Writing Program Objectives Part 2b

Prompt Systems¹

First instances of a new behavior can be effected by teacher assistance known as prompting.

¹ Sternberg et al. (1994). Individuals with Profound Disabilities: Instructional and Assistive Strategies. (3rd ed. pp. 300-303). Austin, TX: PRO-ED.

Prompting

When instructing a new behavior, an immediate problem will occur after delivery of the instructional cue for performance if the learner does not respond.

This is to be expected when asking a learner to perform a response that is not part of his or her behavior repertoire. Skinner (1968) referred to this as the "problem of the first instance."

This first instance must be occasioned so that it can be reinforced to increase the probability of continued performance, so that an incorrect response can be corrected, or so that an approximation of the response can be shaped.

First instances of a new behavior can be effected by teacher assistance known as prompting.

A prompt may be placed in relation to different components of a trial.

Various antecedent prompts can augment the antecedent event(s), and various response prompts can be paired with the instructional cue to assist response performance.

Antecedent prompts

Antecedent prompts are alterations of, or additions to, the instructional material to focus learner attention on the natural cue(s) for making correct responses. There are a number of categories of antecedent prompts, including relevant feature prompts, proximity prompts, context prompts, errorless prompts, and modeling.

Relevant Feature Prompts

Relevant feature prompts are those by which the teacher "cues" the feature of the task materials on which the learner should focus to make the correct response.

Use of this procedure teaches the learner to distinguish the features that define a correct response.

The teacher may use various means, such as color, size, and shape, to focus or prompt the learner's attention by highlighting the relevant feature. For example, if the learner is being instructed to discriminate a spoon from a fork, the relevant feature of the spoon is the bowl portion, and of the fork, the tines.

In teaching this discrimination, these are the places the antecedent prompt should be placed, instead of the handle (e.g., the bowl and tines could be of different colors).

In teaching a learner how to put on a sweater or T-shirt, the prompt for determining front from back should be placed on the label at the back (e.g., a brightly colored ribbon). A typical scenario in the use of relevant feature prompts, as with all prompts, is to eventually fade them so that the natural cue (e.g., the label of a shirt) will indicate to the learner what behavior to exhibit.

Proximity Prompts

Proximity prompts are employed by varying the placement of materials on the instructional plane (Lovass, 1981). If the learner is being taught the spoon-fork discrimination (with fork the correct response), during initial training trials, the two materials might be placed on the table such that the fork is immediately in front of the learner, with the spoon several inches above it.

Over trials, the distance between the two materials would be reduced until they were finally presented in parallel fashion.

Context Prompting

Context prompting is presentation of instructional materials in an array as similar as possible to that in the natural setting. For example, if the learner is being taught "fork," the array within which the learner should learn to select the fork is one containing a fork, spoon, and knife (e.g., a utensil tray in a cafeteria, as this is the array from which he or she must select the item in the natural environment).

Errorless Prompts

Errorless prompts are exaggerated, external, and basically irrelevant cues that dramatically draw the learner's attention to the correct response. For example, in the spoon-fork discrimination ("fork" being the correct response), a large sheet of colored paper might be placed under the fork as trials are conducted.

Once the learner stabilized correct responding, the size of the errorless cue would be reduced over successive trials or sessions until it was removed altogether.

Modeling Prompt

A modeling prompt is when another individual, such as a teacher or peer, demonstrates the behavior to allow for learner imitation.

For example, the learner might watch the teacher put toothpaste on a brush and then be asked to imitate the process.

For modeling to be effective, a teacher should follow some basic guidelines (Baer, Peterson, & Sherman, 1967; Bandura, 1969; Parton, 1976). • First, one must gain the learner's attention before presenting the model.

• The instructional cue for learner imitation should be a simple generalizable cue, such as a gestural or verbal "Do this." • During modeling, the learner must have a clear view of the demonstration, and must be made aware of the position of any materials and how they are applied or handled.

• The pace of the demonstration should be such that the learner can clearly discriminate the order and interdependence of each step.

• When initially modeling a series of actions, the individual should keep the length or complexity short and simple; extensions may be added as successful imitations occur. • Finally, when directionality of the response is important, both the teacher and the learner should face the same direction.

Effective antecedent prompting is characterized by the following guidelines:

• Prompts should focus individuals' attention on the natural cue, not distract from it.

• Prompts should be as weak as possible.

The use of strong prompts when weak ones will do is inefficient and may unnecessarily prolong instruction. • Prompts should be faded as rapidly as possible.

