

Everyone has had opportunities to observe or attend a class in which the teacher was able to elicit good student performance. With good teaching, students are engaged at a high level with the content and are performing skillfully in a short time. Likewise, most people have experienced a class in which the teacher muffed the task presentation and spent the rest of the time correcting communication errors. Sometimes learners do not know what to do because they are not listening, but most of the time students do not know what to do because the teacher is not selective or clear enough in presenting the tasks. When it comes to movement tasks, communication is the name of the game. The ability to present clear tasks that have the potential to facilitate learning requires preparation and practice.

Regardless of the type of content inherent in a task, the presentation of a task is always an exercise in communication. On some occasions, teachers can merely name or quickly describe what they want learners to do and assume that the learners have had experience with tasks that call for similar responses. In most teaching, however, this assumption cannot be made. This chapter, therefore, pays special attention to ideas that relate to the presentation of tasks having some aspect of unfamiliarity to the student. Box 5.1 includes an example of a task presentation.

■ GETTING THE ATTENTION OF THE LEARNER

It seems almost unnecessary to point out that students must be attentive to benefit from any task presentation. Unfortunately, throughout the gymnasiums of this country, teachers are trying to communicate by talking over or shouting students in an environment that is not supportive of any kind of communication. The best task presentation in the world is worthless unless the teacher has the **attention** of the students.

Many conditions contribute to why students are not attentive when tasks are presented. Although the teacher may not have control over some of these conditions, the teacher can prevent many of the causes of inattention. The following section explores some of the reasons a teacher may not have student attention

and discusses some ways a teacher can exert more control over student attention.

Establishing Signals and Procedures

It is easier to get the attention of a learner if you have established signals and procedures with students when you want their attention. Teachers should have routines to begin class so that students know when it is time to begin class. Sometimes students will gather in a place in the gym or in the outside area. A place where students can sit comfortably without having to sit on wet grass or sand is almost a necessity. Maintaining student attention is difficult when students have to stand for more than a few minutes or sit uncomfortably. When the teacher wants practice to end comfortably, the attention of learners, it is helpful to have a signal. A whistle is useful in large play areas but should not be relied on as a substitute for a learning environment that is not conducive to learning. Many teachers find that the whistle in smaller play areas is unnecessary and creates an undesired atmosphere. Students can be taught to respond to a signal (hand clap, drum beat, or raised hand) or a teacher call for attention.

If you find that you are not easily getting the attention of your students, you may need to take the time to establish a procedure or signal. You will need to make clear your intentions and practice with students responding to a signal until it is clear that the expectation is for quiet and attention. Teachers should not proceed until they have the attention of the students. Students cannot be attentive to teacher presentations if the environment is noisy or distracting. If the noise comes from the class, teachers should not try to compete. Shouting over a noisy class when the teacher has asked for attention may be effective once or perhaps even twice, but it quickly loses its effectiveness.

Distractions over which the teacher has less control are more difficult. In situations in which two classes are sharing a facility, workers are changing lightbulbs, dogs are on the field, or airplanes are flying overhead, the teacher must try to remove the distraction when possible and cope creatively when all else fails. One way in which teachers can minimize the effects of distractions is to bring the students into a smaller group, closer to the teacher, with the

BOX 5.1

Example of Task Presentation

Liz is beginning a unit in striking with paddles with her fourth-grade students. When the students walk into the gymnasium, they immediately spy the paddles separated into several piles and spaced throughout the gym. They want to know if they are "going to get to do that today." Liz has the students gather in the center of the gymnasium as a normal procedure. When the last child has sat down, Liz, in a normal tone of voice, says, "May I have your attention?" She waits a few seconds for everybody's eyes to be on her and begins.

"Today we are going to start a unit on striking with paddles. We will be working on this unit for the next few weeks. What sports do you know that use rackets? (Students give some examples.)

I have a videotape prepared that shows different sports that use rackets. When the sports are shown, I am going to stop the tape and see how many you can recognize.

(Teacher shows prepared videotape of tennis, racquetball, badminton, deck tennis, and squash and leads the students to identify the name of the sport.) How many of you have ever played these sports before? Which ones do you think you would like?

All of these sports require that you have some control of the paddle and the object—you must make the object go where you want it to go. We are going to start today to get some control of these paddles and foam balls. When I say 'go,' I would like for you to pick up a ball and paddle at one of the locations around the gym—find a space you can work in—and show me you are ready to begin. GO. (Students complete organizational task.)

When I say to start practicing, we are going to try to bounce the ball down in our own space. (Teacher demonstrates bouncing the ball down, attending to keeping a forward stride position, bent knees, and flat racket face in the demonstration.) What you are trying to do is to maintain enough control of the ball so that you don't have to travel out of your own space and so that you can keep the ball going. (Teacher demonstrates what "out of control" is.) Who can show me what control means? (Teacher asks a student to demonstrate the task.) Okay, that was pretty good control—the ball kept going, and you didn't have to move too far out of your own space. Everyone stand up and see if you can keep your ball in control in your own space, tapping it downward."

explore the qualities of these objects, the children can be expected to hold them without trying to get the



Setting the stage for class with young children sometimes means taking time to reduce the level of excitement.

students facing away from the distraction. A teacher who says, "I know it's hard to listen when workers are up on the roof, but let's try," is also likely to be successful in soliciting student attention.

