Instructional Methods Manual

OTS 402/502

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STEM Education and Occupational Studies
Old Dominion University
Norfolk, VA 23529
INTRODUCTION

This guide is provided to students enrolled in OTS 402, Training Methods, to assist them in completing the course requirements. It contains the course syllabus, assignments, and information about the requirements.

Suggestions for improving the Course Guide, are welcome. Please direct them to:

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Instructional methods and teaching methods mean the same thing. They are primarily descriptions of the lea
rning objective oriented activities and flow of information between teachers and students. Although some m
ay argue otherwise, to split hairs over whether such methods are meaningfully different adds nothing to the process of learning to be a teacher or instructor.

Direct and indirect instruction are two main categories that many educators find useful for classifying teaching methods, but it is, as you will see, a bit more complicated than placing all instruction into two categories. Any instructional method a teacher uses has advantages, disadvantages, and requires some preliminary preparation. Often times, a particular teaching method will naturally flow into another, all within the same lesson, and excellent teachers have developed the skills to make the process seamless to the students.

Which instructional method is "right" for a particular lesson depends on many things, and among them are the age and developmental level of the students, what the students already know, and what they need to know to succeed with the lesson, the subject-matter content, the objective of the lesson, the available people, time, space and material resources, and the physical setting.

Another, more difficult problem is to select an instructional method that best fits one's particular teaching style and the lesson-situation. There is no one "right" method for teaching a particular lesson, but there are some criteria that pertain to each that can help a teacher make the best decision possible.

The following teaching or instructional methods relate to the instruction part of the Instruction System. The methods are not listed in a preferred sequence, no hierarchy of putative superiority of method is intended, and obviously, not all are appropriate for all grades and subject matter content areas.
INSTRUCTIONAL STRATEGIES

**DIRECT TEACHING**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very specific learning objectives. Students are told reasons why content is important - helps to clarify lesson objective. Relatively easy to measure student gains. Is a widely accepted instructional method. Good for teaching specific facts and basic skills.</td>
<td>Can stifle teacher creativity. Requires well-organized content preparation and good oral communication skills. Steps must be followed in prescribed order. May not be effective for higher-order thinking skills, depending on the knowledge base and skill of the teacher.</td>
<td>Content must be organized in advance. Teacher should have information about student prerequisites for the lesson.</td>
</tr>
</tbody>
</table>

**COOPERATIVE LEARNING**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
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</thead>
<tbody>
<tr>
<td>Helps foster mutual responsibility. Supported by research as an effective technique. Students learn to be patient, less critical and more compassionate.</td>
<td>Some students don't work well this way. Loners find it hard to share answers. Aggressive students try to take over. Bright students tend to act superior.</td>
<td>Decide what skills or knowledge are to be learned. Requires some time to prepare students to learn how to work in groups.</td>
</tr>
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</table>

**LECTURE**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
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</thead>
<tbody>
<tr>
<td>Factual material is presented in a direct, logical manner. May provide experiences that inspire Useful for large groups.</td>
<td>Proficient oral skills are necessary. Audience is often passive. Learning is difficult to gauge. Communication is one-way. Not appropriate for children below grade 4.</td>
<td>There should be a clear introduction and summary. Effectiveness related to time and scope of content. Is always audience specific; often includes examples, anecdotes.</td>
</tr>
</tbody>
</table>

**LECTURE WITH DISCUSSION**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involves students, at least after the lecture. Students can question, clarify and challenge. Lecture can be interspersed with discussion.</td>
<td>Time constraints may affect discussion opportunities. Effectiveness is connected to appropriate questions and discussion; often requires teacher to &quot;shift gears&quot; quickly.</td>
<td>Teacher should be prepared to allow questions during lecture, as appropriate. Teacher should also anticipate difficult questions and prepare appropriate responses in advance.</td>
</tr>
</tbody>
</table>

**PANEL OF EXPERTS**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
</table>
Experts present different opinions. Can provoke better discussion than a one person discussion. Frequent change of speaker keeps attention from lagging.

Personalities may overshadow content. Experts are often not effective speakers. Subject may not be in logical order. Not appropriate for elementary age students. Logistics can be troublesome.

Teacher coordinates focus of panel, introduces and summarizes. Teacher briefs panel.

### BRAINSTORMING

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening exercise that allows creative thinking for new ideas. Encourages full participation because all ideas are equally recorded. Draws on group's knowledge and experience. Spirit of cooperation is created. One idea can spark off other ideas.</td>
<td>Can be unfocused. Needs to be limited to 5 - 7 minutes. Students may have difficulty getting away from known reality. If not managed well, criticism and negative evaluation may occur. Value to students depends in part on their maturity level.</td>
<td>Teacher selects issue. Teacher must be ready to intervene when the process is hopelessly bogged down.</td>
</tr>
</tbody>
</table>

### VIDEOTAPES/SLIDES

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertaining way of introducing content and raising issues Usually keeps group's attention Looks professional Stimulates discussion</td>
<td>Can raise too many issues to have a focused discussion Discussion may not have full participation Most effective when following discussion</td>
<td>Need to obtain and set up equipment Effective only if teacher prepares for discussion after the presentation</td>
</tr>
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</table>