Continuing to prompt longer than necessary may result in artificial dependence on the prompt rather than on natural cues. Abrupt removal of prompts, however, may result in termination of the desired behavior.

Fading is conducted by progressively and systematically providing less frequent intrusive or intense prompts over the course of instruction. • Unplanned prompts should be avoided.

A teacher may be unaware that learners are being prompted by facial expression or focal inflection (Alberto & Troutman, 1990). Consider the example of a teacher involved in teaching a learner to select a fork.

The teacher may be unaware that his or her facial expression, as the learner's hand approaches the correct or incorrect utensil, may be prompting the learner's correct selection rather than the shape of the utensil.

Response prompts

Response prompts are types of assistance for actual behavior performance.

They require the teacher to assist the learner in the act of producing the response.

There are at least five types of response prompts: full physical prompts, partial physical prompts, model prompts, gesture prompts, and verbal prompts.

Full Physical Prompts

Full physical prompts provide total guidance to the learner.

The teacher actually puts the learner through the entire behavior, thereby providing assistance for each movement necessary for successful performance.

Partial Physical Prompt

A partial physical prompt is physical assistance to initiate or provide direction for performance.

As soon as the teacher feels the learner engaging in the response, the assistance is terminated.

Model Prompt

A model prompt is a response prompt when its purpose is to occasion coactive imitation by the learner.

The procedure is implemented to increase a learner's ability to imitate a response when given a concurrent (continuing) model presentation.

Gesture Prompt

A gesture prompt is a gesture to signal response initiation, as in pointing to or tapping the target instructional material(s).

Verbal Prompt

A verbal prompt is assistance provided beyond the initial verbal instruction (e.g., encouragement ["You are doing fine." "Keep going."]; hints ["You put it on your foot."]; or questions ["How do you turn on the radio?"]) which further stimulates learner consideration and interest, or provides information for learner initiation and performance of the response.

A verbal hint is also referred to as an indirect verbal prompt.

Systematic Use of Response Prompts

A systematic use of response prompts should be employed to provide consistent assistance to learners.

Guidelines for their systematic use have been proposed for both single prompts and coordinated use of various prompts, when it is necessary. One systematic use of a single response prompt is known as the time delay procedure.

The systematic use of multiple response prompts may be seen in the system of maximum prompts, the system of least prompts, and graduated guidance.

Systematic use of a single prompt

When a teacher works with a learner to instruct a skill, he or she may give an instruction such as "Michael, pull up your pants," and then wait for the learner to perform the response.

After waiting, if the learner does not respond, the teacher should help him perform the task.

The time delay procedure is an approach to systematizing the amount of time the teacher waits before providing assistance.

If the skill being taught is completely new to the learner, the teacher may begin the instructional session at a zero-second delay: The teacher gives the instruction and the prompt simultaneously.

In that way, the learner learns to associate the verbal instruction and the nature of the response called for.

After several repetitions at zero-second delay, or simultaneous presentation, the teacher begins to give the learner time to respond before he or she administers any prompt.

The teacher then systematically increases the length of delay between the verbal instruction and the assistance. This is known as progressive time delay.

Systematic Use of Multiple Prompts

To use the system of maximum prompts, the teacher begins by providing the learner with the most assistance possible.

Gradually, the amount of assistance is reduced. The amount or intrusiveness of the prompt is faded as the learner's independence increases over sessions.

For example, instruction begins with a full physical prompt where the teacher physically assists the learner through the entire response while restating the instruction. The teacher performs the task hand-in-hand with the learner, providing errorless practice.

After one or more sessions of full guidance, the teacher reduces the amount of assistance by employing a partial physical prompt.

After sessions in which the learner can successfully respond with a partial physical prompt, the teacher reduces his or her level of assistance to the use of a less controlling prompt, such as a gesture or verbal instruction.

The goal is for the learner to perform the response without any assistance when given an instructional cue.

System of Least Prompts

The system of least prompts operates from the opposite perspective. Instead of beginning instruction with the greatest amount of assistance, the teacher begins by providing the learner with the least amount of assistance necessary.

The learner is provided the opportunity to perform at his or her highest level of independence on each occasion before assistance is increased within a trial (Doyle et al., 1988). For example, instruction begins with a presentation of the materials and a request for the response.

If the response is not initiated after 3 to 5 seconds, the teacher increases the amount of assistance in a sequential manner (e.g., from providing only the instructional cue to providing the cue plus a gesture simultaneously).

