

# Section B: Instructional Strategies

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*You are the teacher, and you must assume responsibility for establishing a learning environment that is stimulating and exciting for you as well as for your students. If you do not enjoy class, your students will not either!*



Teachers use a variety of instructional strategies to achieve their instructional goals. Adapted from Peter F. Oliva (132-133), here is a list of strategies that teachers may use for their instructional presentation:

lecturing	oral reports
discussion	written reports
textbook exercises	drill (flash cards, etc.)
recitation	audiovisuals
cooperative learning	role playing
questioning	tutoring
problem solving	programmed instruction
discussion	field trips
tests	homework
independent study	projects

This list is only a beginning, but begins to illustrate the variety of activities that can happen in a classroom that will help students master learning objectives.

The Health Occupations Education curriculum guides contain literally thousands of instructional ideas for all Health Occupations Education courses. The new teacher should have a complete curriculum guide for every class taught, and should use the curriculum guide to help plan effective classroom instruction.



## **Overwhelmed?**

The amount and variety of instructional strategies can be overwhelming for the new teacher. One suggestion is to try one new strategy at a time, until the teacher feels confident in the use of that strategy. As confidence grows, the teacher should continue to add different strategies to his/her instructional arsenal.

**Time?** How long does it take for a teacher and a classroom to master a new strategy?

It depends. Consider the complexity and "newness" of the strategy, and then give it enough time to catch on in the classroom.

For example, the first time a teacher tries to use role-play in the whole classroom the students may hesitate to get up and perform. Starting slowly in small groups, and adding to the complexity of the role-play as students develop the skills and confidence needed for the activity may prove successful.

### **What Exactly Should be Taught?**

The course test item banks clearly define what the student should know and be able to do when the student has learned (mastered) a given objective, and should be considered when choosing instructional strategies.

Keep in mind that in Allied Health Sciences I and Medical Sciences I, the focus is primarily on content (cognitive) outcomes. Biomedical Technology, Health Team Relations, Allied Health Sciences II and Medical Sciences II all contain both the traditional knowledge outcomes (measured by multiple choice test items) and performance outcomes (measured by skills checklists.)

### **WHAT ABOUT BLOCK SCHEDULE?**

The 4X4 block schedule involves over 80% of North Carolina High Schools and the number continues to rise. According to studies by the North Carolina Department of Public Instruction, a few very important facts must be considered.

1. There are “few statistically significant differences between block and non-blocked schools” in End-of-Course test scores.
2. “Many principles expect teachers to be able to use a greater variety of teaching methods” with block scheduling.

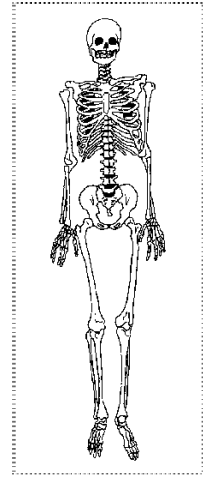
In other words, students in a block scheduled Health Occupations Education class have the same learning expectations as students in a traditional Health Occupations Education class – AND – there is a greater need for using a variety of instructional strategies when teaching in a block schedule.

*I didn't belong as a kid, and that always bothered me. If only I'd known that one day my differences would be an asset, then my early life would have been easier. - Bette Midler*

## An Example of Instructional Strategies for Health Occupations Education

*How could a variety of instructional strategies be used in helping students master a specific objective?*

Objective 1H05.01 in Allied Health Sciences I is "Explain the structure of the bones." To help the students achieve that objective, here are some alternatives the teacher can use (adapted from Oliva 133-143):



