Module: **Prompting**

Steps for Implementation: Simultaneous Prompting

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The simultaneous prompting procedure can be used with discrete (single responses of relatively short duration) and chained skills (a number of behaviors sequenced together to perform a more complex skill). The simultaneous prompting procedure requires two types of daily sessions: instructional sessions and probe sessions. It requires only one prompt--a controlling prompt. The controlling prompt is the least intensive prompt needed by the learner with ASD to use the target skill correctly. For some learners, the controlling prompt may be as simple as pointing to the faucet to prompt hand washing, while others may need full hand-over-hand assistance. The controlling prompt is used on all trials of the instructional sessions; however, it is not used in the probe sessions.

Preparing for the Intervention

Step 1. Identifying the Target Skill/Behavior

In Step 1, teachers and other practitioners define the target behavior or skill that they want a learner with ASD to acquire.

1. Teachers/practitioners define the target skill/behavior in terms that are observable and measurable.

For example, "John will increase his language skills" is not an observable or measurable definition of a target skill/behavior. On the other hand, the definition, "John will request more snack by saying, 'More, please' in two out of three opportunities during snack time," allows teachers/practitioners to directly observe the target skill/behavior and measure the learner's progress.

2. Teachers/practitioners identify the target skill/behavior as being either:

    a. *a discrete task*. A discrete task is one that requires a single response. Examples include pointing to objects, identifying letters, naming pictures or objects, reading words, writing the answers to simple math problems, greeting a peer who enters the room, and answering questions.

    b. *a chained task*. Chained tasks require that teachers/practitioners determine (a) the number and sequence of steps in the chain, (b) whether to teach one step at a time, or (c) whether to teach all steps at the same time. Examples of chained tasks include washing hands, making a sandwich, eating a meal, getting dressed, putting on coat, cooking, and transitioning from one class to the next. In general, teaching the entire chain at the same time is recommended.

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Step 2. *Selecting the Target Stimulus and Cue*

In Step 2, teachers and other practitioners identify: (a) the target stimulus and (b) the cue or task direction. The target stimulus is the object, gesture, activity, or situation to which we want the learner with ASD to respond when instruction is finished. The cue or task direction is what informs the learner that some response is expected during instruction. A cue basically tells the learner that it is time to use the target skill. Identification of the target stimulus is a critical part of the planning and implementation process because it helps control the learner's behavior. Furthermore, the cue signals the learner to use the target skills in situations in which the teacher/practitioner is not present or after the skill has been mastered.

EXAMPLES
- When teaching learners with ASD to play, the toy is the target stimulus.
- When teaching the learner with ASD to initiate social interactions, the presence of a peer is the target stimulus.
- When teaching the learner with ASD to read words, the presence of text is the target stimulus.

The cue or task direction also is important in the planning and teaching process because it signals the learner to use the target skill. Often, cues or task directions are verbal statements by the teacher. These statements do not tell the learner how to do the target skill, but they tell the learner that a certain behavior is expected. Target stimuli may be components of an activity, the teacher, peers, or other elements of the natural environment. Cues and task directions often are added to the environment. For example, in teaching a learner to speak to his peers, the target stimulus is the presence of the peer. A cue or task direction may not be used beyond a general reminder at the beginning of the session to "Talk with your friends when you play." When teaching a learner to read words, the words are the target stimulus, but the cue or task direction may be the teacher saying, "What's this word?" Target stimuli should be clear and consistent, so that reinforcement is successfully linked with completing the target skill. Cues and task directions are used to speed up instruction and let learners know that they should do something.

1. Teachers/practitioners identify one of the following as the target stimulus:

   a. *a naturally occurring event.* Examples: Having dirty hands after finger painting is the target stimulus for hand washing; needing to use the bathroom is the target stimulus for asking to use the restroom or moving to the bathroom and using it.

   b. *completion of one event or activity.* Examples: Completing an instructional activity is the target stimulus for putting materials away, cleaning up the area, and moving to the area for the next activity; finishing one job is the target stimulus for doing the next job (e.g., finishing stocking a shelf in the store is the target stimulus for taking the boxes to the trash).

