This module offering an overview of teaching strategies is 1 in a series of 10 modules written for vocational education teacher education programs. It is to supplement the American Association for Vocational Instructional Materials's Category C: Instructional Execution (Modules C-1 through C-30) of the Professional Teacher Education Module Series. This module investigates basic teaching strategies used in vocational instruction to expand the teachers' experience base and teaching repertoire. Introductory materials include the following: a listing of competencies/tasks to be covered, objective, overview of the module, listing of suggested resources, and content/instructional strategies, including prerequisite information. The module provides instructional materials on these topics: the effect of teaching strategies on learning, learning styles, and techniques and methods of presenting content, including problem solving, learning reinforcement techniques, illustrated talks, techniques for improving oral communication skills, questioning techniques, demonstrations, individualized instruction, interaction techniques, role play and simulation, discussions, guest speakers, team teaching, and field trips. Fourteen activity sheets are provided. (YLB)
MODULE:

Overview of Teaching Strategies

Written by:
Larry Drake, PH.D.
COMPETENCIES/TASKS:
Identify concepts or principles of teaching.
Identify methods of student study.
Identify methods of applying problem solving techniques.
Describe reinforcement learning techniques.
Conduct illustrated talks.
Identify techniques for improving oral communication skills.
Describe questioning techniques.
Provide demonstrations.
Provide individualized instruction.
Stimulate learning through student interaction techniques.
Demonstrate techniques of role playing and simulation.
Conduct group discussions and panel discussions.
Describe the procedures to utilize guest speakers.
Conduct team teaching.
Conduct individual and group field trips.

OBJECTIVE:
1. Given a group of students studying a specific vocational subject, select effective teaching strategies to maximize that group's learning styles.

OVERVIEW OF MODULE:
This module is to supplement AAVIM's Category C: Instructional Execution; refer to the suggested resources below. Although the basics of teaching strategies are relatively consistent, the act of teaching itself is highly individualized and personal as a result of the life experiences of that instructor.

In this module, we will investigate basic teaching strategies used in vocational instruction to expand the participants’ experience base and teaching repertoire.
Module: Overview of Teaching Strategies

Notes

Suggested Resources:


Content/Instructional Strategies

Prerequisite Information:

The pre-service or in-service instructor will have selected a subject matter area in which to teach and have organized the content from which to structure teaching strategies. The American Association for Vocational Instructional Materials, University of Georgia, 120 Driftmier, Engineering Center, Athens, GA 30602.

As designed, module group category C: Instructional Execution for the Assistance of Developing Teaching Strategies, this category of instructional materials involves 30 separate modules.

Introduction:

The teacher's style affects how well student's learn. It is important that teachers give careful thought to the instructional strategies they select. This module will assist in analyzing numerous strategies, some commonly used, some not.

Body of Lesson:

"I've come to a frightening conclusion: I am the decisive element in the classroom. It's my personal approach that creates the climate. It's my daily mood that makes the weather. As a teacher, I possess tremendous power to make a child's life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations, it is my response that decides whether a crisis will be escalated or de-escalated."

- Haim Ginott -
A. The effect of Teaching Strategies on Learning

A teacher is a unique individual capable of inspiring learners to achieve by exhibiting the following characteristics:

- Moves about freely in the classroom and laboratory;
- Reviews and previews;
- Demonstrates;
- Interacts with learners and permits learners to interact; identifies;
- Is at ease, reduces learner threat, learners are at ease; motivates, rewards, reinforces;
- States and restates;
- Participates and encourages others to participate; sequences;
- Introduces;
- Is aware of learner's needs;
- Questions, analyzes, and evaluates;
- Substitutes, supplements;
- Pauses;
- Seeks to achieve variation;
- Establishes rapport;
- Clarifies, summarizes;
- Controls, directs, and manages;
- Creates interest;
- Assigns, explains;
- Leads and responds;
- Relates and compares;

and most of all,

a teacher does all these (and more)

ON PURPOSE

This definition of a teacher was the work of a group of Missouri Vocational Educators.

