

Module: Prompting

**CASE STUDY EXAMPLE:  
Least-to-Most Prompting**

Abby is a 22-month-old toddler with developmental delays who has been identified at high risk for ASD. A speech language pathologist and an occupational therapist each deliver early intervention services to Abby and her family in their home. At Abby’s last IFSP meeting, her parents, the occupational therapist, and speech-language pathologist determined that a priority goal for Abby was to increase her ability to get her wants and needs met by requesting. All members of the team would like Abby to use one-word utterances to request. Currently, Abby has very limited communication skills and often uses nonconventional forms of communication such as grunting to get her needs met. Occasionally, Abby becomes so frustrated because her parents, therapists, and others do not understand what she wants that she begins screaming and crying. The team members have decided to use least-to-most prompting to help Abby reach this priority goal.

Abby’s speech language pathologist, Sally, and the occupational therapist (OT) meet to formulate an intervention. They have already completed the first step in the process by identifying a discrete skill as the target for the intervention: *Abby will use one-word utterances to request assistance, desired materials/foods, and interaction with others.*

After identifying the target skill, Sally and the OT identify the target stimulus. They accomplish this by looking at some of Abby’s daily routines and determining how the target skill could be addressed in each daily routine or activity. They then decide which events, activities, or signals could serve as the target stimulus in each of these contexts. They understand that they need to choose naturally occurring routines, events/activities, or external signals that will cue Abby to use the target skill after the intervention is complete. Table 7 illustrates the target stimuli identified for daily routines and activities.

Table 7. Target Stimuli Identified

Activity/Routine	Target Stimulus	Target Skill: Request using one-word utterances
Play	Preferred toys out of reach	“Toys.”
Bath time	Toy boat out of reach	“Boat.”
Snack	No more food	“More.”

After the target stimuli have been identified for various activities, Sally and the OT select the cues or task directions that will begin the teaching opportunities across the day and will provide Abby with a signal to use the target skill. Sally and the OT identify the following as cues/task directions for the identified routines and activities.

Table 8. Cues/Tasks Directions

Activity/Routine	Target Stimulus	Cue/Task Direction	Target Skill: Request using one-word utterances
Play	Preferred toys out of reach	Abby’s parents or therapists will say, “Time to play, Abby”.	“Toys.”
Bath time	Toy boat out of reach	Abby’s parents or therapists will say, “Time to play, Abby” when Abby gets in the bathtub	“Boat.”

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Snack	No more food	Abby's parents or therapists will say, "I have more snack" when Abby eats the small portion of food on her plate.	"More."
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Sally and the OT also determine the appropriate time to deliver the cue. They decide that they will only provide the cue at the first prompt level during all of the activities. That is, the cue/task direction will be delivered only when the teaching activity is initiated.

The next step is to select reinforcers. Sally and the OT look at each activity/routine where they plan to implement least-to-most prompting with Abby to identify the naturally occurring reinforcers. They also identify what has motivated Abby in the past. After talking about a variety of options, they identify the following reinforcers.

Table 9. Selected Reinforcers

Activity/Routine	Target Skill: Request using one-word utterances	Reinforcer
Play	"Toys."	Receive out-of-reach toys
Bath time	"Boat"	Receive out-of-reach toy boat
Snack	"More."	Receive more snack/juice

Sally and the OT determine that a four-level prompt hierarchy should be used since Abby is just learning how to use the target skill. They anticipate that Abby may need several prompts before she is able to use the skill correctly. The next step is to select the types of prompts to be used in the prompt hierarchy. They decide that gestural and verbal prompts are most appropriate since the target skill is communication-based. They can use gestural prompts to cue Abby to use the target skill (e.g., expectant look, shrugging shoulders and holding out arms as if to say, "What do you need?"). After they have selected the prompt types, Sally and the OT sequence the prompts from least-to-most assistance. Table 10 illustrates the prompt hierarchy that has been created to teach Abby how to request using one-word utterances.

Table 10. Prompt Hierarchy for Abby

Activity/Routine	Target Stimulus	Cue/Task Direction	Prompt Level	Prompt	Reinforcer
Play	Preferred toys out of reach	Abby's parents or therapists will place preferred materials out of reach before free play.	Level 1: Independent	Abby uses one-word utterance to request (e.g., "Toys").	Receive out of reach toys
			Level 2: Intermediate	Gestural: Abby's parent or therapist pushes shoulders up with expectant look as if to say, "What do you want?"	

