

# Implementing Visual Cues

## for Young Children with Autism Spectrum Disorders and Their Classmates

Jennifer B. Ganz and  
Margaret M. Flores

Pete, Jorge, and Jackie, children with autism, are enrolled in inclusive preschool and kindergarten programs. Pete, a 4-year-old, spontaneously uses one- and two-word phrases. He seldom initiates play with his classmates and usually does not respond to their invitations to join in, such as, “C’mon, here’s a train, Pete.” Pete prefers to play alone, engaging in repetitive play with just a few toys. In particular, he enjoys spinning the wheels on toy cars.

Jorge is a 5-year-old with high-functioning autism who speaks in three- to five-word phrases. Like Pete, Jorge seldom initiates play with other children, although he occasionally asks for items—“Can I have that hat?”

Jackie is also a 5-year-old with high-functioning autism. She tends to imitate three- or four-word sentences, like “Want the crown?” when playing with classmates but rarely makes spontaneous comments connected to their play. Nor does Jackie answer her classmates’ questions.

Pete, Jorge, and Jackie’s teachers need strategies they can use to improve and increase each of the children’s interactions with their classmates.

**Jennifer B. Ganz**, PhD, BCBA, is an associate professor of special education at Texas A&M University, in College Station. She works with and conducts research involving individuals with autism spectrum disorders and other developmental disabilities and has written over 30 articles, chapters, and books. [jeniganz@tamu.edu](mailto:jeniganz@tamu.edu)

**Margaret M. Flores**, PhD, is an assistant professor in the Department of Special Education Rehabilitation Counseling at Auburn University, in Alabama. Her research interests include instructional interventions and strategies for children with disabilities. [mflores@auburn.edu](mailto:mflores@auburn.edu).

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Public policy and increased acceptance of people with varying abilities have led to the inclusion of children with disabilities such as autism spectrum disorders (ASD) in regular early childhood programs and primary schools. To help integrate the children into the classroom, early childhood teachers need effective interventions they can easily implement with the children with ASD and their typically developing classmates together. The use of visual cues, such as *scripts* and *instruction cards*—cards with pictures and short written phrases used in play sessions by children with ASD and their classmates—is one strategy for classrooms that include children like Pete, Jorge, and Jackie. (See “Visual Cues: Scripts and Peer Instruction Cards.”)

In addition to benefits like improved social and communication skills for children with ASD, inclusive play groups may benefit the typically developing children as well. Yang and colleagues (2003) report that the typically developing children who took part in integrated play groups enjoyed participating and, following the experience, considered their playmates with autism to be friends. The researchers observed them outside of the arranged groups spontaneously inviting the children with ASD to play. This suggests that typically developing peers also benefit from these groups by expanding their circles of friends. Further, these sessions give them a chance to practice their own budding social and communication skills and to develop empathy.

### Review of the literature

Research shows that visual cues can improve children’s social and communication skills when participating in recreational activities (Krantz & McClannahan 1993; Sarakoff, Taylor, & Poulson 2001; Ganz et al. 2008), communicating with adults (Krantz

& McClannahan 1998), answering questions (Charlop-Christy & Kelso 2003), and making comments (Ganz & Flores 2008). Scripts address social and communication skill delays and difficulties with creative play (APA 2000; Baron-Cohen 2004), both common in children with ASD. They have been used successfully with preschoolers and kindergartners (Krantz & McClannahan 1998; Ganz & Flores 2008) and with elementary school children (Sarakoff, Taylor, & Poulson 2001; Ganz et al. 2008). Additionally, scripts have been successful with both readers (Ganz et al. 2008) and prereaders (Krantz & McClannahan 1998), and with children with ASD who have a range of abilities, from speaking in phrases of only one or two words to speaking in complete sentences (Ganz & Flores 2008).

### Using peer instruction cards and scripts in inclusive play groups

We have used visual cues in inclusive play group sessions—a small group with a preschooler with ASD and a typically developing peer with monitoring by the teacher that is faded over time (Ganz & Flores 2008). While

our suggestions here for implementing these strategies focus on preschoolers and kindergarten-age children, teachers can modify the strategies for use with older children and for children with disabilities other than ASD, such as behavior disorders, developmental delays, and speech delays.

### Forming an inclusive play group

A play group may include as few as two children—the child with ASD and a select classmate—or as many as three or four, depending on the social interaction abilities of the child with ASD. That is, children with ASD who frequently respond to and initiate interactions with peers may be able to participate successfully in larger groups. Children who tend to keep to themselves may do better when grouped with only one peer. It is best to keep an inclusive play group small; otherwise, the typically developing peers may end up playing with their classmates instead of the focus child.

