discovery, discussion, reading, listening, observing, etc.

Input includes the vocabulary, skills, and concepts the teacher will impart to the students, the information the students need to know in order to be successful.

### **4. Modeling**

It is important for the students to "see" what they are learning. It helps them when the teacher demonstrates what is to be learned.

The teacher shows a graphic or demonstrates in a concrete way exactly what the finished product looks like. Remember, a picture is worth a thousand words.

### **5. Checking for Understanding**

It is important to make sure the students understand what was presented. One way this can be done is by asking the students questions.

The teacher uses a variety of questioning strategies to determine "Got it yet?" and to reflect on the pace of the lesson: "Should I move forward or back up?"

### **6. Guided Practice**

The students practice the new learning under direct teacher supervision.

The teacher leads the students through the steps necessary to perform the skill using a trimodal approach: hear/see/do.

### **7. Independent Practice**

When the teacher is sure the students understand the new material, they assign independent practice.

The teacher releases students to practice on their own based on learning that has occurred during the previous steps.

### **8. Closure**

At the end of each lesson, the teacher review or wraps up the lesson by posing a question for the class: "Tell me or show me what you have learned today."

Closure is not necessarily an end point, but more of a final "check for understanding" used at the end of a class period. Closure for on-going laboratory activities may not be appropriate.

## SUMMARY

### Teaching to an objective

(lesson objective--not a "step.")

1. Objectives
2. Set [hook]
3. Standards/expectations
4. Teaching
  - o Input
  - o Modeling/demo
  - o Direction giving [see below]
  - o Checking for understanding
5. Guided Practice
6. Closure
7. Independent Practice

### Behavioral Objective format:

Students will demonstrate their [knowledge, understanding, skill, etc.] of/to [concept, skill, etc.] by [activity performed to meet the lesson objective] according to [standard].

Example: Each student will demonstrate achievement of the skill of addition of whole numbers by adding columns of figures with paper and pencil accurately nine out of ten times individually in class.

### Four step instructional process

1. Watch how I do it [modeling]
2. You help me do it (or we do it together) [together]
3. I'll watch you do it or praise, prompt and leave [guided practice]
4. You do it alone [independent practice].

## **Motivation "TRICKS"**

1. Feeling Tone
2. **Reward** [extrinsic/intrinsic]
3. Interest
4. Level of **Concern**
  - o accountability
  - o time to produce
  - o visibility
  - o predictability
5. **Knowledge** of results
6. **Success**

## **Ways of monitoring**

1. Oral individual
2. Oral together
3. Visual answers, e.g., "thumbs"
4. Written
5. Task Performance
6. Group sampling

## **Questioning Guidelines**

1. Place signal [get their attention], then ask question
2. Ask question before designating the person to answer
3. Do not repeat nor rephrase the student's response. May ask for agreement by class or for others to respond.
4. Ask question then wait for 50% of hands [or "bright eyes," knowing looks]
5. Never ask a question of a student who you *know* cannot answer.
6. If the student is confused or can't answer, calmly repeat the same question or give a direct clue.

## Retention, Reinforcement

1. Meaning/understanding (the most effective way to learn)
2. Degree of original learning. Learn it well the first time. [And don't practice it wrong!]
3. Feeling tone. [positive or negative will work but negative has some undesirable side effects.]
4. Transfer [emphasize similarities for positive transfer and differences where there might be an incorrect transfer.] [See Bloom's Taxonomy of Educational Objectives for levels of learning. Transfer implies all of the higher levels. See Barak Rosenshine re. decontextualizing following this summary of the "Hunter Model"--which is essential for effective transfer of knowledge and skills to the real world.]
5. Schedule of Practice. [Mass the practice at first, then create a regular follow-up schedule.]