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    c. *an external signal.* Examples: A ringing bell may signal it is time to go to the next class; a work shift is completed in an employment situation; or the clothing is dry and should be taken from the dryer, sorted, folded, and put away.

2. Teachers/practitioners decide whether to use a cue or task direction during instruction.

In most cases, this decision is made based on the type of skill being taught. For many skills, a cue or task direction is not warranted. Examples include a peer initiating an interaction with the learner, someone speaking to the learner, the presence of toys, and so forth. In other cases, a task direction makes teaching must easier and faster. Examples include teaching learners with ASD to name objects or pictures, and read words.

3. Teachers/practitioners choose one or more of the following as the cue that will be used during instruction:

    a. *material or environmental manipulation.* Examples include getting the materials set up and ready before the learner comes to the activity (e.g., setting up tasks for individual work time, setting the table before snack, placing play dough and toys on the table, giving a book to the learner for story time).

    b. *task direction.* Examples include telling the learner to get his coat on to go home, giving a picture card to go wash hands, presenting a flashcard with a sight word on it and asking, "What is this?"

    c. *naturally occurring event.* Examples include a ringing phone, fire alarm, school bus arriving after school, a peer greeting the learner, the glass being empty during snack time, dirty hands after finger painting, an interesting and novel event occurring (spilling milk during snack setting the occasion to say, "uh-oh"), or a peer offering the child a toy.

Target stimuli and cues/task directions should be clear, complete, specific, and aimed at learners' skill and interest levels. For example, a teacher would not use picture cards with a learner who is able to follow verbal instructions. Furthermore, a parent would not tell a child to put on his coat if he is learning how to do this independently. In this case, the coat on the chair would serve as the naturally occurring cue. It is essential that the cue be clear enough that learners with ASD know what they are supposed to be doing during the particular task or activity.

Step 3. Selecting a Controlling Prompt

In Step 3, teachers/practitioners select a prompt that ensures that the learner with ASD performs the target skill correctly. This prompt is referred to as the controlling prompt.

1. Teachers/practitioners try out different prompts to see which ones are successful in getting the learner with ASD to do the task correctly.

The issue is not whether the prompt occasionally gets the learner to do the behavior. A controlling prompt elicits the correct behavior on a very consistent basis – nearly every time it is

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used. In general, teachers and other practitioners should use the least intrusive prompt that is still controlling. For example, if pointing to the sink and saying, "Better wash your hands" is enough to get the learner to start the sequence of washing hands, then that would be better than using a physical prompt. Models are good prompts, but learners must be able to imitate others for models to be effective.

Step 4. Selecting Reinforcers

Step 4 is focused on selecting reinforcers that are appropriate for individual learners with ASD, task demands, and target skills. The goal of reinforcement is to increase the likelihood that the learner with ASD will use the target skill again in the future. Therefore, selected reinforcers should be highly motivating to the learner with ASD.

1. When choosing reinforcers for learners with ASD, teachers/practitioners identify:

    a. what has motivated learners in the past and
    b. learners' deprivation state (i.e., What do they want that they can't easily get?).

2. Teachers/practitioners identify a reinforcer that is appropriate for the target skill and instructional task.

The chosen reinforcer should be as natural as possible. That is, it should be related to the activity that is being implemented. For example, it would be natural for a learner with ASD to get free time or have access to a preferred activity/object after taking part in a challenging, non-preferred learning activity. Another example would be to use food as a reinforcer during food related activities such as snack time or lunch when the target skill is requesting "more" or talking with peers. Two critical things to remember about reinforcers are (a) they are individually determined, and (b) they may lose their power with repeated use.

Some examples of positive reinforcement include:

*   preferred activity/favorite toy (e.g., special job, squishy ball, sand table),
*   free time,
*   verbal praise,
*   food-related activity,
*   opportunities to be away from others,
*   objects used in stereotypic behavior,
*   preferred games and activities, and
*   time with a preferred adult or peer.