Research establishes a number of facts about learning, of which a few follow:

1. Behavior which is rewarded is likely to reoccur.

2. Related learning must be in close proximity of time.

3. Practice without knowledge of results is useless.

4. Threat and punishment have varied, uncertain results.

5. Satisfaction that results from achievement is a type of reward with optimum transfer.

6. The most effective tasks performed by learners are those which are neither too difficult nor too easy for their ability.

7. Learner participation in the teaching plan and process increases interest.

8. Excessive direction of a teacher is not desirable.
9. Non-threatening environment is preferred over strict discipline.

10. Learner's participation in the teaching plan and process increases interest.

11. Learning from reading is reinforced best by reciting than by re-reading.

12. Forgetting proceeds rapidly at first, slowing as time passes.

13. Learners tend to remember new information that agrees with what they already think.

14. Learning is reinforced if it occurs in a situation where it is to be used.

15. Learner experience assists the ability to learn.

The above facts about learning are incomplete as educational research continues to reveal. Using what is known, the teacher must keep in mind that learners also exhibit various learning styles. Both learning facts and learning styles are to be kept in mind before the teacher writes objectives in the psychomotor affective or cognitive domains. To help learners more easily reach their highest level of achievement, some of these learning styles are explored below.

1. Learning Style: To provide better educational experiences for students, knowledge and use of, by learning style theories are helpful. By examining learning style preferences of enrollees, the presentation of content can be adjusted to assist each enrollee to experience success. The instruments used to assess learning styles vary in complexity; however a school's guidance department may be using one or more. Mildred Pittman, in an American Vocational Education conference presentation in 1983, reported usefulness for health occupations enrollees by these theories:

   a) Witkin's model of Field Dependence vs Field Independence: A model to determine global learning as opposed to analytic learning tasks.

   b) Meyers-Briggs Type Indicator: An instrument to clarify a style of interaction within relationships with others.

   c) Cognitive Style Mapping: A strategy which allows the sequential organization of information for recall and comprehension.

   d) Learning Style Inventory: An instrument to find a learner's interest and reactions to various learning environments.

   e) Learning Preference Inventory: A structured assessment to provide a learner an opportunity to show how they would like to learn.

   f) Productivity Environmental Preference Survey: An instrument to assess the manner in which adults prefer to function, learn, concentrate, and perform in their occupational or educational activities.
Some programs use computer matching to apply the results of the learning styles assessment to instructional methodologies. In Learner Activity and Teaching Decisions: the teacher is to make decisions on the activities that will assist the enrollees to master the performance objectives at job entry level. The practice, discussion/problem solving, role-play, debate, or programmed learning. The teacher is to consider the support the enrollees may need to reach a level of success. Examples include handouts referred to as outlines, tables, charts, illustrations, models, etc. The support may involve individual sessions, practice sessions, etc. In order to obtain feedback on the success in reaching a level of performance in a set of competencies, the teacher may evaluate the enrollee by using performance exams, quizzes, project evaluation, oral questioning and presentations, and written papers. The teacher may wish to use combinations of activities, support, and evaluation schemes to stimulate the vitality of the instruction.
Activity Sheet 1

Learning/Teaching Styles

1. Consider the learning styles of a number of students. If you are teaching, use your class members. Make note of the dominant learning styles of each individual and classify them according to groups, i.e. auditory, visual, etc.

2. Analyze your teaching styles. Determine your dominant teaching styles, comparing your teaching styles to the learning styles from item #1.

3. What teaching actions could be taken to obtain a more perfect match of your teaching styles to those of the students?
2. **The Lesson Plan:** In preparing your lesson plan for instructional execution, the planning will take a little more time, but in multiple use, the plan will save more time than it takes. Lesson plan formats vary, most have the essential elements such as lesson performance and enabling objectives, learning assignments, references, presentation methods, outline, support material listing, and evaluation. Some recommend that the plan should include a time schedule as a reminder to the teacher to adhere to a pre-set itinerary. A note suggesting improvements on the plan at the end of class will help the instructor the next time the lesson is presented.