## Creating Directions

1. break down into parts/steps.
2. Give only three at a time, one if the behavior is new.
3. Delay giving instructions until just before the activity.
4. Give directions in the correct sequence.
5. Plan dignified help for those who don't tune in. [no put-downs]
6. Give directions visually as well as orally (Visual representation of the task) [cf. Fred Jones' VIP]

## Giving Directions

- Give the planned directions [creation above].
- Check the students' understanding ["Any questions?" does not check understanding.
- Have a student model the behavior. [i.e., on the board or orally.]
- If needed, remediate and recheck. [It is essential that students **do not practice error.**]

The Madeline Hunter "Seven Step" lesson design may be used for more than just direct instruction in the behavioral mode. It can be used as a shell for any instructional lesson or unit.

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## Decontextualization for transfer and general application

Barak Rosenshine, in a presentation to the Association for Supervision and Curriculum Development, Spring 1990, reported on recent research on direct instruction. **Direct instruction** (as addressed by Rosenshine) applies to skills, not to the teaching of content. Most of the research on teaching effectiveness has been on the teaching of well-structured skills: how to add, how to focus a microscope. His new work addresses research on **how effective teachers teach less-structured skills: how to summarize, how to take notes, how to ask appropriate questions, etc.** Other continua that are similar/parallel to well structured-less structured are: explicit-implicit, algorithm-heuristic, and concrete-abstract.

The strategies he has recently reported provide **scaffolds** for learning the less-structured skills. They:

- Regulate the difficulty [escalate after learner gets it]
- Anticipate difficult areas [then provide lots of support]
- Model: talk out loud about the process you are going through.
- Provide procedural facilitators [procedural facilitators are to content as advance organizers are to process]
- Provide appropriate student practice in varied contexts.

All of these apply to the teaching of well-structured skills as well but they are specifically indicated for the teaching of less structured skills: things for which discrete procedural steps are hard to identify. They are less relevant to the teaching of content because prior/background knowledge is key to the teaching of content.

Learning takes place in the **zone of proximal development [ZPD]** where the student's development is advanced enough for the pupil to learn but will need help to get there.

A **scaffold**[outline, model, visual instruction plan (VIP), diagram, or figure that provides an image to hang ideas on] makes it easier for the learner to "get it" in developmental skills subjects where background knowledge is not key and so is not applicable for non-progressive content like social studies or literature. ZPD is not critical for **most** content in English or social studies but is more so in science or math. [Note: writing an essay, at least in the initial learning stages, is a less-structured skill that has steps that can be taught, e.g., start with an attention-grabber, then a topic sentence, then a statement followed by supporting information, then another statement with support, then a third statement with support, then a summary statement tying the three statements to the topic.]

Most things in math and science, especially skills, are taught in a context. For transfer to broader applicability it is necessary to **decontextualize** the learning. One way to do this is in guided practice by giving attention to decontextualizing the skill by providing lots of varied practice and spaced practice. [Ed.note: And to have students manipulate the ideas/skills, e.g., "Have you ever seen something like this down town?" or "How many ways can you think of to use this concept/skill?" or "Can you explain how you arrived at that answer" (metacognition).]

[Ed. note: It is likely that decontextualization of learning is the most important and least practiced function of teaching for latter application. The lack of transfer of knowledge/skills to "real life" is likely the main reason why graduates do so poorly on state-wide and national tests [even when they "know" the answers: the questions aren't asked in the context in which they were learned. It is important that we present and re-represent the material to be learned in as many different ways/contexts as we can...and at the higher levels of Bloom's Taxonomy of Educational Objectives.]

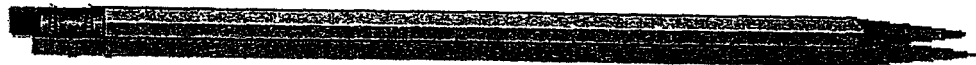
### Summary of the Summary:

You told them what you were going to tell them with **set**, you tell them with **presentation**, you demonstrate what you want them to do with **modeling**, you see if they understand what you've told them with **checking for understanding**, and you tell them what you've told them by tying it all together with **closure**. [For a detailed treatment of this topic, see Cooper et al, Classroom Teaching Skills, 4th ed., D.C. Heath & Co., Lexington, Ky.]