Please refer to *Positive Reinforcement: Steps for Implementation* (National Professional Development Center on ASD, 2008) for more information about reinforcement.

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Step 5. Determining the Response Interval

The simultaneous prompting procedure uses two types of regular sessions: instructional sessions and probe (test) sessions. In the instructional sessions, the teacher/practitioner secures the learner's attention, presents the target stimulus and cue/task directions, and then presents the controlling prompt. The prompt is presented before the learner has a chance to respond. After the prompt, the teacher should present a *response interval* for the child to respond. With the probe sessions, the teacher secures the learner's attention, presents the learner with the target stimulus and cue/task directions, and then presents the *response interval.* No prompt is delivered.

In Step 5, teachers and other practitioners consider both learner characteristics and task difficulty when determining the response interval. When using a full physical prompt (i.e., physically guiding the learner to complete the task) during the instructional sessions, no extra response interval is provided. If the learner responds correctly to a prompt, the teacher/ practitioner provides reinforcement (e.g., more juice, "Good job," preferred activity). If the learner does not do the target skill correctly, the teacher/practitioner ignores the response or corrects it and provides the next trial.

1. When determining the length of the response interval, teachers/practitioners consider:

    a. *learner characteristics.* Teachers/practitioners should consider factors such as how long it usually takes the learner to respond when the learner knows how to do the behavior. Adding a couple seconds to this usual time is generally adequate for determining the length of the response interval.

    b. *task characteristics.* Teachers/practitioners might consider how long it takes another learner with ASD to use a similar skill. For example, if it takes another learner 4 seconds to respond to a verbal prompt, then the teacher might try using 4 seconds as the response interval for this particular learner with ASD. Teachers/practitioners also should consider the amount of time a learner will be allowed to *begin* a task as well as how long the learner will have to *complete* the task. For example, a learner with ASD may begin writing his name within 4 seconds of the cue; however, it may take him 2 minutes to complete the task. In this case, setting the response interval at 6 seconds for the learner to start the task, and 2.5 minutes to complete it is reasonable. For tasks that require more than one step (e.g., setting the table, getting dressed, washing hands), teachers/practitioners use the same response interval for each step; however, some skills may require more time than others to complete (e.g., turning on water takes less time than rubbing soap between hands).

2. When selecting a response interval, teachers/practitioners time how long it takes the learner to complete similar skills/tasks.

This information gives teachers and other practitioners a good starting point for the response interval. The response interval for instructional sessions and the probe sessions should be the same to make it easy for the teacher/practitioner to remember.

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Step 6. Identifying Activities and Times for Teaching

Simultaneous prompting can be used during didactic instruction to teach discrete skills (e.g., answering questions, pointing to numerals) in which learning takes place during individual work or small group time. It can also be embedded into ongoing activities to teach such skills. In addition, simultaneous prompting can also be used to teach chained tasks (e.g., putting on coat, washing hands, cooking) that often are embedded within ongoing routines and activities. The selection of activities and materials depends upon the skill(s) the learner needs to acquire. Teachers and other practitioners also should consider using favorite activities or materials during teaching activities to increase motivation. Regardless of whether discrete or chained behaviors are taught, two regular sessions are needed with the simultaneous prompting procedure.

1. Teachers/practitioners identify two regular times during the day when the target skill can be taught and measured.

One time is used for instruction, and one time is a "probe" session, or test session.

2. Teachers/practitioners identify how many trials will be implemented during each instructional and probe session.

This decision is made by taking into account the learner's characteristics (how readily the learner acquires new skills) and characteristics of the skill (how difficult the skill is). In general, more than one discrete skill is taught at a time. For example, if the skill is reading words, then at least two words should be taught at once. At least five trials should occur in each instructional session for each skill. Chained skills are generally taught with total task instruction, meaning all steps of the chain are taught simultaneously as the chain should be done.

The probe sessions often have fewer trials (two or three) per target skill than the instructional sessions. The probe sessions are simply to test (measure) whether learning is occurring. With chained skills, one opportunity to practice the skill each day may serve as the probe session.