1. Prepare a lecture on the skeletal structure and ask the students to take notes.
2. Prepare a lecture and use the overhead projector, a flip chart, or the chalkboard for students to copy notes from.
3. Prepare a lecture and use a model of the skeletal system (or a real human skeleton if you have one in your classroom) to point out different bones as they are discussed.
4. Show a film on the skeletal system. Give the students a list of terms/bones to look for and questions to write down answers to during the film.
5. Lecture and ask students to label the bones on an illustration of the human skeleton.
6. Use a programmed text to teach the content.
7. Ask students to read the section in their textbooks on the structure of the skeletal system, and complete a related written assignment.
8. Give the students a list of bones they must memorize the medical term for, and ask them to make flash cards for each. Then, they can practice in pairs.
9. In cooperative groups, allow students to look for and teach each other the microscopic function the skeletal system.
10. Simulate the HOSA medical spelling event with the entire class to help students learn to spell the medical terms for the bones.
11. Play "Simon Says" with your class. ("Simon says, point to your patella. Simon says, shake your metacarpals. Point to your scapula." )
12. Invite a radiologic technologist to bring a view box and skeletal films to class. Challenge students to identify the bones in the x-ray.
13. Ask students to compare an illustration of a human skeleton and an animal skeleton. How are they the same? How are they different? Why?

**So . . . can you think of any other "great ideas?"**

What? You aren't that creative? That's not a problem. There are many resources to suggest great ideas for the classroom that can be adapted to fit any instructional objective. At your fingertips you should have:



- \* This guide
- \* HOE Curriculum Guides FILLED with great ideas

In addition, talking to other teachers can prove to be an extremely valuable resource - and don't forget about reading. Most school systems have professional libraries for the teacher, and educational journals can be very enlightening. (If you join NCHOETA - the professional organization for Health Occupations Education teachers - you will receive regular issues of *Techniques*, the Career & Technical Education Journal.)

*Nothing in life is to be feared.  
It is only to be understood.  
- Marie Curie*

### **Choosing the Right Instructional Strategy**

How does the new teacher know which strategies to use? It depends. Quite often, teachers choose a strategy they think will work, and try it in their classrooms. If students are successful, then the teacher will use that strategy again. If the strategy doesn't work, the teacher keeps trying until something works.

Peter Oliva (134-138) lists seven guidelines to help the teacher decide which instructional strategies to use:

- The strategy must be right for the learners. *Consider the age of the students, their past achievement levels and responses to instructional strategies, and what they already know. High school teachers often consider the time of the year. (Lesson plans on the day before a long vacation are often different from those during an uneventful week.)*
- The strategy must be right for the teacher. *Decide what works with your unique personality. A dynamic speaker may choose to present a lecture, while someone with a counseling view toward education may work well in one-to-one situations.*

- The strategy must be right for the subject matter. *Decide what you really want the students to know and be able to do at the conclusion of the unit, and then plan instruction to accomplish that goal. For example, if the student must be able to identify bones in an x-ray, then give them x-rays to identify. If a student must be able to measure blood pressures on anyone, then let them practice on people of all sizes, ages and shapes, and not just their classmates.*
- The strategy must be right for the time available. *A common concern with many Health Occupations Education teachers is having time to teach all of the objectives in the course. Teachers should write an annual plan that includes all course units, determine how much time they have to teach each unit, and then make the best use of the time available. Different instructional strategies take different amounts of time, and the teacher must take that fact into consideration when planning instruction.*
- The strategy must be right for the resources available. *Don't take for granted that resources outside the school are always available to the student. The Health Occupations teacher must be aware of the resources readily available - for the use of the students as well as the teacher. When resources are not available, the Health Occupations teacher should keep a list of what is needed, and request purchase of or access to those materials for the next year through the CTE director.*
- The strategy must be right for the facilities. *Is space available for small group instruction? Is there a computer lab that can be scheduled? Are there community facilities and is transportation to those facilities available for learning laboratory experiences?*
- The strategy must be right for the objectives. *The strategies chosen must fit the instructional objectives. When the cognitive level on a course blueprint is C3, then the outcome desired is at a higher level than basic recall. Consequently, instructional methods must be designed to reach those higher levels. The same rule applies if the outcome behavior is psychomotor. Again, instruction must fit the desired learning outcome.*



## Encouraging the Development of Thinking Skills

Traditional education in America celebrates many, many successes. Traditional education also questions a few practices and beliefs. One belief that has come under much scrutiny in the past few decades is the belief that learning is different from doing.