Student Preoccupation with Other Environmental Factors

Many times students are not attentive because their attention is engaged by other people or other articles in the environment. Teachers who work with young children have a hard time competing with objects the children may have in their hands (e.g., balls, ropes, beanbags) or with nearby equipment (e.g., mats, bars, nets). Teachers can set up class procedures to eliminate some of these problems by giving students something to do with the objects (e.g., telling the students to place the beanbag on the floor in front of them). When young children have had sufficient time to

means out of the beanbag or picking at the foam of the ball.

Teachers can solve many attention problems by having children rest between tasks away from mats, equipment, and walls as a routine procedure. If students are not working with partners or as a group, they should not be resting near others. Standard procedures that teachers take time to structure and reinforce will eliminate many problems in the long run.

The attention of older students can be requested. Older students should be expected to be able to ignore distractions in the environment. If the teacher consistently holds the students' attention despite the influence of external factors, a strong chance exists that internal causes of inattention will be controlled as well.

Inability to Hear or See

Many times teachers do not have students' attention because the students cannot hear or see what is going on. Because of the time wasted, many teachers are reluctant to call students in from large play areas to some central point for a task presentation. This is an acceptable in situations where all the students can hear, the material is brief, and the concepts with which the students are being asked to work are not new. However, if any of these conditions do not exist, teachers can save productive work time by calling students in to a smaller area so that the task can be properly communicated.

Another commonly occurring problem that teachers must address, particularly in outdoor settings, is that students' vision is impaired because of glare from the sun. Sometimes students will complain, but usually they will just struggle with limited vision. Teachers should always position students so that they are sitting with their back to the sun.

Inefficient Use of Time

Teachers may find that they have student attention initially and then gradually lose it. Many times this is because the learning experiences that teachers have designed fail to meet one or more of the criteria for a learning experience discussed in chapter 1. Often attention wanes because teachers take five minutes to

do what could be done in one minute or because teachers use verbal discourse rather than activity.

Teachers of young children must recognize that these children have short attention spans to begin with and even shorter attention spans in a gymnasium that invites activity. The secret to effective task presentation is brevity. Young children are motivated to move, and if teachers have much to communicate, they will have better results doing it through activity and short transitions between activity periods.

Older students' longer attention spans do not excuse inefficient task presentation. Older students will tolerate more inefficiency, but that does not mean they are attending. These students may not express their lack of interest overtly but will simply tune out the teacher. The amount of information, particularly new information, that people can attend to at any one time is limited. Teachers of older students must spend more time in communicating material and in motivating students, but long verbal discourses are again to be avoided in favor of shorter, more frequent breaks in activity.

■ SEQUENCING THE CONTENT AND ORGANIZATIONAL ASPECTS OF TASKS

How the teacher orders the content and organizational aspects of the task can determine how successful the student response to the task will be. The presentation of tasks usually involves information concerning (1) what task is to be performed (including the goal orientation) and (2) the organizational arrangements for the way the task will be practiced. Teachers have a tendency to mix these two types of information in their task presentations. This is confusing for the students. Task clarity is enhanced if these two types of information are not confused in the presentation.

EXAMPLE: Problem task presentation

"Today we are going to work on fielding ground balls. We are going to work with partners. When you field a ground ball, you have to make sure that you get your

body behind the ball in the proper position. If the ball gets by you, it is going to go over that hill over there."

In this example the teacher started with identifying the skill to be practiced and then gave the organizational arrangements. As soon as the idea of partners was introduced, it is likely that only a few students heard anything else. At that point they would be either shuffling around to find a partner or trying to anticipate how the teacher was going to choose partners.

When tasks have an involved management component, teachers may need to separate the management aspect of the task from the content aspect of the task. Beginning teachers working with students for the first time should not expect students to be able to handle too much too soon. Teachers can structure a complex task by giving the *management directions* first and waiting until the students have complied before giving the *content dimension* of the task, as in the example that follows.

EXAMPLE: Separating the content and organizational aspects of the task

"We are going to work with partners and a ball. When I say 'go' I want you to sit next to a partner in a good work space." *The teacher waits until students have a partner and are listening.* "One of you will walk over and get a ball and sit back down with your partner." *The teacher waits until students have complied with the organizational task.* "We are going to work on passing a ball to a moving receiver. . . ."

With time, many groups of students can handle both organizational tasks (getting a partner and getting a ball) simultaneously. If they cannot, the teacher must break down the organizational tasks. Organizational directions do not always have to be given before the content is explained. Separating organizational directions from the content part of a task presentation is useful if students will anticipate that they will have a choice of partner or equipment.

If the organization for practice is critical to how the task is performed, the organizational arrangements should be described and be part of the demonstration. For example, if partners will be on opposite sides of the volleyball net and will work with hitting

the ball from a toss across the net, the student will need to know that the ball is coming over the net from a toss and that the tosser will catch the hit ball when it is returned. In this case the students are practicing a volleyball skill but they are practicing it in specific conditions arranged by the teacher that must be communicated. Few groups of learners can handle having the organizational aspects and content aspects of tasks mixed in the teacher's presentation.

In tasks that involve an extensive management dimension (e.g., getting in groups of three, selecting a ball, and working on passing the ball while moving continuously), the management aspect (getting in groups and selecting a ball) will usually need to be preceded by the cue "When I say go. . . ." to prevent students from beginning the organizational dimension of the task before they have fully comprehended the content dimension. The value of signals or cues to begin should not be underestimated, even with older learners. Teachers' descriptions of what to do are often communicated in language associated with an expected response (e.g., "get a partner"), but teachers do not want that response until they are finished giving their instructions. Young children and people with whom teachers have not worked previously in a learning situation may not be sure when a response is expected. Alerting learners to the idea that a signal will be given ("When I say go. . . .") and using signals ("Go!") makes intention clearer.