B. **Techniques and Methods of Presenting Content**

**Problem Solving:** Basic Reference - Module C-8, "Direct Students in Applying Problem-Solving Techniques."

This module is used as a student motivator. When confronted with a problem, students quickly realize their immediate need to use knowledge and skill. Students using problem-solving develop critical thinking processes which can be applied to the future job situations that they may experience.
Module: Overview of Teaching Strategies

Activity Sheet 2

Problem-Solving

Design a set of brief case studies in your subject area to assist students in gaining critical thinking skills in the affective, cognitive, and psychomotor domains.

1. Affective:

2. Cognitive:

3. Psychomotor:
Learning Reinforcement Techniques: Basic Reference - Module C-13, "Employ Reinforcement Techniques."

When students are sincerely praised for correct behavior, the student is frequently motivated to repeat the behavior that merited the praise. A wise teacher realizes the importance of noticing what students do correctly and letting the student know you've noticed and that you care.

Praise has power. It has the power to increase the self-concept of those around us, improving behavior. We all need to know we are worth something and praise may be confirmation. Praise improves self-concept; students who have a positive self-concept are likely to have self-discipline, self-control, self-esteem, self-respect, and self-confidence. Richard Buchholz reminds us that giving love, praise, and attention reaps returns of the same - so praise someone today.

Positive Reinforcement, i.e. reward encourages a student to repeat desired behavior. It is essential to remember that the student must consider the reinforcement a reward, which may not necessarily be something the teacher thinks is a reward. Positive reinforcement of new learning is best applied at each progressive step. The most effective reinforcement is immediately after the progress. After the initial learning, the reinforcement can be less frequent.

The following steps are verified through research:

1. Present content at the learner's level.
2. Organize the content in a logical sequence.
3. Guide and correct the learner with feedback techniques.
4. Reinforce the learner as they progress toward "mastery."

It is important for the teacher and the learner to clearly understand the performance objective and the mastery standard or criterion. The learner then can use the teacher's reinforcement as a map toward the destination of mastery learning.

Negative Reinforcement, sometimes referred to as punishment, is action that discourages undesirable behavior. This action is more effective when taken immediately after the undesirable behavior. Care must be taken to avoid damaging results. A military saying that sums up this care is "praise in public, discipline in private." Another control technique is referred to as "extinguishing." This "no reinforcement" method tends to extinct a behavior. Well seated behaviors that need extinguishing require a great deal of time and patience. This technique may also be hazardous: for example, the learner may choose non-participation or non-cooperation in any class activity.

Illustrated Talks: Basic reference - Module C-15, "Present an Illustrated Talk."

Activity Sheet 3

Reinforcement Techniques

1. Non-verbal: [e.g. thumb(s) up]
   a. Approval
   b. Disapproval

2. Single-word verbal (spoken or written): (e.g. terrific)

3. Verbal phrases (spoken or written): (e.g. keep plugging)

4. Actions: (e.g. recognition of a student in a publication)
Activity Sheet 4

Illustrated Talks

Following a discussion on the effectiveness and possibilities of illustrated talks, consider the possibilities of your current teaching.

1. List a concept for your field, then parallel that concept with a visual that could be used in an illustrated talk.

   Concept | Visual
   --------|--------

2. Compare an outmoded method with the updated version of the task to be accomplished in order to emphasize the importance of continued study of the field.

   Outmoded method | Update
   ----------------|-------
   Oral thermometer | Electronic thermometer

3. Relate an analogy, frame of reference, anecdote, or example to briefly introduce a lesson of your choice.
Activity Sheet 5

Oral Communication Skills

After considering the importance of oral communication skills for students in vocational-technical and practical arts programs, plan the following class activity for your students.

1. Look for a body of content in your subject matter area that may be logically divided into equal portions to be assigned to your individual class members to present to their peers. Possibilities include glossary terms, parts and functions, instrument/tool identification, problem-solving, spelling, analysis, etc.

2. Invite a "guest" (your student) to discuss a career opportunity in the field. Remember to allot student research time if appropriate, and to suggest a resource. The Occupational Outlook Handbook and MQ Vital Information for Education and Work are potential materials in the school library. Name a few occupational titles upon which your "guests" may speak.