### DISCUSSION

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pools ideas and experiences from group Effective after a presentation, film or experience that needs to be analyzed Allows everyone to participate in an active process</td>
<td>Not practical with more that 20 students A few students can dominate Some students may not participate Is time consuming Can get off the track</td>
<td>Requires careful planning by teacher to guide discussion Requires question outline</td>
</tr>
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</table>

### SMALL GROUP DISCUSSION

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows for participation of Needs careful thought as to Need to prepare specific tasks or</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Students often more comfortable in small groups
Groups can reach consensus

<table>
<thead>
<tr>
<th>CASE STUDIES</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Develops analytic and problem solving skills</td>
<td>Students may not see relevance to own situation</td>
<td>Case must be clearly defined</td>
</tr>
<tr>
<td></td>
<td>Allows for exploration of solutions for complex issues</td>
<td>Insufficient information can lead to inappropriate results</td>
<td>Case study must be prepared</td>
</tr>
<tr>
<td></td>
<td>Allows student to apply new knowledge and skills</td>
<td>Not appropriate for elementary level</td>
<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>ROLE PLAYING</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduces problem situation dramatically</td>
<td>Some students may be too self-conscious</td>
<td>Teacher has to define problem situation and roles clearly</td>
</tr>
<tr>
<td></td>
<td>Provides opportunity for students to assume roles of others and thus appreciate another point of view</td>
<td>Not appropriate for large groups</td>
<td>Teacher must give very clear instructions</td>
</tr>
<tr>
<td></td>
<td>Allows for exploration of solutions</td>
<td>Some students may feel threatened</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provides opportunity to practice skills</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>WORKSHEET/SURVEYS</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Allows students to think for themselves without being influenced by others</td>
<td>Can be used only for short period of time</td>
<td>Teacher has to prepare handouts</td>
</tr>
<tr>
<td></td>
<td>Individual thoughts can then be shared in large group</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>GUEST SPEAKERS</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personalizes topic</td>
<td>May not be a good speaker</td>
<td>Contact speakers and coordinate</td>
</tr>
<tr>
<td></td>
<td>Breaks down audience’s stereotypes</td>
<td>Speaker’s presentation may not support the content you are teaching the learners.</td>
<td>Send them information about what you are teaching</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Introduce speaker appropriately</td>
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</tbody>
</table>

VALUES CLARIFICATION
<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity to explore values and beliefs</td>
<td>Students may not be honest about their values.</td>
<td>Teacher must carefully prepare exercise</td>
</tr>
<tr>
<td>Allows students to discuss values in a safe environment</td>
<td>Students may be too self-conscious.</td>
<td>Teacher must give clear instructions</td>
</tr>
<tr>
<td>Gives structure to discussion</td>
<td>Students may not be able to articulate their values in an effective way.</td>
<td>Teacher must prepare discussion questions</td>
</tr>
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INSTRUCTIONAL STRATEGIES

In delivering learning, the HRD designer of learning programs must be familiar with the wide variety of instructional strategies that are available. This section provides you with information essential to the designer. By no means is it suggested that these are all the strategies. In addition, each of the strategies included has many variations, but the material essential to the designer is provided.

The HRD instructor-facilitator must know these instructional strategies but must also build skill in using them. It is not suggested that this information, or any written material, will enable the instructor-facilitator to reach an acceptable level of competency. Such competency requires experience, coaching, and feedback. This section does provide you with an idea of the instructional strategies that are available.

The HRD manager and HRD consultant should also be familiar with these strategies to be aware of what is contemplated and used in the various learning programs provided through HRD programs.

This section is intended to be a practical primer on institutional strategies for course developers. Concentration is on the factors relating to selection and use of each strategy, as opposed to techniques for instructors.

In selecting appropriate strategies for each learning situation, you should consider a number of factors, including the training objective; characteristics of the participants, competencies of the instructors, and any constraints (i.e., time or physical limitations). Vary the strategies you use to maintain participant interest. Remember, a learning experience will consist of a number of strategies joined together to make up the overall flow of the experience. The developer is, in essence, an orchestrator, selecting and using the strategies that will create the tempo and climate for the experience.
**Action Maze**

A printed description of an incident, for analysis, followed by a list of alternative actions is called an action maze. Each action choice directs the participant to a new page, which gives the results of that action and a new set of alternatives from which to choose. The results the participant receives after each step may give more information, as well as a reaction to the action taken. The selection may also lead to a dead end, sending the participant back to the original situation to make another choice.

**When to use:**
- To develop decision-making skills
- To develop problem-solving skills

**Requirements:**
- Written instructional materials
- Pens, pencils, etc.

**Advantages:**
- Develops an awareness of alternatives and consequences of decisions
- Intense skill development
- Self-paced

**Considerations:**
- Is costly to construct
- Difficult to update. Need to use information that will not change
- No opportunity for discussion or interaction with others

**Related strategies:** Case study, programmed instruction, computer-assisted instruction, delphi technique
Brainstorming

Brainstorming is a problem-solving situation in which participants are given a problem and asked to bring into the discussion any ideas that come to mind, no matter how outlandish. All ideas are gathered and recorded, without evaluation, before any are discussed. Idea gathering is usually limited to 5-15 minutes.