**The Madeline Hunter "seven step lesson plan."** The basic lesson plan outline given above contains the so-called "Hunter direct instruction lesson plan elements:" 1) objectives, 2) standards, 3) anticipatory set, 4) teaching [input, modeling, and check for understanding], 5) guided practice, 6) closure, and 7) independent practice. If you count input, modeling, and check for understanding as three steps, there are nine elements...not the seven in the usual title.

Madeline Hunter did not create a seven step lesson plan model. She suggested various elements that might be considered in planning for effective instruction. In practice, these elements were compiled by others as the "Seven Step Lesson Plan," taught through teacher inservice, and used as a check list of items that must be contained in each lesson. This application is **contrary to Dr. Hunter's intent** and its misuse is largely responsible for objections to "direct instruction" and to Madeline Hunter's system of clinical supervision.

Used as Dr. Hunter intended, the steps make a useful structure for development of many lesson plans...including non-behavioral ones. **Not all elements belong in every lesson** although they will occur in a typical unit plan composed of several lessons. [Those who have an evaluator who uses the elements as a check list and records a fault for each element missing from a lesson are referred to Patricia Wolfe, "What the 'Seven-Step Lesson Plan' Isn't," Educational Leadership, pp. 70-71, Feb., 1987.]



# What the "Seven-Step Lesson Plan" Isn't!

It's not a rigid formula but a set of useful elements.

The instructional practices espoused by Madeline Hunter have gained such wide acceptance over the past 20 years that one begins to believe they may escape the "this too shall pass" syndrome that has plagued so many educational innovations. However, as is often the case with popular concepts, Hunter's practices have suffered abuses as well as successes. Perhaps the most misunderstood component of her work is one that has been labeled the "Seven-Step Lesson Plan," a term that Hunter has never used.

The "trouble" began in 1976 when Hunter and Doug Russell, the lead teacher at University Elementary School, UCLA, wrote an article called *Planning for Effective Instruction: Lesson Design*, in which they described seven elements that should be *considered* when designing a lesson. They wrote that the following elements, if used appropriately, will increase the probability of student success in reaching the lesson objective: anticipatory set, objective, input, modeling, checking for understanding, guided practice, and independent practice. Hunter and Russell do not list them as steps, nor do they indicate that the elements are to be carried out in order. In the article they state their belief "that a systematic consideration of seven elements, which research has shown to be influential in learning and which therefore should be *deliberately included or excluded* in planning instruction, will make the difference in learners' success or lack of it" (Russell and Hunter 1976). Taken separately,

each of these elements is a sensible instructional practice with which few would disagree. However, on the way to implementation, something happened that has caused their efficacy to be questioned.

It could be that educators are fascinated with numbers or that overworked teachers were looking for an all-purpose lesson plan. Or it may have been the fault of staff developers who did not completely understand what Hunter and Russell were saying. Whatever its origin, the "Seven-Step

Lesson Plan" soon became a common phrase in schools all over the United States. Teachers began to try to fit all elements of the "plan" into every lesson they taught. Administrators who were newly trained in clinical supervision began to look for all seven "steps" as they observed in classrooms, often faulting teachers if a step was missing. Behind the scenes, a few rumblings began to be heard. Social studies teachers in secondary schools felt that the "Seven-Step Lesson Plan" as they understood it, didn't work well for a discussion of democracy. Elementary teachers began to complain that there were times when one or more of the steps didn't seem appropriate.

The "dissidents" are right! Those seven instructional elements are not a recipe to be followed step by step in every lesson; they are elements to be *considered* when planning instruction, regardless of what form that instruction takes. If we agree with Hunter that *teaching is decision making*, use of the elements becomes much clearer. As teachers prepare to instruct, they need to consider many factors: the content, their students' previous knowledge and learning styles, their own teaching styles, and so on. A thorough understanding of anticipatory set, of modeling, or of any of the other elements allows the teacher to select those strategies that will best enable students to reach the objective of the lesson.

At times all seven elements might be used in order in a single period or session, but on other occasions it would be appropriate to reorder the

**"The 'dissidents' are right! Those seven instructional elements are not a recipe to be followed step by step in every lesson."**



elements or to omit certain elements altogether. For example, if students are having difficulty with a learning task and it might interfere with their learning if they know they are to work on it again, the teacher might decide not to tell them the objective at the beginning of the lesson. During another lesson, the teacher might determine that the students need additional input and would therefore postpone guided and independent practice. There are no absolutes in the complex world of teaching.

