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Intervention and Instructional Strategies for Supporting Young Children With Delays or Disabilities¹

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Learning Outcomes

After reading this chapter, you will be able to

- Define evidence-based practice as it applies to modifying intervention and instructional practices when working with children with delays or disabilities
- Identify the CONNECT Modules: 5-Step Learning Cycle procedure used to assist early childhood special educators with finding solutions to realistic dilemmas encountered in providing intervention to young children with delays or disabilities
- Describe intervention strategies that facilitate inclusion of young children with delays or disabilities in natural, center-based, and school settings
- Identify teacher-mediated strategies that focus on active engagement and differing levels of participation of young children with delays or disabilities
- Provide examples of each of the following: arranging the environment, promoting acceptance, using of prompts and praise, and monitoring communication
- Identify peer-mediated strategies, including cooperative learning
- Describe routine-based, play-based, activity-based, and specific milieu strategies used to provide intervention or instruction for young children with delays or disabilities from birth through age eight

DEC Recommended Practices

The content of this chapter aligns with the following Division for Early Childhood (DEC) Recommended Practices:

Environment

- E2. Practitioners consider Universal Design for Learning principles to create accessible environments.
- E3. Practitioners work with the family and other adults to modify and adapt the physical, social, and temporal environments to promote each child's access to and participation in learning experiences.

- E4. Practitioners work with families and other adults to identify each child's needs for assistive technology to promote access to and participation in learning experiences.
- E5. Practitioners work with families and other adults to acquire or create appropriate assistive technology to promote each child's access to and participation in learning experiences.

Instruction

- INS1. Practitioners, with the family, identify each child's strengths, preferences, and interests to engage the child in active learning.
- INS2. Practitioners, with the family, identify skills to target for instruction that help a child become adaptive, competent, socially connected, and engaged and that promote learning in natural and inclusive environments.
- INS4. Practitioners plan for and provide the level of support, accommodations, and adaptations needed for the child to access, participate, and learn within and across activities and routines.
- INS3. Practitioners gather and use data to inform decisions about individualized instruction.
- INS5. Practitioners embed instruction within and across routines, activities, and environments to provide contextually relevant learning opportunities.
- INS6. Practitioners use systematic instructional strategies with fidelity to teach skills and to promote child engagement and learning.
- INS7. Practitioners use explicit feedback and consequences to increase child engagement, play, and skills.
- INS8. Practitioners use peer-mediated intervention to teach skills and to promote child engagement and learning.
- INS13. Practitioners use coaching or consultation strategies with primary caregivers or other adults to facilitate positive adult-child interactions and instruction intentionally designed to promote child learning and development.

Interaction

- INT3. Practitioners promote the child's communication development by observing, interpreting, responding contingently, and providing natural consequences for the child's verbal and non-verbal communication and by using language to label and expand on the child's requests, needs, preferences, or interests.

Teaming and Collaboration

- TC1. Practitioners representing multiple disciplines and families work together as a team to plan and implement supports and services to meet the unique needs of each child and family.

Authors' Note: As you read this chapter, you will find these recommended practices identified throughout the chapter. See Appendix B for a complete list of the DEC Recommended Practices.

Introduction

Young children with delays or disabilities are, first and foremost, children. All young children can and do learn; however, they may learn at a different rate, require the use of different strategies, or learn through different modalities. They may learn through exploration and child-initiated activities with the additional support of peers or direction from a teacher or caregiver. The key in creating appropriate educational experiences for any young child is to create a match between the individual needs of the child and the intervention or instruction. This may result in early childhood special educators, parents, and other team members using a variety or combination of intervention or instructional strategies to facilitate development and learning.