When to use:
- To develop novel or creative solutions to problems
- To develop creativity
- To stimulate participation by group members

Requirements:
- Board or flipchart for recording ideas
- Chalk or pens
- Tape for posting flipchart pages

Advantages:
- Encourages unusual suggestions.
- Breaks mind sets and allows for new approaches.
- Although only a small number of the ideas usable, surfaces a significant number of valuable ideas
- Maintains interest because of fast-moving pace of session
- Encourages participation by all group members

Considerations:
- Requires skill on the part of the leader to keep the session moving and the ideas coming, as well as to refrain from judging ideas generated.
- Productivity of the group depends upon the abilities of the participants and their understanding of the process.
- Requires a non-threatening environment

Related strategies: Creative thinking, problem solving
**Buzz Groups**

This includes a large group divided into several small groups of four to six people discuss a topic or perform a task, usually in less than 10 minutes. Originally called the "6 by 6" technique, which meant six people for six minutes, such a strategy has come to be known as a buzz group. Although there is no finished product, provision must be made for some feedback.

**When to use:**
- To stimulate thinking to open or start a discussion
- To get reaction to a speaker, film, etc.

**Requirements:**
- Space, for groups to talk without interference

**Advantages:**
- Stimulates discussion and generates group interest.
- Allows participation by those reticent to speak in a large group.
- Focuses subsequent discussion on participants' interest.

**Considerations:**
- Requires instructor who is able to introduce the activity and stop the discussion at the determined time.
- Sometimes it results in domination of the small group by one or two people.

**Related strategies:** Group discussion, work group, workshop
Case Study

A case study is an oral or written account of a realistic situation, including sufficient detail to make it possible for the participants to analyze the problems involved and to determine possible solutions. In many cases, there is no one correct answer. Case studies should, as much as possible, replicate the real world, both in the nature of the content and in the method in which they are presented and completed. While work on the cases may be done either individually or in groups, this method should always conclude with a discussion of the outcomes.

When to use:
- To develop critical-thinking, problem-solving, and decision-making skills
- To provide realistic and practical experience
- To evaluate learning and/or test analytical knowledge or abilities
- To learn to separate facts from inferences

Requirements:
- The case (written, film, video, or other form of presentation)
- Pencils, pens, paper—whatever is necessary to complete case requirements
- Board and/or flipchart for case study discussion

Advantages:
- Actively involves participants
- Keeps interest levels high because of participant activity and relevancy to real world situations
- Blends well with other methods (ex. lecture or readings)

Considerations:
- Takes time to work and to discuss.
- Cases can become outdated by such things as changes in laws, language used, social mores, dates, etc. Periodic revision is essential.
- Good case studies can be difficult to write. They need to contain enough facts to be completed without making up information. Yet, the information should be organized in such a way that the solution is not obvious. Incomplete or incorrect information, too much extraneous or confusing information, and cute or funny names often detract from the effectiveness of a case. This can cause the participants to become frustrated and direct their energies toward attacking the case, rather than working it.
- To effectively discuss a case, the instructor, if not the developer, must work the case and be thoroughly prepared to answer any questions that may arise.
- The instructor must be able to link the case study situation to the "real world," thereby adding credibility to the case.

Related strategies: Action maze, exercises, incident process, in-basket exercises, role play
Delphi Technique

The strategy that employs a number of experts who independently offer judgments on specific questions on two or more successive occasions is referred to as the delphi technique. At each iteration after the first, the material to be evaluated is accompanied by information showing the amount of group agreement on the previous iteration. A list of reasons for the judgments of the group can also be provided. Each expert is free to consider this information in reevaluating the items. The purpose of this method is to promote maximum convergence of opinion, without the biasing influences of face-to-face confrontation.

When to use:
- To assist in establishing learning objectives (e.g., to elicit information from practitioners in a given career field as to what the "real life" work expectations are).
- To project learning needs for the future, as a basis for long-range curriculum planning
- To assist groups of learners in establishing collective priorities for learning or problem-solving activities

Requirements:
- Paper, envelopes, stamps, pens, etc. for correspondence
- A calculator for tabulations or, if a larger study, perhaps a computer

Advantages:
- Provides freedom from conformity pressures because of anonymity and isolation of respondents.
- Simple pooling of independent ideas and judgments facilitates equality of participants.
- Valuable for obtaining judgments from experts who are geographically isolated.
- The process of writing responses forces respondents to think through the complexity of the problem and submit specific, high quality ideas.
- The strategy can be used with large numbers of participants.
- Relatively low material cost, unless a computer is used for tabulation.

Considerations:
- Technique can be very time consuming.
- The lack of opportunity for verbal clarification can create interpretation difficulties among participants.
- The lack of opportunity for social and emotional rewards can lead to a feeling of detachment from the problem-solving effort. The quality of response is very much influenced by the interest and commitment of the participants.
- Conflicts are not resolved, since conflicting ideas are handled simply by pooling and are added to the votes of group participants.
- Strategy limited to participants who have skill in expressing themselves in written communication.

Related strategies: Group process
Demonstration

A technique that shows how something works or gets done is called a demonstration. It is intended to illustrate or clarify an idea, process, or relationship. The participant's role is one of observing, rather than directly participating. Often, this strategy is coupled with participant practicing and receiving feedback on performance.

When to use:
- To show how a piece of equipment works
- To demonstrate a skill or technique
- To show how a technique can be used

Requirements:
- Equipment being demonstrated, if applicable
- Space requirements as needed

Advantages:
- Provides clear, direct example of how something works or is to be done.
- Is realistic. Can be linked to hands-on application.
- Is inexpensive to develop.
- Can use expert to demonstrate and instructor to facilitate learning.