When new material is being presented, the directive "Now go and do this" usually involves a summary of the explanation (e.g., "When you get your ball, take it to a wall and begin striking it to the wall with at least four different parts of your body"). The assumption is that the specific details of the skill have already been explained. Thus the teacher is summarizing the directive. This summary is necessary and many times is used in conjunction with the type of summary cues mentioned earlier in this chapter. The summary helps fix in the students' minds exactly what they will be working on and the order in which the parts of the task will be performed. The summary should also include the goal orientation of the task. Teachers who want to check the students'

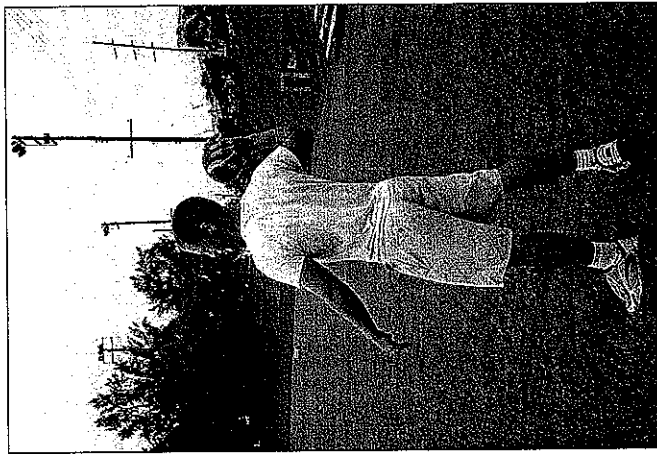
be sufficient. Caution should be used, however, because teachers generally assume too much understanding on the part of a learner. Because of their familiarity with the material, teachers who study movement terminology or who use the same terminology in five different class periods a day tend to assume that students understand after they have been "told" something once or twice. Teachers often think they have done a good job of verbal communication, but they need only ask students what was meant by a communication (a *check for understanding*) to gain enormous insight into the difficulty of describing movement in abstract terms. It should be remembered that the younger the student, the more the student is functioning at a concrete level with regard to verbal material. Therefore a teacher will be less able to rely on verbal communication unaided by demonstration.

Demonstration

In physical education, visual communications most often take the form of demonstrations. Used in conjunction with verbal explanations, they provide the learner with two sources of information. A discussion of guidelines for the use of demonstration in physical education follows.

Demonstrations should be accurate. Students will attempt to reproduce the movement they see. No matter how much an important point is emphasized verbally, many students will attend primarily to the visual demonstration for information. The demonstration therefore should be accurate. Teachers tend to only partially go through the action of a movement skill or task or to demonstrate a skill out of the context in which the students will be using it. At some point, students need to see the whole action performed at correct speed and in context. Students will also gain more accurate information from a demonstration if they see it performed at more than one angle.

Use students to demonstrate when appropriate. If students are capable of demonstrating accurately, they should do so rather than the teacher, unless the performance would put students in an undesirable situation with their peers. When students demonstrate, the teacher can focus the attention of the observers on important aspects of the performance.



A good demonstration facilitates learning.

Demonstrate the organizational format. If the task to be practiced stipulates a specialized organizational format (e.g., standing across a net from a partner or working in groups of three), the demonstration should use the same organizational format that will be required in practice. Many teachers who give good skill demonstrations are still unsuccessful in getting students to understand what is expected because they have failed to include the organizational format for the practice of the task. Good task presentations use demonstrations to communicate both skill and the organizational format of the practice.

Use demonstrations and examples in creative and cognitive problem-solving tasks.

Many teachers who set creative responses, expressiveness, group projects, or problem-solving processes as task goals are reluctant to use demonstration in

presenting the task. They are concerned that if demonstration is used, the spontaneity of student response will be impaired. Indeed, spontaneity will be hurt if the teacher demonstrates only one response to a task and asks that it be copied or if a teacher presents a problem having only one solution and then demonstrates that solution. Teachers who use more indirect approaches to learning usually want students to choose from a variety of responses or to respond with a variety of responses. However, tasks that require expressiveness, creative responses, or solutions to movement problems can use demonstration successfully to communicate to the learners the type of response expected as well as the procedures used to formulate a response. If a teacher wants expressiveness, the teacher needs to communicate the concept with which the students are to work by giving examples of responses within that concept. If a teacher asks students to solve a movement problem that has only one solution, the principle or idea with which the students are to work can be demonstrated. For example, the teacher could demonstrate a few examples of contrasting quick and slow movements with a partner.

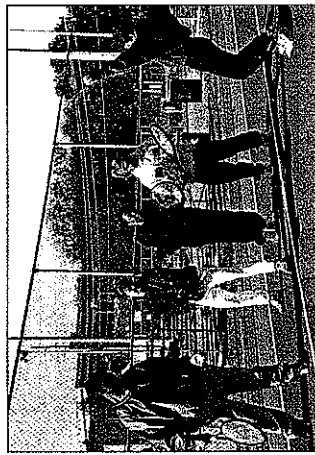
Tasks that seek variety, expressiveness, or problem solving should not result in a student's or a group's futile search for the assignment. Beginning learners of all ages depend on visual and concrete cues. The need for demonstration should not be taken lightly. The need for accuracy of demonstration is critical. The clarity of a task is enhanced by demonstration and examples of the concept being developed. The teacher can encourage students to seek responses within a framework clearly understood by all.