Implementing Simultaneous Prompting

Step 1. Establishing Learner Attention, Delivering the Stimulus, and Providing the Cue

1. Teachers/practitioners establish the learner's attention by:

   a. delivering the target stimulus,
   b. using an attention-getting strategy (e.g., saying learner's name, saying, "Look;" having the learner touch the stimulus), and/or
   c. presenting the cue or task direction.

Eye contact is often used as an indication of attention, but other behaviors, such as matching the stimulus, touching the stimulus, or repeating the task direction also have been used. Once

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attention is secured, the teacher/practitioner presents the cue or task direction to let the learner know a behavior is expected from him/her.

EXAMPLE: A teacher says, "David." David looks at the teacher. She presents a flash card with the word "stop" on it (target stimulus) and says, "What is this, David?" while pointing at the flash card.

The teacher behavior used to secure attention was saying the child's name. The target stimulus is the word "stop." The cue or task direction in this example is the teacher saying, "What is this, David?"

Step 2. Implementing the Prompt

During the *instructional sessions* with the simultaneous prompting procedure, teachers and other practitioners immediately provide the controlling prompt to the learner with ASD. During the probe sessions, no prompts are provided.

A. Instructional Sessions

1. After securing attention, presenting the target stimulus, and delivering the cue/task direction, teachers/practitioners <u>immediately deliver</u> the controlling prompt.

In the example used, above, after saying, "David" (to get his attention), showing the word 'stop,' and saying "What is this David?" the teacher would immediately say, "stop" (controlling prompt).

2. If the learner's response is correct (prompted correct), teachers/practitioners immediately provide positive feedback by:

   a. offering reinforcement (e.g., praise, access to materials, break) and
   b. stating what the learner did (e.g., "You said, 'More,.' Here's more snack," "You said, 'Two times two is four.' That's right. Two times two is four.").

3. If the learner's response is incorrect (prompted error) or if the learner with ASD does not respond, teachers/practitioners ignore the response and go on to the next trial.

With chained skills, when errors (prompted errors) occur, the teacher may have to correct the step before moving on to the next trial.

B. Probe Sessions

1. After securing attention, presenting the target stimulus, and delivering the cue/task direction, teachers/practitioners deliver the response interval (no prompt is provided).

In the example used, above, after saying, "David" (to get his attention), showing the word 'stop,' and saying "What is this David?" the teacher would look expectantly at David for him to provide the response.

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2. If the learner's response is correct (unprompted correct), teachers/practitioners immediately provide positive feedback by:

   a. offering reinforcement (e.g., praise, access to materials, break) and
   b. stating what the learner did (e.g., "You said, 'More,.' Here's more snack," "You said, 'Two times two is four.' That's right. Two times two is four.").

3. If the learner's response is incorrect (unprompted error) or if the learner with ASD does not respond, teachers/practitioners ignore the response and go on to the next trial.

When errors occur with chained tasks, the teacher may have to correct the step before moving on to the next step.

Step 3. Monitoring Learner Progress

A key component of simultaneous prompting is collecting data to monitor a learner's progress. This is accomplished by (a) collecting data during instructional sessions and (b) collecting data in the daily "probe" sessions in which no prompts are used. The probe sessions allow teachers/practitioners to evaluate learners' acquisition of skills.

A. Instructional Data

1. Teachers/practitioners collect data daily during the instructional sessions.

Data gathered during instruction tell teachers/practitioners whether (1) the prompt is providing enough support for the learner to do the target skill correctly and (2) the reinforcer is effective. The following table provides an example data sheet that can be used during instructional sessions.

Table 1. Sample Data Sheet for Simultaneous Prompting Instructional Session

Trial	Stimulus	PC	PE	NR
1				
2				
3				
Total #				
Total %				

Key: PC = prompted correct; PE = prompted error; NR = no response

The teacher/practitioner then makes instructional changes using the following decision rules.

2. Teachers/practitioners select a new controlling prompt if the learner makes errors on 25% of the trials over the course of three consecutive instructional sessions.