Considerations:
- Learner not active, so interest may wane, especially at low learn times of day.
- Need to ensure that all can see the demonstration clearly.
- Learners may see but not be able to do.

Related strategies: Skit, simulation game, interactive modeling
Discussion

A discussion is an exploration of a specific topic by a group. Discussions are most effective in groups of 10-25 participants. They are often coupled with a lecture or other non-participative strategy or may serve as a review of individual or group work (ex. case study). In a discussion, the instructor begins by asking stimulating, usually predetermined questions. During the discussion, the instructor acts as a catalyst and moderator, asking additional questions, recording and/or restating participant responses, and generally guiding the participants in the right direction.

When to use:
- To determine learners' knowledge and/or attitude concerning specific topic
- To review case studies or other work assignments
- To assist learners to learn deductively
- To encourage group participation

Requirements:
- Seating so most group members can see each other during the discussion
- Flipchart or board to gather ideas

Advantages:
- Actively involves participants.
- Pools knowledge and experience of group.
- Allows unclear areas to be identified and discussed.

Considerations:
- Instructor requires good facilitation skills. Must be patient and allow the discussion to evolve.
- One or two vocal members may dominate.
- Takes more time than some other strategies (ex. lecture).
- May be difficult to control and can stray from intended topic.

Related strategies: Buzz groups, brainstorming, work group
**Exercise**

Similar to a case study, the exercise is a short problem focusing on a specific learning point. Most exercises have one correct solution. A group of exercises may be used as a test.

**When to use:**
- To demonstrate newly learned procedures and principles, prior to attempting to apply the knowledge to more difficult and complex case studies

**Requirements:**
- Paper, pens, pencils, etc.

**Advantages:**
- Quickly identifies whether learning has occurred and pinpoint problem areas
- Participants actively involved
- Helps make transition between conceptualization and application

**Considerations:**
- Should be limited to a single concept or procedure
- Takes some time to do and discuss
- Need to avoid tendency to make exercise too long or complex
- Should be tested to assure it will produce the desired result

**Related strategies:** Case studies, incident process
Fishbowl

A fishbowl is a discussion group that is divided in two parts: the inner circle, consisting of four or five people who discuss a topic, and the outer group, consisting of up to 20 people who observe (usually standing). Variations include: (1) members of the outer group may "tap in" or exchange places with members of the inner group; (2) the inner group (half the total group) discusses something for a specific period of time and then rotates with the outer group, who then discusses for a specific period of time; (3) each member of the inner group has an alter ego in the outer group to advise and provide guidance. A fishbowl usually runs 20-30 minutes, enough time to let all interested people express their thoughts but not so long as to drag; it should end on a high note.

When to use:
- To open a discussion or stimulate thinking by allowing individuals to present different points of view
- To foster group participation
- To view group process
- To provide formative evaluation

Requirements:
- Physical space for inner and outer circles
- Chairs

Advantages:
- Encourages group participation by all members
- Maintains group interest
- Surfaces ideas and attitudes concerning a topic area

Considerations:
- As the purpose is to stimulate thinking, choice of topic is important.
- Should be an open-ended topic and one familiar to all the participants.
- This strategy should be coupled with a follow-up strategy which allows for a more in-depth examination of the topic (e.g. work group).
- It is wise to have a fail-safe device in the form of a "plant" (a person to help get the discussion started). The role of such an individual would only be to give some direction and ask questions if the group does not appear to be getting involved.
- The identity of individual should not be made known to the group
- The role of the instructor in this strategy is merely to set it up and to listen. Participation in the discussion should be only as a "tap-in"

Related strategies: Brainstorming, creative thinking
GAME

An activity characterized by structured competition between two or more participants is a game. Each game has its own unique set of rules and learning outcomes. Some games are simple, others are extremely complex. Their primary focus is on participant actions and reactions. Although it is not always necessary, simulation games can be similar to work situations, but with carefully arranged competitive elements. The game provides a framework, within which participants can be involved in an exciting game mood. This mood allows participants to examine systems of interactive decision-making procedures and to approach problems from the perspective of learning at the same time. The distinguishing features of a game are that it includes a set of structured decision-making tasks typical of a real-life situation and that it provides a systematic means of observing and evaluating participants' decisions. These, then, are fed back to the participants so they can judge their appropriateness. Most games are played by one or more teams, each composed of from one to 20 participants.

When to use:
- To develop leadership skills
- To improve technical performance
- To foster cooperation and teamwork
- To improve decision-making ability
- To evaluate learning

Requirements:
- As needed for game, procedures, written material, or game equipment
- Facilities for groups to work

Advantages:
- Games motivate participants to be highly involved.
- They are fun.
- Since long periods of time can be compressed into relatively short learning periods, it is possible to provide in weeks the experience that would take years to gain on the job.
- Participants become deeply involved in the game and undergo the stresses associated with real situations.
- Can be used in an infinite variety of ways for all types of learning from orientation to detailed instruction.
- Can often be used more than once with the same group with additional gains.
- Takes the positive feature of group dynamics and focuses a group's energies on a particular task or a specific concept of change.