Recall from Chapter 4 that the Individuals with Disabilities Education Act (IDEA) and its amendments stress that school-age children should be educated, to the maximum extent appropriate, in the least restrictive environment (LRE) while infants and toddlers are to receive services in the natural environment. In both instances, there is a strong preference for children with delays or disabilities to receive services alongside peers who are typically developing and in the environments in which they would be if they did not have a delay or disability. This approach is currently the model of choice for young children with delays or disabilities and their families (Coppole & Bredekamp, 2009; Division for Early Childhood & National Association for the Education of Young Children, 2009). Within inclusive learning communities, young children with delays or disabilities can

be functionally and socially included while participating in typical classroom activities with early childhood special educators and other professionals providing an array of services and supports as necessary (Barton & Smith, 2015; Gargiulo & Bouck, 2018; Schwartz & Woods, 2015; U.S. Department of Health and Human Services & U.S. Department of Education, 2015). Furthermore, “the purpose of instructional practices is to help children acquire the skills and behaviors that will help them be more independent and successful as young children and through their lives” (Schwartz & Woods, 2015, p. 78).

Practices and Processes Appropriate for Young Children With Delays or Disabilities

The Individuals with Disabilities Education Improvement Act of 2004 (PL 108–446) requires that services for young children with delays or disabilities are to be constructed around scientifically based research. In other words, early childhood special educators should incorporate practices and processes that are based on research and recommended practices in their intervention or instruction.

Evidence-Based and Recommended Practices

When determining *how* to provide intervention or instruction for the young child with delays or disabilities, early childhood special educators should partly base their decision on what is commonly known in the field as **evidence-based practices**. Simply defined, this means “a decision-making process that integrates the best available research evidence with family and professional wisdom and values” (Buysse & Wesley, 2006, p. 244).

As described in previous chapters, another commonly used term is **recommended practices**. The Division for Early Childhood (DEC, 2014) of the Council for Exceptional Children offers guidelines for early intervention and early childhood special education through recommended practices based on best-available empirical evidence and wisdom from the field:

We [DEC] believe that when practitioners and families have the knowledge, skills, and dispositions to implement these practices as intended, children who have or are at risk for developmental delays/



▲ Early childhood special educators should incorporate evidence-based practices whenever possible.

disabilities and their families are more likely to achieve positive outcomes, and families and practitioners are more likely to help children achieve their highest potential. (p. 2)

Collectively, this thinking suggests that early childhood special educators should attempt to incorporate evidence-based practices whenever possible into their daily instructional routines (Cook, Klein, & Chen, 2016). We fully embrace this position. Researchers in the field of early childhood special education have long used evidence-based practices to guide them.

CONNECT Modules: 5-Step Learning Cycle

Although the terminology and terms may have varied throughout the years, researchers at the Center to Mobilize Early Childhood Knowledge located at the University of North Carolina at Chapel Hill have designed learning modules for professionals desiring to incorporate evidence-based practices into their decision-making process. These learning modules provide an informative resource that offers online learning for professionals and families. Currently, modules on embedded interventions, transition, communication for collaboration, family–professional partnerships, assistive technology, dialogical reading, and tiered instruction are available. Of note is the 5-Step Learning Cycle framework used in each module that is valuable for implementing evidence-based

FEATURE 9.1

REPRESENTATIVE WEB RESOURCES

For additional information about evidence-based practices affecting decision making, access the following website:

<http://community.fpg.unc.edu/connect-modules/>

practices (CONNECT, 2018). This is an approach used to make evidence-based decisions founded on solving realistic dilemmas encountered in early childhood special education.

The 5-Step Learning Cycle is anchored in solving problems through the integration of multiple perspectives of professionals and families, as well as other sources of evidence. The five steps of the cycle are as follows:

Step 1. Identify the dilemma or problem. Explore the practitioner's ability to review the dilemma from the perspective of others such as the parents or other professionals familiar with the child.

Step 2. A practitioner uses a practice-focused question that could be answered by utilizing various sources of evidence suggested in current research. This step allows the practitioner to move away from the dilemma to focus on a specific instructional practice, intervention, or behavioral practice. Step 2 establishes the context for solving the dilemma.

Step 3. Gather evidence—the practitioner reviews sources of evidence related to the focused practice identified in Step 2. The key sources of information should include a summary of the best research available on the practice, policies available on the practice, and experience-based knowledge from other professionals, and the family, regarding the practice.

Step 4. The information gathered surrounding the dilemma and its context in relation to the child is integrated in order to make a decision and plan for intervention.

Step 5. Evaluate and refine. The final step involves the monitoring and evaluation of the practice in order to review and refine the practice if needed.