The inclusive play group session is only one of many opportunities throughout the day for children to practice interacting.

**Selecting the children.** How do you determine which children to include in a play group? An inclusive play group often includes only one child with ASD. Generally, scripts are implemented only with children with ASD who

have at least some understandable speech and some play skills. The play activity should be familiar to the child, although the requirement to communicate with peers may be new.

When choosing typically developing peers, children who are somewhat outgoing are prefer-

able to extremely shy ones, because they will need to initiate interactions with a child who may not respond readily. You might also pick children who frequently offer to help.

**Scheduling the sessions.** Have the play group meet as frequently as desired, preferably no fewer than three times a week, for a minimum of 15 minutes each session. Teachers must address play and communication skills more frequently than this in inclusive early childhood settings. The inclusive play group session is only one of many opportunities throughout the day for children to practice interacting.

### Choosing a play theme

Consider the children's interests when choosing a play theme. Use a theme for several consecutive play sessions, so each child can take on all the various roles (baker, cashier, and customer). This allows them to practice the language and social skills for each role before starting a new theme. However, if the children seem bored with a particular theme, you don't have to wait to change it.

When creating new play themes, incorporate skills and phrases similar to those in the previous sessions, if

### Visual Cues: Scripts and Peer Instruction Cards

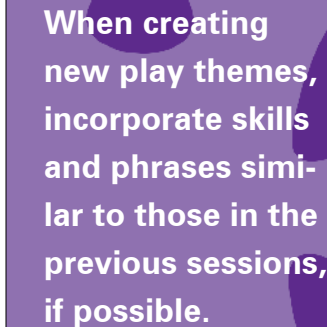
Visual cues are cards with drawings and short phrases that give children suggestions for interactions in inclusive play groups. Scripts are cards with pictures and short written phrases that are used during play or other social activities to give children with communication delays cues about appropriate things to say. Peer instruction cards give the typically developing child or children recommendations for getting the attention of and communicating with their peers with ASD.

Although visual cues include written phrases, the children do not need to read the cards if they are not yet fluent readers. The teachers will tutor them in the written phrases before the play sessions, and during play the children can refer to the pictures.

The teacher monitors the session and, if necessary, prompts the child with ASD. The teacher may suggest opportunities for the children to interact. He or she fades these prompts over time.

possible. That way, children can use the skills they have learned in different contexts. Here are possible themes:

- Baby care
- Bakery or cooking breakfast/lunch/dinner
- Barber shop/hair stylist
- Birthday party
- Camping
- Circus
- Fairy tales or familiar books
- Farm/ranch
- Grocery shopping
- Pet shop or zoo
- Restaurant
- Sports event, amusement park, or theme park
- Video store



When creating new play themes, incorporate skills and phrases similar to those in the previous sessions, if possible.

## Two types of visual cues

**Peer instruction cards.** These visual cue cards give the typically developing child or children in the group recommendations for getting the attention of and communicating with their classmate with ASD. The cards use drawings and short phrases to give the children suggestions. Teachers can print them on large, unlined index cards or half-sheets of letter-size paper (see pages 82–83 for examples in purple). Choose the recommendations in the peer instruction cards based on the needs of the focus child and the typically developing peers participating in the group. Some possible suggestions include:

- Ask for a turn.
- Hand your friend a toy.
- If your friend doesn't answer, try again.
- Play with the same kind of toy as your friend.
- Stand close to your friend to talk to him.
- Talk about what your friend is doing.
- Talk about what your friend is talking about.
- Tell your friend, "Good job!"
- Touch your friend's arm to get his attention.

The teacher introduces peer instruction cards before each inclusive play group session. She reads the card (or cards, if several have been introduced already but the children are not yet using them spontaneously) to the typically developing children.

Next, she gives examples of how to use the suggestion, then has the children role-play it, practicing until they learn it. The teacher then places the peer instruction card in the play area as

a reminder. She introduces additional peer instruction cards one at a time as the typically developing children begin to independently use the previously learned suggestions during play groups. At that point, she can fade out the early suggestion cards.