Considerations:
- Participants may be totally involved only in "win/lose" competition if games are not properly constructed and administered.
- Usually designed to produce a certain set of predetermined learning outcomes and must be carefully adapted if used apart from the original intention.
- Require sound skills and understanding from the instructor/facilitator.
- Require a great deal of time and are costly if purchased commercially. Usually cost more in terms of personnel, equipment, and money than other approaches to learning.
- When a computer is involved, the cost is even greater -- for programming, time on the equipment, and operating personnel.
• Little research has been done on the effectiveness of the game as a learning strategy; therefore its validity has not been proved

**Related strategies:** Simulation, exercise, role play, computer-assisted instruction
In-Basket

The in-basket strategy is a timed variation of a case study. Each participant is provided with an in-basket, including correspondence, reports, memos, and phone messages, some of which may be important to the case or process under study, and some of which may be extraneous. The participants examine the materials and take the appropriate actions. Each participant works for a set period of time on his or her own material. Every other participant handles the same material. At the conclusion of the processing time, participants record how they handled each item and, based on the actions taken, assess their abilities in the areas on which the case study focused. Usually, there is a group discussion (small group or entire class) of selected items and of approaches taken.

When to use:
- To analyze participants' decision-making abilities so that needed training can be provided
- To evaluate managerial skills (e.g., supervisory, communications, time management)
- To provide practice in decision making
- To improve participants' understanding of management theories

Requirements:
- In-basket exercise package of materials for each participant
- Paper, pens, paper clips, erasers for participants to use
- Ample physical space for each participant to work

Advantages:
- Actively involves all participants
- Interesting because of real world nature of materials
- Provides for some competition among participants, if that is needed
- Provides a way for participants to assess their skills in the areas on which the exercise focuses
- Can be constructed to reflect the problems that a particular group is having
- Can be built to fit the time period available to the exercise
- Provides immediate feedback as to the possible consequences of actions taken
- Easy to conduct, although for discussion, instructor requires good facilitation skills

Considerations:
- Takes time, usually three to four hours, to conduct and process
- Difficult to develop in-house
- Can be costly. Costs for in-basket exercise vary greatly, depending on the types of materials being used. The major cost element is the preparation of the materials themselves, particularly if large quantities are required. Some commercial vendors sell in-basket programs. Costs usually range from $40-$120 per participant
- May seem unreal in the sense that the participants are put into a situation with no past relationships with the people they must work through. In reality, actions would probably depend on these relationships
- May be difficult for those without experience handling job problems through correspondence

Related strategies: Case study, exercise, action maze, incident process, simulation game
Incident Process

The incident process is a variation of the case method. Participants are presented with an incident that is short and lacking in detail. Participants then question the instructor to determine the data needed to complete the assignment. The instructor gives out pertinent facts only as the participants ask for them, forcing the participants to reconstruct the entire situation. Often, an observer-reporter records group interaction. This method provides the participants with the opportunity to examine the present, unravel the past events leading up to the incident, and identify future implications resulting from the incident. This strategy emphasizes the process involved in gathering pertinent information in order to arrive at a decision.

When to use:
- To develop problem analysis and problem-solving skills
- To develop decision-making skills
- To develop observation skills
- To develop questioning and listening skills

Requirements:
- Physical space for participants to work, at times in small groups
- Written incident and additional fact sheets, as needed
- Pens, pencils, paper, etc.

Advantages:
- Actively involves participants
- Has a "living quality," as opposed to a case which is all in writing
- Provides an opportunity to reconstruct a case from start to finish
- Emphasizes fact-finding process more than the solution
- Promotes public speaking and development of summaries
- Promotes "openness" of ideas and expression
- Incident can be modified to suit the level of the participants
- Provides an opportunity to examine consequences of a decision

Considerations:
- More time consuming than traditional case studies.
- Difficult to evaluate transfer of process and utilization on the job.
- Best suited to groups of fewer than 20-25 participants.
- Extroverted participants tend to monopolize discussion.
- Instructor must have all the information needed to respond to the participants’ questions.
- Information may be given orally or on data sheets.
- Instructor must have good facilitation skills

Related strategies: Case study, action maze, exercise, simulation game
Interactive Modeling

*Interactive modeling* is a means of learning new behaviors by observing model or ideal behavior, trying new behavior, and receiving feedback. This cycle is repeated until the new behavior is learned. The following sequence of four types of behavioral learning activities is involved:

1. **Modeling** -- groups of participants watch filmed or acted supervisor and employee model the desired behavior
2. **Role playing** -- participants take part in extensive practice and rehearsal of these specific behaviors demonstrated by the models
3. **Social reinforcement** -- players receive praise, reward, and constructive feedback from instructor and other participants
4. **Transfer of training** -- participants apply learning by being able to model behavior back on the job

**When to use:**
- To orient new employee to procedures
- To learn methods of interviewing, counseling, and other similar tasks

**Requirements:**
- Video, film equipment, or script
- Space large enough for viewing and for role plays
- Flipchart and board

**Advantages:**
- Provides a step-by-step approach for handling difficult interaction situations.
- Provides a positive model, demonstrating how difficult situations can be handled successfully.
- Provides practice for each participant in handling difficult situations.
- Provides on-the-job environment, which facilitates learning.

**Considerations:**
- May be difficult to isolate step-by-step procedures for each behavior.
- Very difficult to find suitable off-the-shelf models.
- Usually each organization must develop its own film or video. This is costly and requires developers who are able to create realistic demonstration.
- Purely behaviorist, does not take into account attitudes or feelings.
- Is time consuming, since cycle is usually repeated several times for each participant.