The key to using the elements of instruction appropriately is a deep rather than superficial understanding of each one. Bruce Joyce and Beverly Showers (1983) call this kind of understanding "executive control." What appears to have happened in many cases is that the training in these instructional practices has not included sufficient practice for educators to obtain such control, to know when the use of an element is indicated and how to adapt it to specific situations and students.

The elements of effective instruction (including the use of motivation, reinforcement, transfer, rate and degree of learning, hemisphericity, and retention) generally contained in training in Hunter's practices might be better understood as "generic" instructional processes that underlie effective teaching and whose use needs to be *considered* in every teaching situation. With this understanding, we could eliminate the terms "Seven-Step Lesson Plan" and "Hunter Model" and see these instructional elements as they were intended as research-validated practices to be applied at the discretion of teachers and administrators who understand their use to promote student learning. ☐

#### References

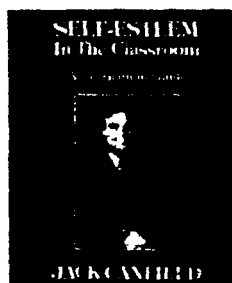
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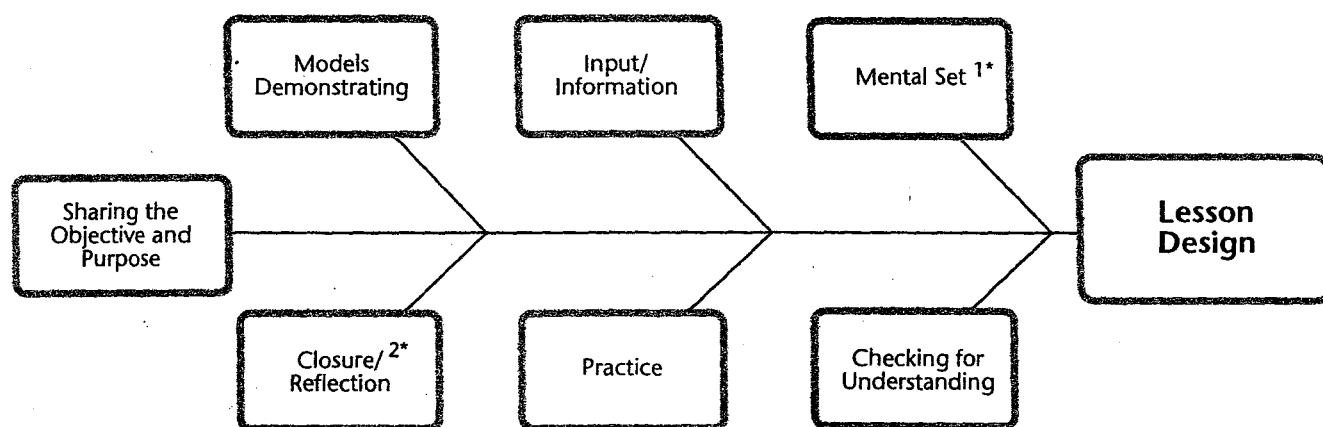
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# Fish Bone Organizer of Lesson Design

At the start of the chapter you were invited to think about the components that would be part of most lessons. The Fish Bone

Organizer below illustrates the components of the strategy of Lesson Design.



Ask yourself whether or not you agree with those instructional ideas. We did. We asked ourselves:

- Is linking to the past experiences of students important? (Mental Set)
- Is actively and meaningfully involving students important? (Mental Set)
- Should students have a say or opportunity to discuss or debate the learning objectives? (Sharing the Objective and Purpose)
- Should we be sensitive to the variety of ways in which students can obtain information? (Think about Multiple Intelligence and Learning Styles.) (Input)
- Is modelling or demonstrating or role playing a useful process?
- Should teachers and students check to see they understand?
- Should students practise or simply be able to explain? Is a tutor or a mentor sometimes useful? (Guided and Independent Practice)

- Is a summary of the key learning and integration with previous learning a worthwhile idea (Closure and Extension)



## *Mental Set - Brief Description*

Mental Set is an instructional concept a teacher invokes to get students focused and actively involved in learning. Another label could be "lesson introduction" or the "hook." This instructional concept is often initiated in a lesson through the teacher playing with three critical attributes (the essential characteristics of something). Of course, if students run through your classroom doors with palpitating hearts, passionately demanding to begin your class work immediately, then you can most likely dispense with Mental Set.