3. List persons that would be willing to volunteer time for a mock interview with students. Video the short interview for critique. Caution: This may be a traumatic experience for some and instructor judgement may call for excusing the extremely shy student.
Questioning Techniques: Basic reference - Module C-12, "Employ Oral Questioning Techniques."

Module C-12 has excellent suggestions for our questioning techniques, classifying the types and levels according to Bloom's Taxonomy of Educational Objectives. Cheryl G. Fedje and Ann Irvine, in an AVA Journal article, "Questions to Promote Thinking" suggest techniques to promote the development of thinking and reasoning skills, enhancing the AAVIM approach. They advise teacher educators to expect their teacher/students to identify and use a wide range of types of questions. Some are as follows:

Observation questions change, "What are some characteristics of this material/age group/process?", are useful in introducing a new idea, a piece of equipment, an instrument, which provide a base for high level reasoning.

Recall questions, "What did you learn about this procedure last week?", help the student use what they have learned in the past. Students are generally more apt to voluntarily partake in the activity because with recall and observation questions there are not correct or incorrect answers.

Similarities and differences questions, "How is this problem/idea/practice/object/procedure like the last one? How is it different?", build on the foundation knowledge of the recall and observation questions.

Conclusions questions, "Based on what we have said/done to this point, what conclusions can you draw?", are useful for instructor feedback during various closure points in a lesson. This type of question encourages students to synthesize ideas and form decisions.

Grouping and categorizing, "How can these tools/objects/problems/ideas/procedures be placed in categories? What name can these categories be given?", ask the learner to analyze on the basis of similarities.

Ordering questions, "How would you rank these ideas in order of importance/usefulness/priority tasks?", give learners an opportunity to form priorities essential to fundamental employment skills.

Cause and effect questions, "What are some of the consequences of doing this? or not doing this?", give the learner an opportunity to build problem-solving skills, to anticipate consequences of action or inaction.

Probing questions, "What is there about ... that makes you think ...?", help to extend our thinking, to clarify, and verify the logic of our thinking.
Activity Sheet 6

Questioning Techniques

Upon completing a class discussion on oral questioning, devise a question for your teaching field in each of the following types and levels.

___ 1. Observation -

___ 2. Recall -

___ 3. Similarities and differences -

___ 4. Conclusions -

___ 5. Grouping and categorizing

___ 6. Ordering -

___ 7. Cause and effect -

___ 8. Probing -

9. Add the appropriate letter to the left of 1 - 8, indicating the cognitive level of the oral question devised.

   a. Knowledge
   b. Comprehension - translation
   c. Comprehension - interpretation
   d. Comprehension - extrapolation
   e. Application
   f. Analysis
   g. Synthesis
   h. Evaluation

10. Demonstrate how you would write and use questions throughout a lesson plan.
Module: Overview of Teaching Strategies

**Demonstrations**: Basic reference - Modules C-16, "Demonstrate a Manipulative Skill," and C-17, "Demonstrate a Concept or Principle."

**Individualized Instruction**: Basic reference - Module C-18, "Individualized Instruction." Secondary references - Category K, "Implementing Competency-Based Education (CBE)," Category L, "Serving Students with Special/Exceptional Needs," and Category M, "Assisting Students in Improving Their Basic Skills."

**Interaction Techniques**: Basic reference - Modules C-4, "Direct Students in Instructing Other Students," and C-12, "Employ Oral Questioning Techniques."

Carolyn Gillespie, a teacher at Wanda Gray School, Springfield uses an interaction technique called cooperative learning or CL. She explains that CL are carefully structured lessons. Groups of various ability learners may be combined and linked in a lesson to reflect individual student accountability. Group size may vary from two to six. The group is viewed as productive when all members have mastered lesson competencies.

Team members are to interact in a positive manner. Communication skills tend to improve rapidly when the group members learn to share ideas, facts, and an expansion of the lesson. CL claims belongingness, peer power, and excitement.