**Related strategies:** Role play, demonstration
**Interview**

An interview is a means of using a resource person who does not make a prepared speech. The resource person is asked questions by participants. Questions can be spontaneous or developed in advance and given to the resource person to allow time for preparation.

**When to use:**
- To obtain from a resource person the information that most interests the participants
- To create a relaxed and open environment when dealing with a resource person

**Requirements:**
- A comfortable setting in which the group can meet

**Advantages:**
- Resource person will discuss items of most interest to participants
- Allows for give and take among participants and resource person
- Often enjoyable for resource person, who need not prepare a formal lecture

**Considerations:**
- Resource person must be flexible and comfortable in such an unstructured situation
- Discussion can go off on a tangent that may be interesting but may not focus on learning objectives.
- It is best to prepare some questions in advance to alert the resource person to participant interests and to begin the discussion.
- Some verbal participants may monopolize questioning. The instructor may need to be a moderator and keep discussion open and moving.
- Best if used with groups of under 20 participants
- An alternative is a dialogue, in which two people have a conversation in front of the group.
- That may best be used in a larger group. Conversation may be between the resource person and one or more participants or between two resource people.

**Related strategies:** Lecture, panel
Learning Contracts

The learning contract is a document, drawn up by a participant in consultation with the instructor, specifying: (1) the learning goals for the particular learning experience, (2) the methods by which the participant intends to accomplish those goals, and (3) the method of evaluation. During the course of the learning, the instructor must be available to provide counsel, direction, and resources. The contract can be renegotiated, if circumstances warrant.

When to use:
- For almost all learning situations

Requirements:
- Paper

Advantages:
- Fosters self-reliance and self-understanding
- Individuals can learn in the styles to which they are best suited
- Learning can be individualized/personalized
- Participant is involved in active evaluation of own progress
- Fosters a great measure of personal pride and a high level of commitment
- Relatively inexpensive (in terms of time and money) to implement
- Places major responsibility for learning on the participant

Considerations:
- Demands strong motivation by participant
- Requires role reorientation for both the participant and the instructor
- May foster a feeling of undue pressure on the participant that may heighten the anxiety level during the learning process
- Contract is time consuming to develop
- Contracts are in effect over a period of time, usually two to three months, however they can be modified and used in shorter time frames

Related strategies: Self-study, correspondence courses
Lecture

A prepared, oral presentation delivered by a resource person to a group of participants is called a lecture. Since it is a one-way presentation in which the participants are essentially passive, it should be enhanced with visual aids and be coupled with a more active strategy (e.g., discussion or exercise). A lecture can be delivered to any size group and can be of any duration; however, briefer lectures (15-30 minutes) are effective.

When to use:
- To inform group of policies and practices
- To relay factual information
- To introduce and/or explain a concept or theory

Requirements:
- Podium and amplification equipment, if necessary
- Sufficient space for all participants to see and hear

Advantages:
- Covers a large body of information in a short period of time
- Relatively easy to prepare and deliver
- Inexpensive
- Allows many people to hear the same message

Considerations:
- Lectures must be well planned and concise
- Many instructors lack the presentation skills necessary to be a good lecturer
- Difficult to maintain interest
- Retention of information is lower than with more participative strategies
- Often effective to supplement with listening groups. Divide the participants into general groups, each of which is assigned the task of listening to and observing an assigned part of the lecture or speech and asked to do something (e.g., develop questions, critique research points, etc.)

Related strategies: Panel, interview, film or video, demonstration
Panel

The panel strategy is a conversation, by several persons, in front of an audience. A group of three to five experts presents short prepared statements. The statements are discussed by panel members, and questions from the audience are answered. A moderator introduces, coordinates, and often participates in the discussion.

When to use:
- To open or conclude the study of a topic
- To expose participants to the ideas and opinions of several resource people
- To surface differing points of view on a topic, similar to but not as structured as a debate

Requirements:
- Chairs for panel members placed to face the participants
- Sufficient space for all the participants to see and hear
- Amplification equipment, if needed

Advantages:
- Can develop an awareness of the complexity of various issues.
- Exposes participants to several resource people in the same session.
- Often enjoyable for resource people. Requires little formal preparation beyond the opening statement.
- A lively panel discussion can be very enlightening and, at times, entertaining
- Questioning by participants increases participation and ensures that panel members will discuss points that interest the group.

Considerations:
- A group of experts can be expensive to assemble, although the cost could be reduced through the use of technology (e.g., teleconference)
- Panel members must be at ease and willing to be challenged on issues.
- A good moderator is essential, in order to prevent one or two panel members from dominating the discussion.
- Participants are relatively passive and may be hesitant to ask questions. One technique would be to have the participants write questions on pieces of paper and submit them to the moderator to ask to the panelists.

Related strategies: Interview, lecture
Programmed Instruction

Programmed instruction is a highly structured form of self-study. Material to be learned is presented to the participant in a series of carefully planned, sequential steps. The steps progress from simple to more complex levels of instruction. At each step, the participant must make a response that tests comprehension. The participant immediately receives feedback as to the correctness or incorrectness of a response. The learner proceeds through the course at his or her own pace.

When to use:
- To learn detailed, factual material
- To learn policies or procedures
- As prework for a formal seminar

Requirements:
- Programmed text, pencils, erasers, etc.