### CRITICAL ATTRIBUTES:

(See Examples on Web site)

1. Linking to the past experiences of the students through questions or activities.
2. Having all Students (or as many as possible) actively involved.
3. Connecting Students' involvement to the learning objective.

### WHEN USED:

Usually at the beginning of a lesson or to re-focus the students after an interruption in the lesson (e.g., someone at the door).

Remember though, that the learning may be so intrinsically interesting that you do not need a Mental Set. This is no different from art. If you don't need a colour, you don't use it.

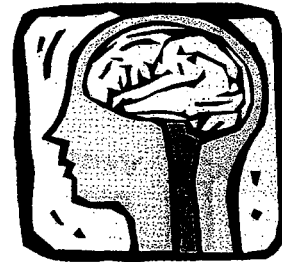
### WHY USED:

To increase the chances all students are meaningfully connected and involved in the learning. We often think students are not interested in learning; not true. They are interested in learning—they are just not interested in what and how it is being presented. Remember that students have an intense and demanding life outside of the classroom. Other things are often on their mind (e.g., birthdays, competitions, divorces, new puppies, deaths, falling into or out of love). Mental Set must attend to those competing demands.

### CONSIDERATIONS:

Mental Set can occur in a matter of seconds or, if students don't have the experiences, it may take as long as a film, a story, or a field trip—the time needed to create the experiences. At times the Mental Set can have a complete lesson embedded inside it. Simply said, Mental Set is about getting the mind ready to learn. Mental Set is also a place to invoke the power of the skills that enhance motivation.

The fascinating aspect of MENTAL SET is that like a puzzle piece, it has receptor sites. Those receptor sites allow other tactics such as Mind Maps and Word Webs, as well as other strategies such as Inquiry, Concept Attainment, Role-Playing, and Inductive Thinking to become the Mental Set. The Set can be pointedly precise or mythically magic. Regardless of what you do, it will set the tone for the students' involvement in the lesson.



## Sharing the Objective and Purpose

This is the place in the lesson where the teacher decides whether or not to share and/or discuss with the students what they will be learning in terms of the cognitive, affective, or psychomotor domains. In addition, a discussion often occurs as to why it is important for them to inquire into this particular area and how it connects to their lives. Shared Objectives and Shared Purposes represent the statements that assist students in understanding how to meet learning outcomes or bench marks. As Madeline Hunter (1994) states: "It is not the pedantic: At the end of today's lesson you will be able to ...". Although that objective is in the teacher's mind as a guide, the objective is shared in student language. "Today we are going to extend our thinking about the types of energy you have explored. I thought we might employ a Mind Map to assist us to pull the ideas together and then we can see how you respond to some questions that will come out of your thinking from your Mind Map."

### CRITICAL ATTRIBUTES:

(See Examples on Web site)

1. The objective is stated in student language and states what will be learned and how the students will demonstrate that learning. It can also include the level of performance re the assessment of the learning (say 90% accuracy) and the conditions (given 30 minutes). (For example: Given 30 minutes and the opportunity to work with a partner, the students will construct at least

Note that an objective might be relevant, but we need to ask if it is also meaningful and relevant. Is working on worksheets in math an example of brain-friendly learning? If a learning objective is lacking authenticity and relevance the human brain is more likely to reject it. The brain is designed for survival, not boredom.

three arguments that communicate their understanding of both sides of the issue re the conflict of clear cutting.)

2. The objective is clear, and if required, measurable.
3. The objective is specific i.e., the level of thinking is considered.
4. The objective is meaningful or relevant.

