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Application of Response Prompt Strategies in Training Students with Intellectual Disabilities and Associated Conditions

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Abstract

The ultimate goal of education is to teach students, to reach fullest potential for successful and independent functioning in the community and its true with special education too. Persons with Intellectual Disability can be trained in functional skills, which are to be used in the community.

There are substantial body of research in relation to effective teaching such as prompting, shaping, modelling etc. The response prompting strategies are error less teaching methods which includes most to least prompting, least to most prompting, time delay procedure and simultaneous prompting. In the article, different response prompting strategies are discussed focusing on steps involved in it and guidelines to be followed in its application.

Keywords*: Most to least prompting, Least to most prompting, Time delay, Simultaneous prompting etc.*

Introduction

Students with intellectual disabilities and related conditions have limited intellectual ability, which hinders learning new skills or carry out the ones they have already learnt correctly. There are numerous instructional methods being utilized for such children such task analysis, shaping, chaining, modelling, reinforcing etc., one of them is prompting.

Prompting is the process of actively assisting pupils in learning a desired behaviour. Prompts are of various types such as physical prompt, verbal prompt, modelling, visual prompt, positional prompt and cluing. For completing a task some students require physical guidance such as hand –over-hand assistance. Physical prompts are used at the beginning of teaching new behavior. Certain children might simply require verbal statements describing every steps of the behavior that is required to be performed to be able to complete that task

Modelling prompts entails acting out the desired action so that pupils may copy it. Some students may need visual aids like pictures, schedules or written instructions to provide additional support. Positional prompts involve placing objects closer to students to encourage interaction. Some students just need verbal cues (like "open," "zip," "push," etc.) or visual cues (like pointing signals) to assist them in doing actions. Response prompts and stimulus prompts are the two categories of prompts used in applied behaviour analysis, each with a distinct function or goal.

Stimulus prompts are a type of visual prompt where the cue is built into the stimulus. Some examples include exaggeration of the size or color, modifying the location, where as in response prompts are presented in addition to the instruction or cue to evoke correct responding. It includes verbal prompt, modelling and physical prompt. Response prompts are often more intrusive than stimulus prompt

This article focuses on application of response prompting strategies in training children with intellectual disability and associated conditions

Different response prompting strategies

A set of protocols based on applied behaviour analysis comprise response-prompting methods. These are systematic strategies used to increase the probability of correct responding and opportunities for positive reinforcement for learners by providing and then systematically removing prompts. Response prompting is also known as error less learning because teaching using these procedures usually results in few or no errors. Response prompting strategies aim to fade, or shift stimulus control from the prompt to the intended

discriminative stimulus.It is often done using a most-to-least strategy, least-to- most strategy, time- delay and graduated guidance.

Most-to-Least Prompting:

To guarantee that students receive the right response and reinforcement while simultaneously decreasing errors, it entails teaching a skill starting with the most invasive prompt.

The intrusiveness of the prompts are then systematically faded across trials if learners is demonstrating success (Gast, 2011). The following are the suggested actions to successfully apply most-to-least prompting

- Identifying and specifying the desired behaviour
- Selecting the stimuli that will cause the person to respond
- Selecting how many prompt levels to add to the prompt hierarchy
- Selecting which types of prompt to add to the hierarchy of prompts
- Ordering the prompt types from those requiring more control over the individual behavior to those requiring less control.
- The response interval time
- Determining the criterion for transitioning to the prompt that require less control over individual behavior.
- Determining the necessary evaluation plan to the individual‘s performance in the teaching sessions where prompt requiring less control over individual behavior is presented.
- Determining how the individual will respond to his/her reactions
- Determining and applying the data recording method and record keeping.

Guidelines for using Most – to-least prompting strategies:

Libby et al 2008 has suggested following guidelines for using Most- to –least Prompting strategy-

- The highest results are obtained with youngsters who have uncertain learning backgrounds and intellectual disability.
- This teaching procedure is preferred if errors are impeding child’s learning or increasing their problem behavior
- To make sure that mistakes don't impede learning, progress should be regularly reviewed.
- The prompting strategy need to be customized for each student.

The most- to – least Prompting procedure is used effectively in teaching self-care skills (Aykut & Varol, 2010, Aykut, 2012,safety skills (Batu et al 2004, fine-motor skills (Cengher et al 2016), leisure skills (Jerome et al 2007, Kurt & Cuhander 2018), and communication skills (Leaf et al 2016b) to individuals with intellectual disability. However, it has some limitations like -

- Regular evaluation is necessary to ascertain the kind of prompt that a learner need.
- Prompt reliance may arise if cues are not gradually and methodically removed.
- When switching from more intrusive to less intrusive prompts, there are no precise criteria in place.

Least –to- Most Prompting:

- The least –to-most prompting procedure is also known as system of least prompt, system of increasing assistance. Both discrete and chained tasks can be employed with this process.
- This process ensures that the initial level of the hierarchy is constantly autonomous and devoid of cues.