Advantages:
- Orderly development of skills/knowledge
- In-depth learning, especially of factual material
- Provides reinforcement without an instructor
- Self-paced
- High learner involvement by constantly answering questions
- Easy to administer
- Some are reusable. Tend to have a long shelf life
- Relatively inexpensive to purchase and use. Permits decentralized training

Considerations:
- Development costs are high. It is extremely time consuming to write and test such materials. Considerations for deciding whether to use include:
  - Nature of material -- should be for stable body of knowledge, so that frequent revision is unnecessary
  - Shelf life -- three to five years is best
  - Usage -- not for "one shot" program rather for a continuous program with many potential learners.
- By their very nature, self-instructional programs are designed to be complete unto themselves, requiring no instructor intervention. This should be primary in the minds of those who develop and evaluate such programs. If instructions and/or content is unclear programs lose effectiveness.
- The personality of a learner affects the success of the learning.
- People with high social needs tend to learn best in groups. People with low social needs tend to learn best alone and, therefore, learn well with this type of strategy
- Good for knowledge acquisition but not for dealing with attitudes and feelings
- Can be used in a group; however, there will be a need to account for different learning rates.
- Variations of programmed instruction can allow for different levels of knowledge. For example, in a scatter book the material is presented in a scrambled manner.
- Participants read portions of the text and are presented with several possible actions.
They make the preferred choice and proceed to another situation, often skipping through the sequence of pages. If an incorrect choice is made, they are led to additional information or remedial exercises to help in arriving at the correct decision. In the workbook, a book of questions or written exercises provides spaces for the participants to write answers. The questions may be related to readings, to previous learning, or included content material.

**Related strategies:** Computer-assisted instruction (CAI), action maze, readings
Questioning

The questioning strategy consists of developing and asking a variety of questions, designed to test learning and stimulate discussion. The questioning technique helps participants learn to use different modes of thinking, such as inquiry, analytical thinking, discovery, intuitive thinking, and problem solving.

When to use:
- To test knowledge learned
- To open and maintain discussion
- To actively involve participants

Requirements:
- None

Advantages:
- Determines learning without a written test
- Economical
- Encourages participation
- Shifts focus of learning from instructor to participants
- Stimulates alternative ways of looking at problems and solutions
- Maintains interest

Considerations:
- Questions should be developed in advance. There is the need to develop appropriate questions (e.g., closed questions for testing, open for discussion)
- Instructor requires skills in developing and delivering questions.
- Instructor requires good listening skills.
- One or two people may want to provide all the answers.
- The instructor may have to call on people to get maximum participation.
- Some participants may be hesitant to speak and may need to be drawn out.

Related strategies: Discussion
Readings

Readings are the printed matter assigned to individuals in the form of articles, books, or pamphlets. All the participants can read the same material, or the readings can be individualized. Readings are often coupled with a study guide or discussion questions for use during a class session.

When to use:
- To present factual material
- To present policies and procedures
- For preseminar assignments or homework
- For postseminar materials

Requirements:
- Printed matter

Advantages:
- Economical, if materials are readily available
- Self-paced. The time needed depends on participant's reading skill and comprehension ability. Can be done at participant's own convenience
- Ensures that all participants will have a common body of knowledge.
- If used as prework, does not take seminar time that could be used for a discussion of the readings.

Considerations:
- Selection of relevant articles. Each reading should be carefully chosen and edited to meet the program's needs. Often, published materials include information that is not directly related to the topic. Select only the portions of such materials that are germane.
- Assigning too much material without proper guidance will often result in a low participant completion rate.
- Retention of information is lower than more participative methods
- While the participants are active, the focus of their attention may or may not be on the relevant subject matter. This is especially true if the readings have not been written specifically for the program. If possible, readings should be organized into a self-study pack. These help to ensure that participants will focus on the important issues. The guidance provided in such a package could be in the form of outlines for notetaking, specific study questions related to the important issues, or exercises and/or case studies for application of the learning.
- It is often effective to have participants read material and make a report to the group, especially if different participants in a class are assigned different readings
- Also related to an annotated reading list, in which participants research available literature on a subject matter, read or review materials, describe the contents in a short paragraph, and provide bibliographical information. This is especially useful for seminar readings.

Related strategies: Programmed instruction
Role Play

A strategy of human interaction involving realistic behavior in non-job settings is called role playing. Two or more role players are presented with a hypothetical problem or conflict with which they must attempt to deal. Only a basic description of the role and setting is provided. The role players must improvise and respond spontaneously to each other. Observers critically view the interaction. Following the enactment, role players and observers analyze what has taken place. Through role playing, participants experience their own behavior and emotions and how they affect others in an interactive situation.