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			Level 3: Intermediate	Verbal: Abby's parent or therapist says, "What do you want, Abby?"	
			Level 4: Controlling	Verbal: Abby's parent or therapist says, "You want toys. Say, 'Toys'."	
Bath time	Toy boat out of reach	Abby's parents or therapists will say, "Time to play, Abby" when Abby gets in the bathtub	Level 1: Independent	Abby uses one-word utterance to request (e.g., "Boat").	Receive out of reach toy boat
			Level 2: Intermediate	Gestural: Abby's parent or therapist pushes shoulders up with expectant look as if to say, "What do you want?"	
			Level 3: Intermediate	Verbal: Abby's parent or therapist says, "What do you want, Abby?"	
			Level 4: Controlling	Verbal: Abby's parent or therapist says, "You want boat. Say, 'Boat'."	

Activity/ Routine	Target Stimulus	Cue/Task Direction	Prompt Level	Prompt	Reinforcer
Snack	No more food	Abby's parent or therapist will place small amounts of food on Abby's plate so that she must request more food.	Level 1: Independent	Abby says, "More" when she has no more food on her plate.	Receive more snack/juice
			Level 2: Intermediate	Gestural: Abby's parent or therapist pushes shoulders up with expectant look as if to say, "What do you want?"	

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			Level 3: Intermediate	Verbal: Abby's parent or therapist says, "What do you want, Abby?"
			Level 4: Controlling	Verbal: Abby's parent or therapist says, "You want more. Say, 'More'."

After selecting the types of prompts that will be used to teach Abby how to use one-word utterances, Sally and the OT determine how long they will wait before prompting Abby to use the target skill. Because this is a new skill for Abby, they decide that they will wait 3 seconds at each level of the hierarchy before providing a prompt.

When Sally and the OT have finished planning the prompting intervention, they decide to implement it at the beginning of the following week. When Sally arrives for a therapy session on Monday, she demonstrates to Abby's parents how to set up the environment to teach Abby how to use one-word utterances. First, she moves Abby's favorite toys (i.e., plastic animals) from the lowest shelf where she can reach them to a higher shelf that is out of reach but still visible. The plan is for Abby to see them and want them. When this happens, Sally will prompt Abby to request them.

During a therapy session with Abby, Sally models the prompting procedure for Abby's parents. Sally says, "Time to play, Abby." Abby goes to the shelf and looks for the small bin of plastic animals. Sally follows Abby and waits 3 seconds for her to request independently. When Abby doesn't respond within 3 seconds, Sally shrugs her shoulders and puts her arms out as if to say, "What do you want, Abby?" Sally then waits 3 more seconds before using the next prompt in the hierarchy. When Abby doesn't respond again, Sally says to Abby, "What do you want, Abby?" and waits 3 more seconds. Abby still does not respond. Sally then uses the final prompt in the hierarchy and says, "You want toys. Say, 'Toys'." Abby looks at Sally and says, "Toh." Sally immediately takes the plastic animals from the shelf and gives them to Abby who sits on the floor and begins lining them up. After this teaching interaction, Sally takes her clipboard with a data collection sheet on it and records Abby's responses. Table 11 shows how Sally is collecting data to monitor Abby's progress on the target skill.

Table 11. Data on Abby's Progress

Trial	Target Stimulus	Level 1	Level 2	Level 3	Level 4
1	Preferred toys out of reach	0	0	0	+
2	Toy boat out of reach				
3	No more food				
Summary Data					

Key: + = correct; - = incorrect; 0 = no response

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Sally implements similar prompting procedures during the identified activities to teach Abby the target skill. After one week, Sally compiles her data collection sheets and meets with the OT to determine next steps. They decide that Abby is making great progress at using one-word utterances. Therefore, they decide to modify the prompting hierarchy so that only three levels are used. Furthermore, they increase the wait time to 5 seconds so that Abby has more opportunities to respond independently before Abby's therapists and parents prompt her to use the target skill.

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**Graduated Guidance**

Finn is a 7-year-old with ASD. He currently receives services within a self-contained classroom for elementary students with autism. Three other students with ASD also receive services within this setting. Finn's parents are very concerned about their son's difficulty with self-help skills. In particular, they would like him to do a better job of washing his hands and brushing his teeth. Finn often skips important steps during these tasks and doesn't spend enough time washing his hands or brushing his teeth. Because of his parents' concerns, Finn's teacher, Mr. Jones, wants to address self-help skills at school. After talking with Finn's parents, Mr. Jones has decided that the first target skill will be to teach Finn how to wash his hands thoroughly before lunch. Because hand washing is a chained task, Mr. Jones will use graduated guidance to help Finn acquire this skill. Once Finn becomes more proficient at washing his hands, Mr. Jones plans to work with his parents to help Finn improve his hand washing at home as well.