Furthermore, the subsequent levels are arranged in ascending order of degree of assistance. Neitzel & Wolery's (2009) proposed actions for implementing least-to-most prompting effectively are as follows:

- Determining and defining the target behavior
- Determining the stimulus to be given for the individual to react
- Selecting rein forcers
- Deciding how many prompt levels the prompt hierarchy should have
- Deciding which kinds of cues to employ
- Ordering prompts from least to most assistance
- Establishing length of the response interval.
- Implementing the intervention with establishing the learner at tention
- Watching for the student's response
- Responding to learner’s attempt
- Monitoring learner outcomes

Guidelines for using least-to-most prompting:

Less-to-Most Prompting might be the better option for children who have demonstrated quick learning with this method.

Wait time for students are essential. If wait time are not allowed, students may have needed more prompts and it will take away opportunity for their responding correctly.

- Collect data related to level of prompt used.
- Use high-powered rein forcers.

The Least- to – Most Prompting procedure is used effectively for teaching various types of curricula (Doyle et al., 1988, Wolery et al., 1992, Collins, 2012; DiCcarlo et al. However, it has some limitations like

- It is time consuming and
- It gives opportunity for errors.

Time delay procedure:

Time-delay techniques aid students in learning new skills or behavior by gradually reducing the amount of assistance provided. It is of two type: progressive and constant. With progressive time-delay, teacher gradually

increase the waiting time between instruction and any prompts that might be utilized to elicit response from learner. With constant time-delay, there is no delay between the instruction and prompt when a learner is first learning a skill. However, fixed amount of time is always used between instruction and the prompt.

In the both procedures, two types of trials 0 seconds and delay trials are used. Zero seconds trials are identical in both procedures and differ only in how the delay trials are used. The controlling prompt is delayed for a predetermined amount of time—typically five seconds—when using a constant time delay approach. These trials are used until the learners master the skill. With progressive time delay procedure, the reaction time between the presentation of the target stimulus and the controlling prompts gradually increased over sessions.

According to Neitzel, J., & Wolery, M. (2009), the following actions are advised for the successful execution of the time delay process:

- Determining and defining the target behavior
- Determining the current skills like waiting, imitating, following direction etc.
- Determining the cue, the target stimulus, or the task's direction.
- Choosing the controlling cue that ensures the student carries out the desired behaviour accurately
- Selection of appropriate reinforces.
- Finding the reaction/ response interval
- Establishing learner attention, delivering the stimulus and giving the cue for implementing time delay.
- Monitoring progress

Guidelines for using progressive time delay:

- Start with zero seconds, no time delay, so that student is able to respond.
- Increase the delay gradually
- Individualize the delay based on child's processing time.
- Provide strong rein forcers.
- Monitor student progress

Guidelines for using constant time delay

- Start with 0-second trials
- Use delay trials for rest of instruction, say 5 seconds
- Monitor student progress

Multiple studies have demonstrated the efficiency of Progressive and constant time delay. Students with reading difficulties have been taught letter discrimination through social behavior during instructional sessions to students with autism (Ledford & Wehhy, 2015), and food and drink preparation to students with autism (Tekin-Iftar & Birkan, 2010). Similarly, many studies have demonstrated its effectiveness with children with intellectual disability. Children with moderate intellectual disability were taught tea preparation (Kumar, S., & Kumar, D. 2022) and folding of trouser and washing of hands (Kumar, S. 2023) successfully.

The most frequent skill category taught using constant time delay procedure was leisure and recreation, food preparation, purchasing skills, gift-wrapping, motor, vocational skills and swimming (Dogoe & Banda, 2009). How ever time delay procedure have few limitations such as:

- It is long and time consuming
- It requires professional expertise.

Simultaneous Prompting:

One relatively recent errorless learning response prompting technique that has been shown to be successful in teaching students with and without impairments how to master both discrete and chained tasks is simultaneous prompting. Gibson and Schuster (1992) reported that this procedure emerged when data revealed that students were acquiring target skills during the zero second trials that are conducted during time delay procedure.

Simultaneous prompting requires two different kinds of daily sessions: instructional sessions and probe sessions. It requires only controlling prompt, a prompt needed by learner that ensure task will be performed correctly.

Implementing simultaneous prompting as recommended by Neitzel & Worley (2009) involves the following steps:

- Identifying and defining the desired behavior
- Determining the task direction or target stimulus and cue
- Selecting a controlling cue/prompt
- Selecting reinforcers that are suitable for individual learner
- Determining the length of response interval
- Identifying two regular times during the day when desired skill can be taught and measured
- While intervention establish learner attention and give controlling cue/prompt to learner
- Monitoring learner progress

Simultaneous prompting is used effectively for teaching various types of activities like dressing skills (Sewell et al 1998), hand washing (Parrott et al 2000), and shopping skills (Singleton et al 1999).

Summary

All of the discussed response prompting strategies are evidence-based practices using the criteria. Studies have shown that response-prompting strategies are effective with learners having intellectual disability and associated conditions. They help learners learn new skills more effectively and easily. These strategies have demonstrated efficacy across a range of situations, ages, degrees of severity, and abilities and behaviors (both discrete and chained).

It also facilitates their transition to greater independence by fading assistance gradually.

Numerous studies have shown that it lessens teacher and student frustration. Teachers can modify their approach

to fit the individual requirements and skills of each learner by utilizing response-prompting techniques. As these learning strategies often, require less instructional time to implement than other procedures and have minimum errors. Classroom teachers can use it across various settings. It is crucial for special educators to adhere to the rules when choosing which prompting strategies to utilize because of the range of options available and the flexibility with which they may be applied.

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