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Each instructional session includes a certain number of trials. In the sample data sheet above, the instructional activity contains three trials. Two more instructional activities need to be completed before making any changes to instruction.

3. Teachers/practitioners select a different reinforcer if no responses occur on 25% of the trials over the course of three consecutive instructional sessions.

4. If a learner begins to make errors when using a previously mastered discrete skill (e.g., raising hand, pointing to letters), teachers/practitioners make modifications to the initial cue (e.g., using two different types of cues instead of one).

EXAMPLE: A young child with ASD, Nate, has been working on requesting more by saying, "More, please." Marissa, Nate's teacher, has been implementing instructional activities within classroom activities to work on this skill using simultaneous prompting. A planned instructional activity for this skill is snack time. Nate had been consistently requesting more snack by saying, "More, please;" however, for the past two days, he has been grabbing the snack bag on Marissa's lap without asking. Marissa reviewed the instructional data from the past several days and determined that the initial cue might need to be changed because he is consistently using "more" correctly, but only when she prompts him by saying, "What do you want?" while holding up the bag. The new initial cue will be for Marissa to hold up the bag in front of Nate when she notices that he is almost finished with what is on his plate. She hopes that this will be enough of a signal to Nate to use the target skill.

B. Probe Data

Probe data are used to evaluate how learners are acquiring target skills. This is accomplished by implementing sessions without using prompts.

1. Teachers/practitioners implement at least one probe session daily.

The probe sessions allow teachers/practitioners to evaluate learners' acquisition of skills. When no prompt is provided, teachers/practitioners determine whether or not the learner is able to use the target skill correctly without the controlling prompt.

2. Teachers/practitioners identify how many trials will be implemented during the probe session (at least 2 trials on each behavior per probe session).

At least two trials on each behavior should be implemented during each probe session.

3. Teachers/practitioners present the cue, but not the controlling prompt, during the probe session.

EXAMPLE: Using the previous example, Marissa, Nate's teacher, collects probe data by sitting with Nate during free play to determine how well he can ask for "more" without prompts. At a table in the writing center, she conducts a familiar instructional activity without using prompts. She presents Nate with one of his favorite toys, Legos. She places two Legos on the table and

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waits for him to put them together. The remaining Legos are on her lap in a box which she previously selected as the cue. When Nate finishes putting the two Legos together, he grabs for the box without asking. Marissa does not prompt him to use the skill and records on her data sheet that Nate's response was an *Error*. Marissa then puts the Legos back in the box and places two more Legos on the table in front of Nate. She completes five trials to collect sufficient probe data.

The following table provides a sample data sheet that can be used during probe sessions.

Table 2. Sample Data Sheet for Simultaneous Prompting Probe Sessions

Trial	Stimulus	C	E	NR
1				
2				
3				
Total #				
Total %				

Key: C = correct; E = error; NR = no response

The teacher/practitioner then makes instructional decisions using the following decision rules.

4. Teachers/practitioners select a different prompting procedure (e.g., graduated guidance, least-to-most) to use if the following occurs:

    a. learner errors occur on 25% of trials over the course of five consecutive probe sessions *and*
    b. instructional data indicate 100% correct responses.

5. Teachers/practitioners select a different reinforcer if no responses occur on 25% of the trials over the course of three consecutive probe sessions.

6. If a learner omits a step from a chained task, teachers/practitioners modify that step to make it more apparent to the learner with ASD (e.g., using more than one cue rather than one).

EXAMPLE: A target skill for Molly, a middle school student with ASD, is to wash her hands sufficiently before going to lunch. To accomplish this, Molly must check her schedule, walk to the bathroom, turn on the water, get soap, rub her hands together 10 times, get a paper towel, throw the paper towel in the trash can, and check her schedule again. For the past several days, Molly has been washing her hands without soap. The soap is located in a soap dispenser on the wall to the right of the sink. Molly's teacher, Tate, has decided that this may not be an obvious location for Molly. He has decided to get a soap pump which can be placed right behind the warm water handle. His hope is that the soap pump will be more obvious to her, thus limiting the need for any additional prompting for this step to be completed successfully.