When to use:
- To practice skills learned in such areas as problem solving, counseling, and interviewing
- To promote understanding of the viewpoints and feelings of other persons
- To encourage insight into attitudes and behavior
- If videotaped and replayed, to gain awareness of one's own style and the reactions of others

Requirements:
- Role situation sheets for each player. Guidelines for critiquing and copies of both roles for the observers
- Sufficient space for players, far enough from observers to allow free flow of conversation but close enough for good observation
- Videotaping equipment, if used

Advantages:
- Allows participants to experience and try out new learning and receive immediate feedback
- Totally involves participants
- Is relatively easy to develop
- Provides some realism
- Economical, unless video equipment is rented for taping
- Can be enjoyed

Considerations:
- Can be difficult to use. The instructor must be able to set a climate in which the participants are comfortable enough to role play and do not feel threatened. Must be introduced carefully, because confusing or misunderstood instructions can detract from the effectiveness of the strategy. Care must be taken to ensure that the word "play" is not misinterpreted. The aim is to present a realistic situation and to discourage participants from unrealistic "clowning" or from deliberately presenting confusing facts or giving misleading information.
- Instructor must ensure that the discussion that follows a role play is objective and constructive and does not become a personal attack on the players.
- Can be administered in a number of different ways: multiple role playing, in which the entire class is grouped in dyads and play without an observer; triads, with an observer; single group in which two people role play in front of a large group; or teams in which teams prepare, select representative players, and coach their players. Can also include role reversal, in which case players play their roles to a conclusion and then switch roles and "replay" the situation.
• Somewhat time consuming. Most role plays are 7-10 minutes in duration, and the participants may need 10 minutes to prepare.
• The critique session, including video replay, usually lasts 15-20 minutes or longer.
• Care must be taken in developing roles to ensure that the roles are consistent.
• There should be differences in the perceptions of the two roles but not in the facts of the situation.
• Avoid using funny or weird names or including too much extraneous information.

Related strategies: Interactive modeling, simulation, game, case study
Simulation

Simulation is a representation of a real-life situation -- usually a situation requiring appropriate actions and reactions or a situation requiring the demonstration of technical expertise. For some, learning simulations often involve the use of computers or other machinery. Simulations may be relatively simple or quite complex. Some of the most complex are the simulators used to instruct astronauts and pilots. Depending upon the type of learning, simulations may be used by one person or by a group. The number of participants will be determined in part by how many would perform the activity in the "real world."

When to use:
- To assess previous learning
- To demonstrate technical ability
- To bridge between learning and real life

Requirements:
- Equipment as needed for simulation
- Ample facilities

Advantages:
- Presents a situation as close to real life as any learning experience can be. Participants feel real-life stresses associated with the activity.
- Activity involves the participant through hands-on experience
- Provides individual activity and assessment
- Motivates interest

Considerations:
- Usually very expensive to develop and maintain. There are high equipment costs and long development time.
- Must be specifically developed for each situation, consequently few commercial products are available. Developers must have both technical and educational expertise
- Instructors often play role of job supervisor as well as facilitator/evaluator role

Related strategies: Games, computer-assisted instruction (CAI), roleplay
**Skit**

The skit is a short, rehearsed, dramatic presentation, acted from a prepared script. It dramatizes an incident that illustrates a problem or a situation. "Actors" can either be instructors and or participants. Skits can be an effective way to create situations similar to those created by roleplays. While the lack of participant involvement may make them less effective learning experiences than role plays, they are less threatening and easier to use.

**When to use:**
- To demonstrate a procedure or technique
- To present a situation, usually an interpersonal problem situation for the group to discuss
- To surface issues

**Requirements:**
- Script and props
- Space for "stage" and audience

**Advantages:**
- Roles are rehearsed so that expected action will take place as designed
- Members involved in a skit have more responsibility to the purpose of learning than those in role play
- A good attention getter, often used to initiate a learning experience
- Creates interest in a subject
- Usually inexpensive to construct and produce
- Entertaining as well as informative
- Good way to demonstrate a process

**Considerations:**
- "Actors" may not be totally secure and confident about performing in front of others.
- Rehearsals take time but are essential
- Difficult to find a skit that specifically meets the goals and objectives of a learning experience and a facilitator. It may require special writing
- Difficult to include important points of learning experience in a short skit
- Difficult to locate skits already prepared for the educational purposes of adults, since most available materials in skits are related to children or social groups
- More time consuming to construct, rehearse, and produce than more traditional learning strategies
- Requires imagination and creativity on the part of the facilitator
- At times, more attention may be focused on the behavior of the players than on the issues for which the skit is being performed
- Instructors must lead the group in discussing the issues that surface in the skit

**Related strategies:** Role play, interactive modeling, videotape presentations, demonstration
Workgroup

Three to eight individuals working together on a specific task to produce some specific output (e.g., suggestions, solutions to a problem) is called a work group. Its purpose is usually to apply learning to solve a problem. It should not be used to introduce new material.

When to use:
- To demonstrate and apply learning
- To gather questions and/or concerns from the group
- To practice making decisions in groups
- To encourage teamwork
- For case studies, games, or simulations

Requirements:
- Ample space for each group to work, perhaps separate break-out rooms
- Flipcharts and markers

Advantages:
- Active participation by all the participants
- Encourages participation by those who are hesitant to speak in a large group
- Allows participants to help each other, fosters teamwork
- Group answers and/or ideas are often more effective than those of individuals

Considerations:
- Time consuming. A work group should last a minimum of 30 minutes, often much longer. Time should be built in for moving to and from break-out rooms, if used.
- Ample time is needed to discuss the results
- Groups may need to choose a spokesperson to record results and report the results back to the whole group. The format of these reports should be understood before the group begins work
- Instructor's role is to be sure the assignment and the instruction are clearly understood. The instructor should arrange logistics, materials, and keep group aware of time limitation, and he or she should be available, as needed
- Results of work groups should be communicated to the total group. This can be done by spokespersons reporting, by posting all of the results and reviewing them, by groups exchanging results and critiquing each other, or by having a general discussion

Related strategies: Buzz group, discussion