Tasks that ask students to generate a cognitive response need to be presented in a manner that makes it clear to the student the type of response requested as well as the process the student should use to arrive at the response. For example, if you want students to discover the best way to get a shuttlecock to the end line in badminton, you need to be clear that you want them to experiment with different ways to generate enough force to get the shuttlecock to the back line and to be prepared to identify and demonstrate what they have determined is the best way. If you want students to identify three different vigorous activities they can participate in outside of class, then you must

share with them the criteria. The activity must be vigorous and the students must identify three that can be done outside of class in their own situation.

Emphasize important information about a task. For students to get the most from a demonstration, the teacher must guide their observations. The critical aspects of a skill or task should be highlighted verbally and, if possible, visually through freezing the action at critical points or verbally overemphasizing important aspects of a task. For example, if a teacher is going to teach a back handspring, three points should be emphasized before the execution of the movement: (1) starting in the sit position with a straight back, (2) subsequently losing balance backward, and (3) thrusting the arms and legs. If a teacher wants students to identify three different ways to develop cardiovascular endurance the teacher should emphasize that an appropriate response would involve (1) activities that get the heart rate up for a sustained period and (2) three different activities.

Provide information on why a skill is performed a certain way. Some learners will be able to remember the visual and verbal cues of a skill better if they are provided with information regarding why a skill is performed in a certain way. The badminton serve, for instance, is performed with a low backswing and follow-through because the rule says that the shuttlecock cannot be contacted above the waist. The influence of a rule or the principles of movement efficiency on an action often help learners



Students may need additional demonstrations during the learning process.

pay attention to important cues. This kind of information is useful but should not turn an efficient task presentation into a lecture on the skill. Information should be provided only where it is critical to understanding the skill.

Check student understanding after a demonstration. Before teachers have students practice a skill, teachers should check the students' understanding of what they have observed. This can be done by asking questions after an observation or by asking students to demonstrate what they are trying to do. It can be done also by asking students to look for particularly important points during the observation and checking their understanding afterward. Box 5.3 summarizes the qualities of a good demonstration.

Media Materials

Because the videocassette recorder (VCR) and computer are standard equipment in many homes and are becoming a more essential part of gymnasium equipment, teachers have access to a wide variety of visual media in their content area. These materials can be used to motivate students and give students a perspective on the "whole." Knowing what games look like when they are played well helps students to know what they are working toward and therefore makes practice more meaningful.

An increasing supply of commercially produced computer programs, pictures, films, charts, loop films, and videotapes, as well as Web accessed materials, are available to physical educators relatively in-



Teachers can use audiovisual resources to emphasize important information about a skill.

expensively. As visual aids to communicating a skill, these materials have the advantage of being professionally produced. In addition, the teacher has some assurance that the models provided are good ones. Most of the video taped materials can also be repeated in slow motion if desired. Such materials tend to motivate a computer and television-age audience and allow the teacher to observe both the demonstration and the student response.

One disadvantage of using commercially produced visual materials that attempt to show how a skill is performed is that the materials may not be appropriate for the particular group of learners with whom a teacher is working. Material above or below a learner's ability may not be valuable. Much commercially produced material with dialogue gives learners more information than they need for one skill. The sound tracks of such material will probably be more valuable if they are not used in the initial presentation of a movement skill or idea but are saved until the learners can make better use of more specific information.

To use visual materials well, the teacher should preview these materials, use them for a specific purpose, and set up the equipment for their use in advance. Student time should not be consumed with teacher preparations. Teachers should not abandon their role as teachers to be projectionists or instructors on how to use a computer program. Setting up and taking down the equipment should occur outside

the instructional period. These materials are useful instructional tools, and teachers should seriously consider using them and adapting their use to the specific needs of their learners.

SELECTING AND ORGANIZING LEARNING CUES

A final aspect of task presentation is the teacher's selection and organization of learning cues. A learning cue is a word or phrase that identifies and communicates to a performer the *critical features of a movement skill or task*. If the teacher is going to teach the floater serve to a volleyball class who has learned the regular overhead serve, the following information might be useful in helping the students understand the skill:

- The action of the floater serve starts like the regular overhead serve.
- Contact is made with an open hand straight through the ball.
- The action used is a punching action with little or no follow-through.

Each point would be considered a critical feature of the skill. Teachers can facilitate the cognitive process needed to establish an accurate motor plan for a skill by determining critical features of that skill and then selecting a learning cue that can be used to represent that critical feature (see box 5.4).

In designing the learning cues for the smash, the teacher decided that the "get set" cue could be taught as a package. The first four critical features have to do with the "get set" position, which can be practiced apart from the execution and follow-through.

Selecting good cues is important for all learners but is absolutely essential for the beginning learner. This is because motor performance and cognition are interdependent, especially in the early stages of learning. Cues presented to learners should be reduced to key words and organized with the specific learner in mind. What the teacher focuses the learner on is critical and largely determines the ability of the task to elicit the desired outcome.

Good cues have several characteristics. They are (1) accurate, (2) critical to the task being presented, (3) few in number, and (4) appropriate to the learner's age and stage of learning.

Identifying Learning Cues

Definition of a learning cue

A word or phrase that efficiently communicates as much information about a critical feature as possible.

Example

Critical features of a tennis overhead smash

- Position yourself where the ball will be coming down (the ball should be in front and slightly to the right).
- Bend your knees.
- Position the racket head behind you at about head level.
- Shift your weight to the back foot.
- Point your hand or finger at the ball.
- Swing the racket upward and forward with an extended arm at contact.

Learning cue for critical features

- Get set.
- Point and shift.
- Swing up and forward.