**Role Play and Simulation**: Basic reference - Module C-5, "Employ Simulation Techniques."

**Discussions**: Basic reference - Module C-2, "Conduct Group Discussions, Panel Discussions, and Symposiums."

**Guest Speakers**: Basic reference - Module C-20, "Use Subject Matter Experts to Present Information."

**Team Teaching**: Basic reference - Module C-19, "Employ the Team Teaching Approach."

**Field Trips**: Basic reference - Module C-1, "Direct Field Trips."

**NOTE**: Suggest the teacher educator use the evaluation and model responses given in Category C, "Instructional Execution."
Module: Overview of Teaching Strategies

Activity Sheet 7

Demonstrations

Teacher Educator Involvement: To prove the effectiveness of the demonstration in teaching, select a member of the class to explain (verbally only) how to perform some simple task. For example, have your tooth brushing items on a table, asking the member to explain to you for your very first time how to brush your teeth. Usually the unforwarned member is not precise in their verbal instructions. As they may tell you to apply toothpaste to the brush, you may apply the paste to the entire toothbrush, or inserting the brush in your mouth, place the handle in your mouth, etc. This showmanship teaching has been used convincingly to prove how essential the demonstration is to vocational education and the practical arts.

Teacher Education Class Involvement: Follow up the above activity with a simple task as explained by the teacher educator (verbally only). This action usually proves to the entire class that the "seasoned professor" can't do any better than the selected class member. One teacher educator has the class fold a simple painter's cup. Class members should feel frustration in failure. At this point, a carefully planned demonstration by the teacher educator will relieve the frustration, grounding the class members in the importance of the demonstration in teaching skills.
Activity Sheet 8

Individualized Instruction

After participating in class discussion on Individualized Instruction, consider the following:

List the typical students that learn best through individualized instruction. Call on in-service class members to share with the class their success with individualized instruction and the techniques used.
Activity Sheet 9

Interaction Techniques

Construct a problem-solving case study to use with a class setting, arrange the content for small groups. Consider the competencies to be accomplished. Weigh the option of competition.

1. Check assurances on your case study as follows:
   a. develops cooperation and planning skills
   b. encourages leadership and active participation
   c. leads to better class relations
   d. prepares students for the real world of work

2. Consider these factors in your problem-solving case study:
   a. are the tasks specific and concrete?
   b. does the task match the group size?
   c. have the time limits been adequately set?
   d. will the groups' work be duly recognized?

Adaptation: 147 Practical Tips for Teaching Professors, Magna Publications, Inc., 2718 Dryden Drive, Madison, WI 53704-3086.
Teacher Educator Involvement: since many teachers are reluctant to use and participate in role play and simulation, the teacher educator may model as follows:

Invite yourself as a guest. Take the role of a visitor - an employer, a patient, a parent, a fellow professional, an OSHA inspector. Ask the class to discuss what they are learning and why. (Adapted from 147 Practical Tips for Teaching Professors, Magna Publications, Inc., 2718 Dryden Drive, Madison, WI 53704-3086.)

Ask the class members to enumerate role play and simulation possibilities for their teaching area. Examples are CPR, job interview, short change artist, building inspector, etc.
Activity Sheet 11

Discussions

After completing the content on discussion techniques, the class members may list topics suitable for this technique in the affective and cognitive domains. For example, temptation by a patient to send out for a pizza, clearly violating the patient's dietary rules.
Activity Sheet 12

Guest Speakers

Upon completing the pointers given for the use of guest speakers, the class members may list possible guest speakers for their area. For example, program completers, entrepreneurs, etc.
Activity Sheet 13

Team Teaching

Planning for team teaching activities in a smaller school may not be as obvious as an in-service teacher in a large system. However, preservice and in-service teachers have team teaching potential in both smaller and larger systems. For example, content relationships and cooperation may be secured with basic subject teachers; printing with journalism, health occupations with biology, etc. The AVTS also has potential, for example, machine trades with welding, auto mechanics with electronics, etc.

Class members may list the possibilities for their teaching field and in-service members may contribute personal dos and don'ts from their experiences. Remember to include placement coordinators.
Activity Sheet 14

Field Trips

Ask class members to list their students' work experience. List the possibilities of individual reports from their "field trips."

Ask class members to plan a field trip to a firm (potential employment completers) in their geographic locality.