If the increased prompt is still insufficient to occasion the response, the level of assistance is increased to a partial physical prompt, and so on, until the response is made by the learner or until the teacher makes use of the most assistance possible, a full physical prompt.

At each subsequent request (trial) for the response, the teacher again begins at the instructional cue and progressively increases assistance as needed.

Response prompting systems are most often used in teaching activities that require a motor movement, such as dressing, vocational tasks, play tasks, and other tasks that involve material manipulation (as in sorting by size or color) or material selection to indicate receptive language skills. Although the two prompting systems have common elements, there are several practical differences in their application.

As noted, when using the system of maximum prompts, each teaching session is conducted at one assistance level, but in subsequent sessions the assistance level is decreased.

In the system of least prompts, each opportunity for performance (trial) begins at the level of instructional cue, regardless of how much assistance was required on the previous trial. As maximum prompts initially provide greater physical assistance by the teacher, they are thought to be most appropriate for use during the acquisition stage of learning.

Decreasing assistance provides more intensive instruction at an earlier point in time, thereby minimizing errors and reducing time between the instructional cue and the learner response (Schoen, 1986).

The least prompts procedure is thought most useful at higher levels of learning, such as fluency and generalization (Csapo, 1981).

Graduated Guidance

Graduated guidance, or constant contact, provides an amount of physical contact by the teacher that is necessary for the learner to correctly complete a response (Foxx, 1981). The amount of physical assistance given can be adjusted throughout the trial depending on the learner's performance.

The use of a graduated guidance strategy has been found to be effective in a number of skill areas, especially motor skill development (Reid et al., 1991).

Graduated Guidance

There are three components of graduated guidance.

The first is full graduated guidance.

During this procedure, the teacher keeps his or her hands in full contact with the learner's hands. The teacher puts the learner through the entire behavior until the learner offers no resistance to the movement, or begins to initiate the movement on his or her own. At this point, partial graduated guidance is offered. This may be done in one of two ways.

The full contact by the teacher may be moved up the learner's arm, to the wrist, then the elbow, then the upper arm, and finally to the shoulder.

In the second method of partial graduated guidance, the teacher uses only his or her thumb and forefinger on the learner's hand or wrist to assist in movement (Foxx, 1981).

Again, guidance is given by the teacher when resistance to movement is felt.

In both methods, the learner begins to take more responsibility for the actions.

If the action is not initiated by the learner, if resistance is felt, or if an incorrect action is started, the teacher may return to full graduated guidance. Once the learner is reliably performing the behavior with the least amount of partial graduated guidance, the teacher may use shadowing.

With this procedure, the teacher does not touch the learner. Rather, the teacher keeps his or her hand within an inch of the learner's hand throughout the trial until the behavior is completed. Therefore, if assistance is needed, it can be easily provided.

As the learner continues to perform the behavior, the teacher may move further away, thereby allowing for more independent movement. With any response prompting system, the goal of instruction is for the learner to comply with the instructional cue when presented by the teacher.

Such a goal, however, can result in a learner who still relies on the teacher for initiation and/or correction of his or her performance.

Although response to a teacher-delivered cue may be appropriate in certain situations, such as the classroom or community, it does not provide sufficient independence for adolescents or adults.

True independence is the ability to respond to cues that occur naturally in the environment that signal the learner to perform a particular behavior or that indicate that a behavior is being performed incorrectly.

For many learners with disabilities, however, the extent of educators' current knowledge of instruction is such that the learners may be unable to perform certain behaviors or series of behaviors independent of additional cueing.

One solution is the use of partial participation (Baumgart et al., 1982; Ferguson & Baumgart, 1991).

Partial Participation

Many learners with profound disabilities will be unable to perform specific steps of a task.

Using the principle of partial participation, a learner would be encouraged to participate in the display of the step(s) in any manner in which he or she is capable. The full demonstration of the step and overall task, however, would be accomplished by the teacher. The teachers might use full physical guidance with the learner, or perform the remaining components of the task.

For many learners with profound disabilities, partial participation will not involve an actual display of a motor component of the step(s), but rather basic developmental skills associated with the step(s). For additional information on basic developmental skills, refer to the "Profound Disabilities" presentation.

References

¹ Sternberg et al. (1994). Individuals with Profound Disabilities: Instructional and Assistive Strategies. (3rd ed. pp. 300-303). Austin, TX: PRO-ED. Send us your comments or questions to fsb@dhw.idaho.gov