### WHEN USED:

Usually the objective is shared near the beginning of the lesson—unless the objective is to be discovered through student involvement in an Inquiry-oriented lesson. In this case, you might want the student to identify the objective and purpose for the lesson as part of the summary or Closure to the lesson.

### WHY USED:

If students know where they are going it increases the chances they will get there—especially if the purpose for the objective has meaning and interest.

### CONSIDERATION:

As teachers, we often have a passion for our subject ... a passion that is not always shared by the students. Although that passion is useful to us, we must remember that our students seldom walk through the door with that same level of appreciation. It's not that they are not interested, they are simply not interested in what we want them to be interested in. If we as teachers are not sensitive to the learner's disposition to the content being learned, then we increase the chances students will not be sensitive to ours.



## ***Input or Information: A Brief Description***

Input or information refers to what the students receive to facilitate the learning. That information can emerge from a number of sources:

- from other students (for example, in a Cooperative Learning lesson)
- the teacher
- computer searches
- a video, film, slides, pictures
- guest speakers
- field trips
- a trip to the library
- books
- the student's own experiences and thinking
- activities such as drama or role playing
- other instructional strategies such as Mind Mapping, Concept Attainment, Inductive Thinking, Inquiry, Group Investigation, etc.

Although stated previously, as many of the senses (auditory, visual, tactile, kinesthetic, taste, and smell) should be stimulated as *appropriate* to accommodate the sensory strengths and weaknesses of the students.

## **CRITICAL ATTRIBUTES:**

(See Examples on Web site)

1. The Input relates to the learning to be achieved.
2. The Input supports/encourages an appropriate level or area of thinking.
3. The Input should facilitate a meaningful and interesting inquiry.

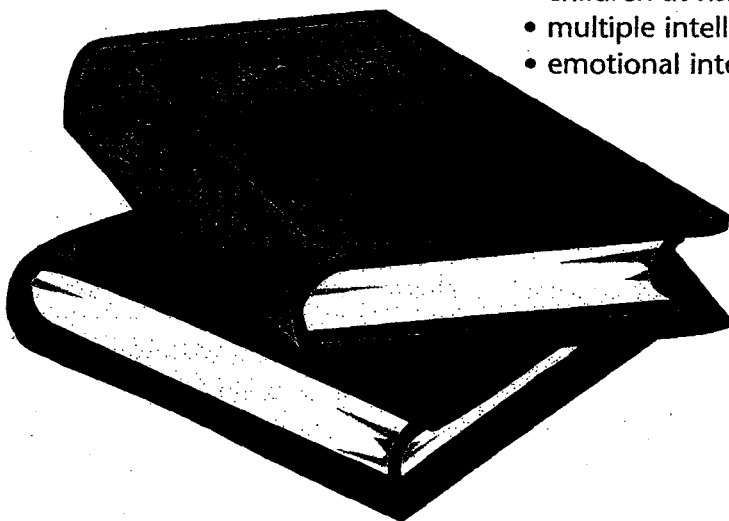
Of course, the other decision the teacher must make about the use of information relates to the percentage of time students will work individually, in small cooperative groups, or in large group discussions. The authors believe that no single approach is best; variety and balance is the key.

Obviously Input is not as simple as Input. All of the above can be situated on a continuum of teacher-influenced to student-influenced or postivist to constructivist. The options are richly complex.

## **CONSIDERATION**

Stepping back to other literatures that inform or guide Input we must also consider the literature/research on:

- gender
- culture and ethnicity
- learning disabilities
- the human brain
- children at risk
- multiple intelligence
- emotional intelligence



## ***Modelling/Demonstration: A Brief Description***

Modelling usually refers to the visual representations of what is being learned (like a model of the human heart). It can also refer to "hearing" or "feeling" representations such as a poem or piece of music or the idea of rough or cold respectively.

Demonstrations usually refer to an action or simulation or a process (as in an experiment or solving a math problem).

### **CRITICAL ATTRIBUTES:**

(See Examples on Web site)

1. The Model/Demonstration contains the critical elements or steps to be learned.
2. The Model/Demonstration is not confusing or ambiguous.
3. The students can see and, if necessary, hear or touch the attributes.
4. The students can talk about what they see, hear, or touch related to the critical elements.