Good Cues Are Accurate

Teachers must know their subject matter to select accurate cues, and good teachers spend a lot of planning time selecting good cues. What the teacher focuses the learner on can make the difference between student success and student failure in performance. Physical educators are often called on to teach activities with which they have no experience. Resources are available to help familiarize teachers with almost any activity they may be asked to teach. If you will make a list of the critical features of a skill from a textbook, you will then be able to reduce those critical features to important learning cues. Many inexperienced teachers remain ignorant because they fail to consult appropriate resources and prepare themselves to teach the lesson.

A research team at the University of South Carolina asked four physical education specialists to teach jumping and landing skills to one of their second-grade classes. The ability of the students was

BOX 5.3

Qualities of a Good Demonstration

- Information is accurate.
- Demonstration is performed by student if possible.
- Teacher uses organizational format students will use for practice.
- Important information is emphasized.
- Information is provided on why a skill is performed in a certain way.
- Student understanding is checked.
- The demonstration is repeated more than one time.

tested before and after six lessons taught by each teacher. Only one of the four teachers had accurately identified the learning cues for the skills involved. The performance of the students reflected this accuracy. The more effective teacher had used reference material to correctly identify what was important in the skill being taught (Werner & Rink, 1989).

The ability to select critical cues that are accurate and can elicit the desired response from students is developed through preparation and practice. With experience, teachers will become selective in choosing critical cues for a movement skill or concept.

Good Cues Are Brief and Critical to the Skill Being Performed

Learners cannot use a great deal of information on the specifics of a movement response. In some cases, it is beneficial to get students doing a skill and then come back and present the skill more formally. The cues the teacher selects should be chosen because they are critical to the performance. For the overhand serve, the following description might be written by a beginning teacher:

- The performer stands in an open stride position with his or her side to the intended direction of the object being thrown. The foot forward should be opposite to the throwing arm.
 - The backswing of the throw is initiated by rotating back at the hips and shoulders. The arm movement is led with the elbow, which is about shoulder level. The hand drops back at the close of the backswing as the weight is transferred to the back foot.
 - The forward motion of the throw is initiated with an elbow lead and trunk rotation forward. The momentum of the throw is released sequentially through the shoulder, elbow, and wrist with a quick, sudden action leading to weight transfer onto the forward foot and a follow-through in front of the body.
- How much do students need to know? Few students initially would gain much from all that information. It would be better to assume the ready position for the skill and then select only three cues for the action as follows:
1. "Keep your elbow high and lean forward."

2. "Step to the opposite foot."

3. "Put your hand out and snap your wrist on the throw."

Selecting critical cues is important to giving learners good, accurate pictures of what they are trying to do. One teacher asked an 8-year-old to tell the rest of the class how to throw a ball. The youngster replied, "I just le-a-n back and let 'er fly." Physical educators might all take a lesson from that child.

For complex skills, some cues are especially important. Most of the time these cues involve locating the body in space at critical points in the action. The stance, the back swing, and the follow-through are usually critical points for manipulative tasks. Breaking down most body actions into preparation, execution, and follow-through helps divide actions into manageable parts. Picture these three phases for the cartwheel, the bowling approach and release, and the forward roll.

Words that help students understand the type of action desired (e.g., *snap, punch, push, press*) often are useful in designing cues. Sometimes these words are referred to as **summary cues** because they are single words that capture a quality or critical feature of the movement. These types of words give the learner a description of the time quality (e.g., quick or sustained) and weight quality (e.g., strong or light) of the action. In skills such as the basketball layup, it is important to know that the ball is placed up to the basket and not thrown up. Striking activities are primarily quick actions requiring muscular tension just before contact. In sports such as field hockey, some actions are hits (with a backswing) and some are pushes (no backswing). In gymnastics, a walkover is a continuous application of force, whereas a round-off is an explosive action. Cues that describe the action can help the learner get a more accurate picture of what to do.

The selection of cues is just as critical for task presentations that use an environmental design approach.

EXAMPLES:

- The teacher is teaching the overhand throw pattern and has decided to use a high target and the cue "hit the wall above the line as hard as you can" without

giving the learners any more information on how the overhand throw is performed.

- The teacher has decided to encourage students to get under the ball when using a volleyball overhead pass by having them set the ball into a basket or large hoop placed at least ten feet high. The teacher uses the cue "get the ball into the basket," or "use a high arc to get the ball into the basket," with full knowledge that to be successful, the student must get under the ball.

In these examples the cues do not focus the learner on how to do the movement. Rather, the learner's attention is focused on the intent of the movement, under the assumption that to be effective, the learner must also do the skill correctly.

Good Cues Are Appropriate to the Learner's Skill Level and Age

Selecting cues to present to learners involves making judgments about the ages and ability levels of the learners. Both of these learner characteristics significantly affect the types of cues selected and how they are communicated.

Skill level of the learner. Although most young learners are beginners, some are not; although some older students are advanced, most are not. Thus, teachers in physical education will be working primarily with beginners in their classes. As learners become more proficient in their movement skills, they can profit from a different kind of learning cue. Teachers must learn to adjust their cues to the proficiency levels of the learner.

Beginning learners. Beginning learners are at a cognitive stage of learning a motor skill. The intent in selecting cues is to give the learner the "whole idea" of the skill or the "gross action" of the skill in as few words as possible. It is not until after the learner has had some experience with the skill that he or she can use more specific information on how to do it. In one sense, that is why environmental design (designing the environment of the task to elicit the movement) for many skills is effective for the beginning learner. Too much analysis destroys the response. Demonstration at this level is also critical to communicate the whole idea.