Before implementing graduated guidance, Mr. Jones first identifies the target behaviors that make up the chained skill. He does so by completing the chain of skills at home and writing them down as he goes. The following steps were identified:

1. Turn on water
2. Wet hands
3. Get soap
4. Rub hands
5. Rinse hands
6. Dry hands

Mr. Jones also creates the following visual checklist for the activity. He hopes that this will give Finn additional visual and written support to wash his hands more independently.



After the steps in the chained task are identified, Mr. Jones decides that a naturally occurring stimulus, such as the lunch bell, will wash his hands. Mr. Jones feels that this would be the most appropriate stimulus because it can be present both at school and at home; thus, helping him to generalize use of the target skill across settings.

Mr. Jones identifies the target stimulus. He chooses the lunch bell as an example, before eating meals, Finn will wash his hands. Mr. Jones feels that this would be the most appropriate stimulus because it can be present both at school and at home; thus, helping him to generalize use of the target skill across settings.

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Next, Mr. Jones identifies the cue or task direction that will signal Finn to use the target skill. Because Finn has difficulty with receptive language, Mr. Jones decides to use the following picture card that shows a person washing his hands. As Mr. Jones gives the card to Finn, he will say, "Wash hands, Finn." Mr. Jones feels that this combination of a visual support with a verbal task direction will help Finn begin using the target skill successfully.



Mr. Jones then selects reinforcers that can be given to Finn after he washes his hands successfully. He decides that verbal praise is the best reinforcer for this activity because it is the most natural and has motivated Finn in the past. Mr. Jones also determines that the controlling prompt to be used with all steps in the chain will be full physical assistance. That is, if Finn does not respond to less intensive prompts (e.g., gestural, verbal) when trying to complete a step in the chain, Mr. Jones or another adult will physically help Finn complete the skill. Mr. Jones feels that a response interval of 4 seconds will be a sufficient amount of time to wait before providing Finn with more assistance when trying to complete each step. As Finn begins using the skill associated with a particular step (e.g., turning on faucet, getting soap), Mr. Jones will immediately remove the prompt so that Finn can complete the skill independently and not become dependent upon Mr. Jones to finish the task. Mr. Jones also has decided to set a timer for 20 seconds as soon as Finn starts rubbing his hands together. He hopes that this will help Finn wash his hands more thoroughly and independently. With the planning complete, Mr. Jones decides to begin teaching the skill the following day before lunch.

Before lunch the next day, Mr. Jones gives Finn the picture card with the instruction, "Wash hands" on it. As he hands the card to Finn, Mr. Jones says, "Wash hands, Finn." Finn takes the card, but does not move. Mr. Jones waits 4 seconds and then says, "Finn, it's time to wash your hands." Mr. Jones also points to the bathroom and gently nudges Finn in the direction of the bathroom. Finn then begins walking toward the bathroom with the picture card in his hand. Mr. Jones follows Finn into the bathroom and waits for him to begin the chained task of washing his hands. After about 4 seconds, Finn still has not started washing his hands. At this point, Mr. Jones provides increasing amounts of assistance until Finn starts to complete the first step in the chain. For example, Mr. Jones uses verbal and gestural prompting to help Finn begin the first step. He says, "Turn water on, Finn" while pointing to the faucet on the sink. Then he waits 4 more seconds to see if Finn turns the water on without additional prompting. When he doesn't, Mr. Jones uses full physical assistance (i.e., hand-over-hand) to help Finn get started. As Finn begins to

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complete this step independently, Mr. Jones immediately stops using the prompt. After Finn turns the water on, Mr. Jones waits to see if Finn will begin the second step independently. When he doesn't, Mr. Jones repeats the prompting procedures by providing and withdrawing assistance as needed. This process is repeated for each of the steps in the chain.

To monitor Finn's progress, Mr. Jones collects data as Finn is engaged in the activity. For example, he records the number of chains completed (a) correctly without prompts, (b) correctly with prompts, and (c) correctly, but with resistance. As Finn becomes more proficient at starting and completing each step independently, Mr. Jones increases the response interval as well as his distance from Finn during the hand-washing activity. Mr. Jones also provides training and support to Finn's parents so that they can begin implementing the activity at home to increase Finn's generalization of the target skill.