

Box 4. Mariah's Individual Education Plan

GOAL: Improve Mariah's interest in and capacity for reciprocal social engagement.

- *Objective:* Mariah will sustain engagement in sensorimotor interactive play with a special adult for 10-minute periods 2 times per day at school and 5 to 6 times per day at home. Mariah will show engagement:
 - a. By facial expression—smiles, wide eyes, upturned mouth—and through gesture (takes adult hand, signs or motions for more, pulls adult to object of desire).
 - b. By verbal expression—laughing, cooing, words—and by showing that she is reciprocally involved with the adult in an activity, such as water play, play dough, putting lotion on her skin, pulling stickers off her clothing, chase and tickle games, and variations of peek-a-boo.
 - c. By her seeking out the adult, showing anticipation of the next interpersonal exchange, offering objects or herself (e.g., takes a cup to pour water, puts arm toward adult for more lotion).
- *Objective:* Facilitated by an adult, Mariah will sustain engagement with a peer “expert player” for 10-minute periods 3 times per day.
 - a. Mariah will make an ongoing relationship with one peer carefully selected for his/her interest in Mariah. Mariah will show interest in interaction with the peer as with the adult (above) in activities of high interest to her, such as sensory play, music, and snacking.
 - b. At snack time, Mariah can be in charge and gesture to invite her friend to the table. She can inquire if her friend wants juice and pour for her from a small pitcher with which she can succeed. Mariah can give out cookies at her friend's request.
 - c. Symbolic links can be made with circle cookies that roll or mini-bagels that can be held up as eye-glasses. Snack can segue into water play by washing the snack dishes and cups, dividing up jobs such as squirting soap, making bubbles in the water, scrubbing, and drying. Such activities teach sequencing of events, fine motor skills, motor planning, and the target, reciprocal sustained engagement.

GOAL: Improve Mariah's spontaneous interpersonal communication.

- *Objective:* Use moments of high affective motivation to elicit spontaneous verbal and nonverbal circles of communication with Mariah 20 or more times per day as they occur in the natural environment or as can be elicited with nonverbal temptations.
 - a. During snack time, place a favorite snack in a container that is challenging for Mariah to open so that she will need assistance (and also benefit from practice with a fine motor skill). Provide support by offering adult proximity and gestural and verbal interest, such as “Need help?” or “What do you want?”
 - b. Wait for Mariah to initiate, even by pushing the container toward the adult, and keep the circles of interaction going as long as is tolerable and fun for her. For example, do not just open the container and hand it to her after one gesture. Play dumb and silly. “Oh, this, how nice, a hat?” and put the container on your head. Visual humor and silliness are usually the key to keeping her engaged without introducing disorganizing frustration.

GOAL: Improve Mariah's comprehension of interpersonal communication.

- *Objective:* Mariah will connect learning of language to meaningful experiences through an activity-based approach to learning throughout the day.
 - a. Mariah will learn the intentions and meanings of verbal communications through the manipulation of objects and the consequences of her requests and actions. For example, say you are teaching the concepts of “big” and “little.” Mariah wants a piece of bacon from her lunch box. The adult asks, “Do you want a big piece or a little piece?” Mariah hears “little” last and repeats “little piece,” even though she really wants it all. She doesn't have the comprehension for words related to size yet and still echoes the last thing she hears. Now, the adult gives her a small piece torn off the end of the strip and says, “Here is a little piece.” Mariah's disappointment is evident by the

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Box 4. *Continued*

expression on her face and her gesture to reach for the rest of the bacon. The adult empathizes, “You didn’t mean little piece, you want the *big* piece.” After several rounds of this kind of exchange, Mariah asks consistently for the big piece, and the adults expect that she has reached a new level of understanding. This approach is carried out with various things she wants throughout the day, such as the big crayon, the little bubbles, the big paintbrush. In this way, the concepts of “big” and “little” start to take on experiential meaning.

GOAL: Improve the quality of unstructured interactions within the family.

- *Objective:* Through the family-focused center and home-based program, assist Mariah’s parents in developing mutually gratifying ways of relating to Mariah that support family cohesion and pleasurable interaction.
 - a. Help parents work together on Mariah’s behalf and develop a shared language for understanding her difficulties.
 - b. Facilitate parents’ discussion of their perspectives about how to help her and how to be with her at home.
 - c. Develop mutually gratifying patterns of relating that use invitation and wooing, supporting positive feeling and sustained interpersonal engagement.
 - d. Assist parents in the classroom to recognize and participate in successful social activities with Mariah.
 - e. Meet with parents bimonthly to share ideas about how to engage Mariah in the less structured household activities. Teachers can offer opportunities for practice in the classroom, for example, someone comes to the door and the teacher has to greet them. What can Mariah do? What does the teacher do with Mariah before she attends to the person at the door?

The above goals and objectives are designed to support the development of Mariah’s spontaneous self-expression, reciprocal engagement with adults and peers, and capacity for self-initiation. They are goals designed to ameliorate the core developmental issues in autism. These interactive, relationship-based interventions should not be implemented only in a complementary fashion with discrete trial training during which the focus of the goals is on compliance and prompted discrete-trial demonstration. Rather, these instructions are essential for the generalization and spontaneous use of what is learned through behavioral reinforcement.

educational programs or curricula and the degree to which they contribute to individual outcomes, both child and program characteristics need to be considered. Today, children falling under the autistic spectrum umbrella have very wide variations. To know which children are being addressed requires more than matching age, IQ measures, or even symptom lists, as is frequently done in outcome studies. Instead, multidimensional profiles and functional capacities are needed to identify the children in meaningful ways, with relevant measures of primary deficits in relating and communicating at entry and outcome (Greenspan & Wieder, 1997).

In order to compare educational approaches, it is necessary to identify the various elements of the educational models as well as their various operative elements, including intensity, quality, and skill of the providers; related services; and family interactions. Research designs that could take all these variables into account do not yet exist, and existing studies on program outcomes make claims that are questionable if not misleading. Programs often select certain children for study rather than sample from different groups. The study often is based on what is easy to measure or teach without considering all the real variables that are part of the child’s