Advanced learners. Once learners have passed the initial cognitive stage of learning, they move into

the associative stage. At this stage they are expected to be able to concentrate on more specific aspects of the skill. However, the details, like the original cues, should be kept selective and ordered by importance. As always, the cues should be appropriate for the level of proficiency of the learner. When working with more-advanced learners, teachers should avoid the temptation of trying to correct at once everything that is wrong. Even an advanced learner cannot attend to large numbers of cues at one time. With the advanced learner, process-oriented cues are used rather than "gross framework" cues, but the cues must be limited in number all the same.

Age of the learner. Students of different ages have different learning characteristics that should be considered in the selection and organization of learning cues. Although great differences exist between individual students of the same age, recognizing the age characteristics of learners in terms of their ability to profit from different types of cues can guide the teacher's efforts.

Young learners. Two problems should be remembered when working with young learners. The first is that they have less movement experience to bring to a new skill and therefore cannot call up large chains of previously established prerequisite motor responses. It is possible that a young learner will be putting together most of the parts of a complex chain for the first time instead of just combining them in a new way, as an older learner would. The second problem associated with young learners is their undeveloped verbal skills. Most of the terms used in physical education textbooks to analyze skills have little meaning for young learners. The abstract nature of most language used for movement description is not appropriate for learners functioning at concrete levels of abstraction.

Cue selection for young learners at the beginning stages in learning a skill, particularly a complex skill, can take several forms. Young learners are adept at mimicking behavior; that is, they are able to reproduce whole actions with surprising accuracy merely by seeing the action. Therefore, demonstrations that are accurate and overemphasize the critical cues often are useful. Freezing a movement at its critical points to create a visual picture also is helpful.

A second strategy useful with young learners is focusing the learner initially on the whole action and what it should produce, rather than presenting a process analysis of what is happening in the action. Teachers who want to emphasize getting power in a jump can focus learners on "jump as high as you can" rather than on "bending at the hips, knees and ankles and using the arms to drive up to full extension." Another way to elicit the jump might be to use the cue "jump to a complete stretch in the air." The cues used in these examples help the learner to form a visual picture of the whole action.

Environmental design is particularly useful for the young learner. Responses can be elicited by creating an environment requiring the correct response. Overhand throwing patterns are better elicited using the cue "throw as hard as you can" in conjunction with a high target placed just within maximal throwing distance of the student. Tight forward rolls are elicited by short spaces between equipment or by the cue "roll as slowly as you can." Young volleyball players are encouraged to "get under the ball" by a high net rather than a low one.

Young learners can focus on refining cues after experience with the gross action. At this point, the whole response does not need their attention and they are able to attend to more specific cues in future performance. If students are still not performing the gross action with consistency, the teacher must go back and find cues that will communicate to learners the intent of the task. If some consistency in performance has been attained, the teacher can move on to focus the learners on what is happening in different aspects of performance to refine the learner's response. However, the number of cues given to the learner must always be few, accurate, and at a next stage in refinement. Observation of many effective teachers with young children has shown that the focus of follow-up refining tasks is narrow.

Older learners. Many times older learners already have an idea of their ability to succeed or fail with a task based on their past performance with the same or a related task. If the learner has not been successful with the task in the past, motivation to learn it again in the present may be decreased. Additionally, movement responses needed for successful perfor-

mance may have been learned and practiced incorrectly for a long time. Changing established patterns is difficult.

However, older learners have increased ability to profit from verbal communication. Many words meaningless to young learners may be used with older learners. An older learner can call up chains of motor responses without paying attention to every aspect of the response. Previous experiences with similar motor responses help the older learner select the right cues from a movement environment.

Many teachers continue to "overload" the information-processing system, particularly of older learners, by presenting far too many cues to performance. The phrase "paralysis by analysis" rings true. A useful exercise for teachers is to reduce the number of initial cues they present to a maximum of four and then see if they can list which cues they think are going to be needed at higher levels of task refinement. Older learners in many school situations may not have acquired fundamental ability; therefore, the teacher cannot count on these being present. For students who have not been successful in the past, the teacher must take care to design tasks that ensure success in a reasonable amount of time. Although it is possible to learn even rather complex skills through a completely random process of trial and error, one of the teacher's jobs is to shorten the time it takes to learn. Teachers can do this if they select cues wisely and attend to the limited information-processing abilities of students. Older learners have different problems and different resources, but a beginning learner, whether young or old, is still a beginning learner. Many of the approaches described previously for the younger learner are appropriate for an older learner who is a beginner.

Good Cues Are Appropriate for Different Types of Content

The type of learning cues the teacher uses should vary with the kind of content being presented and the specific task. Motor content may be a closed skill, an open skill, or a movement concept. When establishing progressions for each of these content areas, the teacher will use a variety of tasks requiring different types of cues. Three types of cues are presented in box 5.5.

BOX 5.5

Cues for Different Kinds of Content

Cue for the response

Gives the learner information on the process of the movement.

Task: Chest pass to a stationary partner.

Example: Place your feet in a forward stride position.

Cue for adjustment of the response

Gives the learner information on how to adjust a movement response to a different condition.

Task: Dribbling a basketball against a defensive player.

Example: When being closely guarded, keep the dribble close to your body.

Cue for the use of a response

Gives the learner information on how to use a movement in a particular situation.

Task: Passing a basketball to a player on the move against defense.

Example: Pass the ball ahead of the moving receiver; get rid of the ball quickly; pass the ball from the level at which it is received.