**Scripts.** We recommend scripts for use with children with ASD, although teachers can adapt them for use with children with other communication-based disabilities also (Ganz, Cook, & Earles-Vollrath 2006). When implementing scripts, the adult first determines which skill the child needs to work on—asking for toys, complementing peers, and so on (see examples in blue on pages 81–83). Then, the teacher develops scripts based on her observations of the phrases typically developing children use during a given play theme and the language and cognitive abilities of the child with ASD. The teacher creates the scripts, printing the script phrases on note cards with representative photographs or drawings. He or she will likely need to write new scripts for each play theme, although the new scripts should be similar in syntax to previously learned ones. Some examples are

- Ticket, please.
- Your turn.
- Let's play ball.
- Look, a dolphin.

Before implementing a script during a play group session, the adult teaches the child with ASD the script phrase. The teacher implements one phrase at a time for as long as it takes the child to use the phrase without the teacher's prompt—as long as three weeks or as short as one week, depending on the focus child's abilities. In future sessions the teacher introduces more scripts as the child learns to independently recite the previous ones.

## Teacher's role during a play session

When the focus child has learned the script phrase, the teacher is ready to use the script during a play group session. Place a script card near the related item. That is, if the card says, "This truck's fast!" place the card next to the toy truck. During the play group, give the child some time to use the script independently upon seeing it by the item. If the focus child does not independently use the scripted phrase or otherwise communicate with classmates in the group, it's time to prompt the use of the script. Follow this sequence and wait a few seconds between prompts:

- Hold the script card a few feet in front of the child
- Take the child's hand and help him or her point to the card
- Model what the card says
- Tell the child, "Say, 'This truck's fast!'"

If, at any point, the child independently says the phrase on the card, the teacher discontinues prompting. You can eventually fade script cards from use for some children, although others may continue to need the cards as visual reminders of appropriate communication skills.

## Tips and Reminders about Using Visual Cues

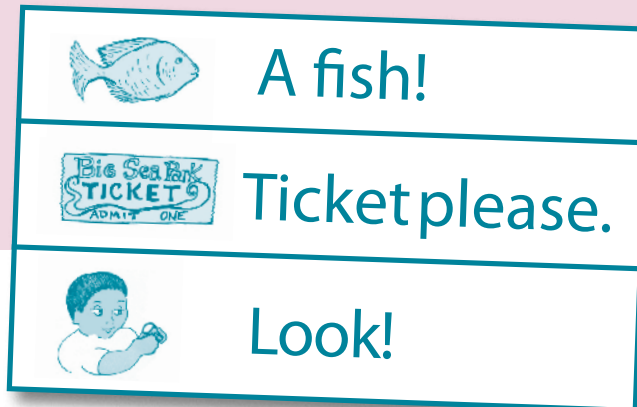


### Tips

- Select naturally nurturing children for the typically developing peers in a play session; choose children who frequently volunteer to help.
- Choose typically developing peers who are proficient at play and have age-appropriate social skills, possibly children who are a little older than the child with autism.
- Comment repeatedly and privately on all the children's contributions and accomplishments in participating and practicing new skills.
- Choose activities the child with a disability enjoys and can join in; the goal is not to teach new activities, but to promote interactions. If the child has mastered few activities in the classroom, you might preteach the play activity before beginning the play sessions.
- Introduce new scripts gradually, particularly with a child who has not used them before. Try to fade the script gradually over time.
- Teach classroom assistants or volunteers to monitor play groups and prompt the children. All the adults in the classroom can take turns implementing visual cues.

### Reminders

- Place a child with autism in a small group of typically developing peers; he is likely to be excluded in a large group because peers will have access to a number of other children who already have strong social skills.
- Invite the same typically developing peers often; allowing the children to become comfortable with each other is likely to lead to increased interactions.
- Expect that it will take a while for the child with ASD to learn to use the script; she may require instruction for two weeks or more.
- Allow spontaneously occurring interactions to continue rather than interrupting to implement a script.
- Keep the script going until it is no longer needed. However, if the child stops using the scripted phrase or spontaneous initiations, reintroduce the script.



### Examples of implementation of visual cues in inclusive play groups

The following are three examples from our research that describe materials, peer instruction cards, and scripts implemented during play group sessions. Each example includes a play group consisting of at least two preschoolers, one with ASD and one typically developing peer. Some play groups include additional typically developing peer models.

#### Pete: Ocean amusement park theme

Pete (age 4) and 5-year-old Joaquin participated in an ocean amusement-park dramatic-play activity. The teacher chose the theme because Pete, the focus child, and Joaquin lived near an ocean amusement park. Pete's

mother said Pete frequently visited it and particularly enjoyed the aquarium and the whale and dolphin shows.