Note: a student cannot 'see' all the attributes (characteristics) of a mammal by analyzing a picture (life, birth, hair on body, warm blooded); so we must be sensitive to what is 'discernable.'



### **WHEN USED:**

In most cases, Modelling comes after or along with the information being presented. At times it can occur at the beginning of the lesson as part of the Mental Set to generate input or information. As well, it can also be applied in the process of Checking for Understanding, Practice, and Closure.

### **WHY USED:**

Modelling helps students remember what was learned by acting as a visual check on what was presented orally. As well, it provides variety and interest and, if possible, hands-on experience.



Note that if you integrate the Concept Attainment or Inductive Strategies into the lesson, the Modelling occurs in the presentation of the data sets. Also, when using Mind Maps, the drawings completed by the students are one of the factors that make Mind Maps effective in assisting students to retain information.

### **CAUTION:**

When teachers are encouraging divergent thinking or creativity, they must be thoughtful about whether or not to employ Modelling—it can control or encourage students to replicate the model and work against divergent/creative thinking.

## Checking for Understanding: A Brief Description

This is a process that assists teachers in monitoring the learning and determining if students have attained an appropriate level of competence related to the targeted learning. Based on that finding, a check for understanding helps teachers make adjustments in their teaching. Adjustments can include actions such as re-teaching the same way; break into simpler steps and re-teach; to trying a different approach; leaving it until later; or, if successful, to go on to the next step.

The use of rubrics or benchmarks is one way for students to check their own understanding. Rubrics can also involve student self-assessment, which is another process that allows students to take more responsibility for checking their understanding.

### CRITICAL ATTRIBUTES:

(See Examples on Web site)

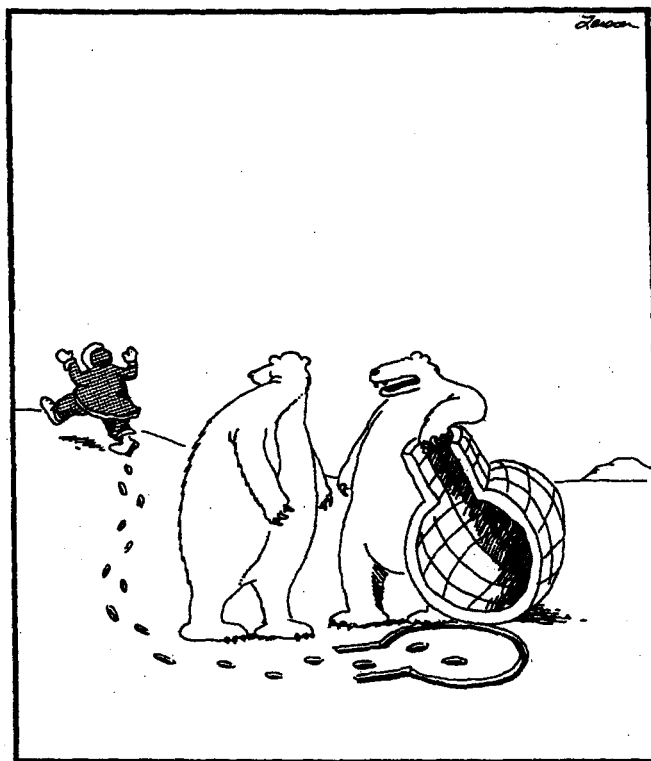
1. It involves all the students (the concept of active participation).
2. The teacher asks for an overt response.
3. Students get specific feedback.
4. It relates to the objective and the desired type or level of thinking.
5. The teacher responds appropriately to the students' efforts. (e.g., if a student is asked a question and gives an incorrect, partially correct or correct response).

### WHEN USED:

Usually the Check for Understanding is used before the students are asked to Practise. It can also occur in the Mental Set to check what students know before starting the lesson or in the Closure to summarize the key ideas in the lesson.