These three types of cues are largely representative of the different types of motor content we teach in physical education. Discussion of cues for closed skills, open skills, and movement concepts follows.

Cues for closed skills. Most people's mental image of teaching physical education is usually that of a teacher explaining and/or demonstrating a movement to be reproduced by the learner. The teacher's role in such situations is to translate movement into verbal and visual pictures for the learner in ways that organize cues and facilitate the student's development of a motor plan. The student's role is to reproduce the desired response.

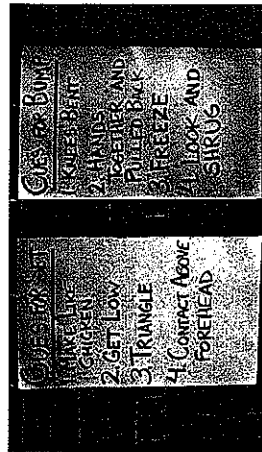
The selection of cues for closed skills consists largely of cues for the response that create visual pictures of the critical elements of the skill. When working with closed skills, many effective teachers demonstrate a movement by freezing critical spatial aspects of the movement and drawing attention to body-space relationships and to the movement processes that move the body from one position to the

next. The phrase "scratch your back" is an effective cue, used to describe the position of the racket head before the forward swing in the tennis serve.

Teachers can facilitate the accurate reproduction of closed skills by vividly sequencing the action of the skill with a few descriptive terms. If the teacher can use these cues in a way that also communicates the dynamic qualities of the movement (including the rhythmic quality of the movement), the motor plan of the student is likely to be more accurate. An example of rhythmic sequences is the cue "hand-hand-foot-foot" used for the cartwheel. Many skills can be sequenced rhythmically to provide another dimension that adds accuracy to the learner's motor plan.

Cues for open skills. The specific type of response for an open skill changes with the environment in which the skill is performed (e.g., dribbling a soccer ball is never the same in all conditions). Most teachers begin by teaching an open skill in a closed way. Teachers will often reduce the complexity of the environment for the beginning learner almost to the point of that necessary in practicing a closed skill (e.g., demonstrating how a skill will be performed without using the ball; practicing batting using a batting tee; practicing a layup shot from the same spot without any interference). When practice of an open skill approximates closed skill practice, cues can be similar to those given for closed skills. However, practice should not remain in closed skill conditions for a long period.

When an open skill is practiced in a changing environment or a closed skill is practiced in a different



Cues facilitate cognitive understanding of a skill. (Photo by Michael Gelfand-Grant.)

environment, the type of cues needed changes from cues about the performance of the response to cues concerned with adjusting the response to meet changes in the environment. The cues used should reflect the specific environmental conditions to which the learner is being introduced.

EXAMPLE:

The throw pattern in a baseball game changes according to how the throw needs to be made, how quickly the throw needs to be made, and the direction of the throw relative to receiving the ball.

EXAMPLE:

The golf swing changes when using a wedge to get the ball out of a sand trap.

As each of the conditions mentioned is introduced, the learner should be focused on how to appropriately make the change in the throw pattern or golf swing to be successful.

Perceptual cues are critical to open skills—cues that guide the learner not in the performance of the movement action, but in the appropriate selection of an action for the given situation. The ability to perform the action required as an appropriate response is

assumed by the time learners get to complex environments.

The changes in the type of cue that becomes useful in complex environments are illustrated in table 5.1, which describes the development of the basketball dribble through four stages of skill development. If the cues used for the sample task provided are studied, a change from cues for how to execute the dribble to cues for how to use the dribble in increasingly complex game situations can be seen.

The information learners receive in the form of cues should be the content of teacher feedback to learners on their performance. If teachers must continually focus students on cues more appropriate to earlier stages of skill development, the lesson they are currently teaching may be too difficult. In such cases, it would be wise to return to earlier stages of skill development.

EXAMPLE:

If students are playing two-on-two in basketball and the teacher's feedback is still on how to execute the dribble or how to execute the pass, students are probably not ready for two-on-two basketball. The cues for two-on-

TABLE 5.1

Changes in the appropriateness of cues for the basketball dribble

Stages in games play development	Sample task	Appropriate cues
One	Dribble the ball at different levels in your own space. Travel with the ball in different directions.	Use pads of fingers and push ball down to produce force. Change contact point on ball to produce different directions.
Two	Dribble the ball to a wall, pass it, receive it, and continue dribbling to a new wall; stay moving the whole time.	Pass at an angle to a wall to lead the ball so that it can be received on the move. Make smooth transitions between dribbling and passing, passing and receiving, and receiving and dribbling.
Three	Play one-on-one offense against defense with offense dribbling and defense trying to touch the ball.	Keep body between ball and the receiver. Change hands. Maintain eye contact with the defense.
Four	Play four-on-four full court basketball.	Do not dribble if a teammate is open ahead. Use the dribble to allow a teammate to get open.

two basketball should primarily involve strategies and what to do in offensive and defensive relationships.

Cues for movement concepts. The types of tasks presented in the development of movement concepts are so varied that precise guidelines are difficult to specify. Two common types of tasks used in developing concepts are illustrated in box 5.6.