The teacher set up the play area with a 4-foot square plastic children's pool (no water) with stuffed animals representing a variety of sea creatures (dolphins, orcas, sharks); a small plastic aquarium with plastic sea creatures (turtles, clown fish, frogs, salamanders); a child-size picnic table and chairs, cups, plates, forks, and play food (plastic pizza, hamburgers, milk, soda); and child-size swim masks, two snorkels (one for each child), and flippers.

Because Pete spoke in short phrases and had a limited verbal repertoire, his script consisted of

only three phrases, each approximately two words long. Mindful of Pete's infrequent social initiations and responses, the teacher decided to implement a play group session for Pete and only one other child. Thus, Pete would not have to compete with more socially competent children for Joaquin's attention. Joaquin's peer instruction cards primarily consisted of ways to get Pete's attention and reminders to be persistent in interacting with him.

As a result of Pete and Joaquin's using the visual cues in play sessions, Pete more frequently made comments related to their play, although he required teacher prompting for several weeks. Joaquin quickly learned



Stand close to Pete and talk to him.



If Pete doesn't answer, try again.

how to get Pete's attention and continued to do so throughout the play group sessions.

### Jorge: Ranch theme

Jorge (age 5) participated in a ranch theme play group with 4-year-old Farid and 5-year-old Mike, typically developing classmates. To capitalize on one of Jorge's special interests, horses, his teacher chose the ranch theme. The ranch play area included dress-up clothes (cowboy hat, bandana, boots); pairs of stuffed animals and animal puppets representing animals found on a ranch (horses, sheep, chickens); plastic farm animals (ducks, pigs, roosters, chickens, cattle); and metal

and plastic ranch equipment (tractors, mowers, pickup trucks, farm/ranch house, barn/stable, fencing).

While Jorge spoke in understandable three- to five-word phrases, his communication skills were limited to making requests. So Jorge's teacher and parents decided to have him work on two skills, sharing and making context-appropriate comments. Farid and Mike's peer instruction cards included directions to ask Jorge for a turn and to offer to trade toys with Jorge to promote turn taking. As a result, after a number of play sessions with Mike and Farid, Jorge began making more comments during regular play groups and sharing more often, particularly with Farid and Mike.

### Jackie: Birthday party theme

Jackie (age 5) participated in a birthday party theme activity with typically developing 5-year-olds, Meg and Gabriella. The theme was chosen because, following several birthday celebrations at the preschool, Jackie sang *Happy Birthday to You* and repeated the phrases, "How old are you?" and "Blow out the candles," although she frequently said them out of context.

The area set up for the birthday party play sessions included decorations (streamers, balloons, tablecloth); gift bags with small toys and tissue paper inside; a plastic birthday cake that could be decorated and "cut" into slices; plastic plates and utensils; a CD player with a birthday song CD; and birthday hats and goodie bags.

Jackie's teacher chose two objectives: answering the question, "What are you doing?" and making context-related comments in addition to "How old are you?" and "Blow out the candles." Meg and Gabriella's peer instruction cards directed the girls to ask Jackie, "What are you doing?" and to model sentences telling Jackie what they were doing.

Jackie expanded her use of context-appropriate comments to include a variety of statements, and she learned to answer her classmates' question, "What are you doing?" Further, she learned new, unscripted phrases ("I'm blowing up balloons") after hearing Meg and Gabriella repeatedly labeling their own activities. Jackie and her



Do you want the tractor?



It's your turn.



Can I have the hat?



Time to milk the cow.



This truck's fast!



Ask Jorge for a turn.



Trade Jorge for a new toy.



It's your birthday!



I'm eating cake.



Let's sing *Happy Birthday*.



I'm opening presents.

5

I'm five now.



Ask Jackie what she's doing



Tell Jackie what you're doing.

peers continued to rely on the visual cues for several months, including new scripts the teacher implemented when the play theme changed.

### Conclusion

We hope these suggestions, instructions, and examples are useful to teachers in inclusive early childhood classrooms and help them give children with ASD opportunities to learn new communicative and social skills. We anticipate that the use of these strategies will benefit both children with autism and their typically developing peers. Children will have opportunities to increase friendships, learn empathy, and practice new social and communication skills. Finally, remember that patience and flexibility are key when implementing these visual strategies. We urge teachers to consider changes to play group participants, play themes, and format of the visuals and instructions if a strategy is not successful.

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