### WHY USED:

A Check for Understanding increases the chances the students will experience success rather than frustration or confusion during the Practice. Successful students are more likely to be motivated to continue learning—discouraged children are not so apt to become a management problem because their concerns are being picked up and resolved.



"I lift, you grab ... was that concept just a little too complex, Carl?"

THE FAR SIDE Gary Larson©. 1991 Far Works, Inc. Used with permission. All Rights Reserved.

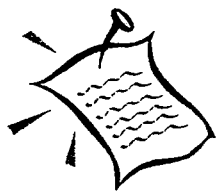
## *Practice: Guided & Independent: A Brief Description*

Practice is the time given in the lesson or outside the classroom (e.g., homework) to allow the student to try out or experience what was learned. It is an opportunity to apply their understanding. Two types of practice that exist on either end of a continuum are working completely alone (Independent Practice) or having intense help (Guided Practice). Practice can also be massed (intense period, then finished) or distributed (shorter periods that occur over time).

**Guided Practice** – the student receives or can ask for assistance from the teacher, parents, other students, etc. The idea of peer tutors, coaching, and mentoring also relate to this type of practice, as would aspects of Cooperative Learning. In Guided Practice you are intending to make sure the student is comfortable with the ideas before allowing her to work more independently.

**Independent Practice** – the student completes a task with no help from another source. Homework usually falls into this category.

Note that some students will need more Guided Practice than others. As well, some students will prefer to be totally independent.



## CRITICAL ATTRIBUTES:

(See Examples on Web site)

1. Amount. How much should be practised? (suggestion: a small, meaningful amount)
2. Duration. How long should they practise? (suggestion: a short, intense period)
3. Frequency. How often should they practise? (suggestion: a variety, from massed to distributed)
4. Feedback. How will they find out how well they did? (feedback or knowledge of results)
5. Timing. Is the practice to be massed for immediate use (a lot of practice with no or little other learning between practices) or distributed for long term retention?
6. Appropriateness. Does the practice relate to the objective (the intended learning) and the appropriate level of thinking?

## WHEN USED:

Practice usually occurs after what has been learned has been Modelled or Demonstrated and the students understand what they are to apply during the Practice.

## WHY USED:

Practice is used to increase the chances that students not only remember what they have learned, but also that they transfer that learning to new situations. "To know something is to act on it—to act on it is to remember it."



## Closure: A Brief Description

Closure is often a final summary of the lesson that occurs in the minds of the learners, not the mind of the teacher. It can be similar to a Check-for Understanding although it usually focuses on the major learning of the lesson. It can be simple. It can be complex. It can also encourage the students to extend their thinking, to make connections to what they have already learned, or will be learning next...like a transition phase.

### WHEN USED:

Usually at the end of the lesson or a phase of the lesson.

### WHY USED:

Closure brings the major ideas in the lesson into a sharper focus. It provides time for the student to gel the learning. It might be as simple as explaining the major ideas in a lesson, or as complex as having students argue the value of what was learned. At times it invites the students to be creative with what was learned or to apply it in a different situation. Somehow, during the lesson the students must obtain what David Perkins (1986) discusses as Knowledge as Design. That is, have they...

1. understood the structure of what was learned?
2. discussed the purpose of that learning?
3. experienced model cases of that learning?
4. inquired into the arguments or value of that learning?

If not...then of what value was the learning?

## CRITICAL ATTRIBUTES:

(See Examples on Web site)

1. Closure actively involves all the students.
2. The Closure relates to the objective (often by extending the objective).

### An Example of Closure:

We have finished discussing the effects of the Industrial Revolution on men and women in the late and early nineteenth century. I am going to ask you a question. Think to yourself and be prepared to defend your answers in about 30 seconds. No hands, I'll randomly invite responses.

*"Given what you know about the Industrial Revolution, can we assume it is over? If yes, what proof do you have? If no, what proof do you have?"*

**Caution:** Often the teacher does the summary or checks with one or two students and asks "Now does everyone understand?" and assumes that because no student responds, that all students do. When in fact the hidden response is: "Yes-I-do-but-really-I-don't-because-I-don't-want-others-to-know-I-don't."