When teachers ask students to choose a response within a concept, they usually attach limitations to the students' choices. These limitations serve as cues to guide the students in selecting appropriate responses. In the examples given for choosing a response, the limitation in the first task is "three parts of your body." In the second task the limitation is "changing your direction." The limitations that the learner must attend to as cues when selecting a sequence must be few in number. It is not uncommon to hear elementary physical education teachers ask students to

BOX 5.6

Common Tasks Used in Developing Concepts

Choose a movement response within a concept

Example tasks:

Balance on three parts of your body
Travel in different ways changing your direction
Design three exercises for developing hamstring flexibility

Problem solving to determine movement principles

Movement tasks:

Where should the weight be when you finish the forehead stroke?
Design a strategy for defending the goal rather than the player.
Determine the best stance for a ready position in a sport.
Determine where to contact a ball to put different spins on the ball.

change their level, direction, and speed as they travel. Students, even adults, cannot attend to this number of cues.

When teachers ask students to apply principles to a movement response or to discover principles from their movement responses, cues should function to give the learner a strategy for solving the problem. In the examples given for applying a concept, the teacher has asked students to focus on the transfer of weight from the back foot to the front foot in the tennis forehand. A useful cue for the students might be to "focus on where your weight is after you have finished your swing." In the second task, a useful strategy for designing a defense might be to "try placing your defensive players at different spots under the goal."

In both examples it is necessary for students to know the concept words being used before being asked to work with them. Ideas such as balance, travel, weight, and strategy for defense must be clearly defined.

Cues are More Effective If They Are Organized and Learners Have the Opportunity to Rehearse Them

Students are more likely to be able to use cues if the cues are organized sequentially for them and if they have the opportunity to rehearse the order in which the cues will be performed. Complex tasks that require more description are presented more clearly if the teacher takes as a cue a descriptive phrase, reduces it to a single word, sequences the cue words for the learner, and then gives the learner an opportunity to rehearse the learning cues. When teachers do this, they are using summary cues. The following examples of the sequencing of summary cues for different kinds of tasks illustrate their use:

Bowling: "push away-extend-swing back"

Rising and sinking: "rise turning-sink twisting"

Traveling and balancing: "travel-balance-travel"

Floater serve: "toss-back-extend-stop"

The use of summary cues allows the learner to practice the order of complex skills without having to remember lengthy descriptions of how each phase of the movement should be done. Most teachers learn

through trial and error which words are most effective in eliciting desired movement responses from students. Perhaps someday, experienced and effective teachers can share in more formal ways what has worked for them. Meanwhile, inexperienced teachers should spend time preparing and designing word cues for students and putting them into a summary sequence.

A teacher trying to get young children to achieve flight off a piece of apparatus and land with a soft landing might have several alternative word cues. Initially, the teacher might consider action words such as *jump* and *land*. These words sequence the action, but

they do not cue the leader to the quality of the movement desired. They are hollow in their communication abilities. Alternative cues to "jump" and "land" are "spring-extend-squash." These cues, put in sequence, communicate a great deal more.

Summary cues do several things for learners and the teacher. They highlight the significant aspects of a movement, which helps learners remember and form visual pictures of what they are trying to do. They sequence actions for learners and can also provide a rhythmic cue if chosen carefully and expressed dynamically. Summary cues can serve also as observational cues for the teacher and establish a common language for teacher feedback.

Summary cues summarize information presented to the learner at another time. The cues are effective only if they are meaningful to the learner and have the same meaning for both learner and teacher.

Box 5.7 provides the teacher a checklist of the characteristics of a good task presentation. Good teachers cannot always be as clear as they want to be. However, with practice, teachers can make clarity in task presentation a part of their teaching repertoire.

SUMMARY

1. Students must be attentive if they are to profit from a task presentation.
2. Clarity of communication is assisted by attending to the factors that aid communication between people.
3. Verbal communication, demonstration, and the use of media materials are the most common forms of task communication. Each has its advantages and should be used with attention to guidelines for its effectiveness.
4. Critical features of a skill are selected to be the most important information on how to do a skill.
5. A learning cue is a word or phrase given to a performer that identifies and communicates the critical feature of a movement skill or task. Good cues are accurate, critical to the task being presented, few in number, and appropriate to the age of the learner and the stage of learning.

BOX 5.7

Teacher Checklist for Task Presentation

1. Do I have the attention of the students?
2. Have I included a set induction for the beginning of the class?
3. Is my presentation sequenced in logical order?
4. Have I presented both examples and nonexamples?
5. Have I personalized my remarks?
6. Have I repeated things that are difficult to understand?
7. Have I related new material to previous experience?
8. Have I checked for student understanding?
9. Is my presentation dynamic?
10. Does my demonstration:
 - Use students?
 - Use proper organizational aspects of practice?
 - Emphasize important information?
 - Provide information on why a skill is performed a certain way?
11. If I am using media, have I prepared in advance?
12. Are my learning cues:
 - Accurate?
 - Appropriate for the content?
 - Appropriate for the age and ability of the learner?
 - Condensed to effective word cues?
 - Summarized and sequenced?
13. Have I separated the organization and content aspects of my presentation?

6. Cues that sequence the action and communicate not only the action but also the movement quality of the action assist the learner in developing a more accurate plan for the task.
7. Organizational aspects of a task should be separated from the content dimensions of a task.

CHECKING YOUR UNDERSTANDING

1. What are some major causes of student inattention? How can the teacher best prevent inattention?
2. What are some things teachers can do to improve communication with learners in task presentation?
3. What are guidelines for using demonstration effectively?
4. What are the advantages and disadvantages of media materials?
5. What are the characteristics of good learning cues? Design a set of learning cues you would use with young beginning learners and then for older advanced learners for a closed skill, open skill, and movement concept.
6. What focus can be used if young students doing a vertical jump are not obtaining adequate flexion, are not using their arms as much as they could, and are not getting full extension? Why would this focus be effective?
7. What are organizational signals? Where are they most necessary in a physical education class?

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