In Health Occupations Education, teachers have long believed that the best way to learn is from experience. That is why clinical internships and mentorships play such an important part in Allied Health Sciences II and Medical Sciences II. HOE teachers agree that the best way to learn to take a blood pressure is not by hearing and seeing, but by doing.

The same logic is true for all Health Occupations Education courses. Students need to know more than the right answer. They need to know how to find it, and what to do with it once they find it. For that reason, all Health Occupations Education curriculum guides include suggested instructional strategies to encourage the development of critical thinking or higher order thinking skills.

The study of the development of critical thinking skills consumes volumes of literature. Hopefully, new teachers will have an opportunity early in their professional career to attend workshops designed at incorporating thinking strategies into classroom instruction. Until that time, here are some suggested guidelines and classroom activities for improving thinking skills.

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### Critical Thinking Classroom Activity Suggestions

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1. In small groups, do a **COMPARISON ACTIVITY**. Ask students to compare something new (SARS) with something they are familiar with (The common cold, cancer, etc.). List how these things are alike. List how these things are different.

The comparison activity can be extended by asking the students to create a model/chart/graph/picture illustrating their comparison.

2. **VIDEO** - Show a movie or video and ask the students to look for the answers to the following questions: (Use one or more.)  
How is this film trying to persuade you?  
Was a particular character good, bad, or neutral? Why?  
What is the general pattern underlying this information?  
Based on \_\_\_\_\_, what prediction can you make or what conclusions can you draw that must be true  
(Always get permission from the principal to show a video)

3. After a **FIELD TRIP**, ask students specific questions that cause students to review what they have experienced in such a way as to expand their understanding of the content. Example: After a trip to Hospice, ask the students "We know that Hospice operates on the principle of death with dignity. What are at least two necessary consequences of this that Hospice families must be prepared to deal with?" or "Now that you have heard about Hospice, what further questions would you like to have answered?"

4. **INDUCTION** - The teacher highlights facts and asks the students to make generalizations based on the facts. For example:

- Alcohol affects body temperature almost immediately.
- Alcohol affects the liver by replacing the CHO with fats.
- Alcohol increases secretions in the stomach.



"Given these facts about alcohol, what conclusions can you draw?"

5. **FACT VS OPINION** - Ask students to read an article about a given issue and find five statements that are facts, five statements that are opinions, and five that could be either fact or opinion.
6. **VIDEOTAPE** - Videotape two leaders, one who looks very professional and the other who looks unprofessional. The students will compare and develop criteria for professional appearance.
7. **ANALYZING PERSPECTIVES** - Activity to help students look at their side of an issue and the other person's side. For example:

Two physicians were arguing because the surgeon felt the patient should be operated on, and the family practice physician thought antibiotic therapy should be tried first. At one point, one of the physicians stopped to think about what was upsetting her. She was upset because the other physician disagreed, so she tried to identify her reasons for wanting to operate. Then she tried to identify his reasons for wanting to try antibiotic therapy.

Now, have the students in small groups identify the reasoning behind each physician's idea. Then ask, "Why go through the process of analyzing perspectives?"

8. **EXPERIMENTS** - Steps of experimenting include:

1. Observe something and describe what occurred.
2. Explain what you observed. What rules do you know of that could explain what you observed?
3. Make a prediction based on your explanation.
4. Set up an experiment (activity) to test your prediction. Be sure to include a control group (do nothing to this group) and an experimental group (do something different to this group.)
5. Report the results of your experiment.

Ask the student to following these steps in setting up a small group experiment related to the current topic.



**Reading Strategies**

Section G of this Instructional Guide includes suggested reading strategies that provide for effective instruction.