Examples of using this decision-making process can be seen throughout the modules via videos, vignettes, and reflective exercises.

Three evidence-based practices in early childhood special education are *embedded interventions*, *transition practices*, and *assistive technology interventions*. **Embedded interventions** incorporate the use of intervention or instructional strategies to address a specific learning goal within the context of the child's everyday activities, routines, and transitions occurring at home, at school, or in the community (Barton, Bishop, & Synder, 2014; Division for Early Childhood, 2014; Schwartz & Woods, 2015). A more in-depth view of embedded interventions with child-specific examples will be discussed later in this chapter.

Transition practices are widely identified in the research literature with regard to early childhood special education. Defining transition practices is difficult. Most professionals agree that recommended practices in transition should include addressing the skills the child will need in the next environment, coordinating the professionals from the receiving and sending programs, facilitating good communication among the participants, and arranging parent/child visits to the new educational setting. As you may recall, Chapter 4 reviewed the necessary steps for making a successful transition for young children with delays or disabilities. Finally, **assistive technology interventions** refer to the practice of evaluating the child, implementing the use of technology tools, and monitoring the effects of specific technologies in order to increase independence for children with special needs in all areas of learning. Assistive technology is addressed specifically in Chapter 10.

Engagement in Inclusive Settings

The provision of services to young children with delays or disabilities in the natural environment or inclusive settings is a complex subject that involves many factors in the decision. Some key issues that professionals and families should consider are the quality of the early childhood program, child characteristics, family goals, and experience of the staff (Division for Early Childhood, 2014). Furthermore, inclusion is more than just the physical placement of children with delays or disabilities in educational settings alongside children who are typically developing. Inclusion considers intentionally promoting the participation of children with disabilities in all learning activities and environments, using individualized accommodations, and supporting friendships with peers and sense of belonging (U.S. Department of Health and Human Services & U.S. Department of Education, 2015). Barton and Smith (2015), in their work examining the current successes and challenges in early childhood inclusion, state that defining features of inclusive programs for young children with special needs should include access to high-quality early childhood programs, the child's level of participation, and the individual supports. To support this, practitioners should "use systematic instructional strategies with fidelity to teach skills and promote child engagement and learning" (Division for Early Childhood, 2014, p. 11) [DEC Recommended Practices INS6].

For the purpose of this discussion, **engagement** is defined as a child's sustained attention to and active involvement with people (teachers, family members, other professionals, peers), activities (snack time, play time, group time participation, center selection and participation), and materials (use of toys, art supplies, water play materials) in an age-appropriate manner throughout the child's day that lead to goal achievement (Division for Early Childhood, 2014; Grisham-Brown & Hemmeter, 2017).

The following sections of this chapter will focus on selected strategies that are organized into the following four categories:



▲ Young children with disabilities need learning environments that are accepting of all children.

1. Teacher-mediated strategies
2. Peer-mediated strategies
3. Routine-based strategies
4. Naturalistic (milieu) strategies

While the discussion focuses primarily on strategies used in inclusive preschool or early primary classrooms, the strategies are appropriate for use with infants and toddlers who receive early intervention services in their homes or inclusive child care settings and other natural environments.

Teacher-Mediated Strategies

The term **teacher-mediated** has typically been used to describe teacher-directed explicit interventions designed to promote social interaction by teaching a specific skill or skill set (Division for Early Childhood & National Association for the Education of Young Children, 2009; Gargiulo & Bouck, 2018). We broaden the term *teacher-mediated* to include many techniques that an adult (teacher, parent, other family member, related service professional) can implement before or during activities that promote child engagement with people, materials, or activities. Teacher-mediated strategies include arranging the environment, promoting acceptance, providing prompts and praise, accepting differential levels/types of participation, and monitoring communicative input.

Environmental Arrangements

One of the least intrusive steps that early childhood special educators can take to promote engagement of children within their educational settings is environmental arrangement. Current guidelines are available with suggestions for the organization, structure, and operation of optimal learning environments for children with diverse abilities (Catalino & Meyer, 2016; Copple & Bredekamp, 2009) [DEC Recommended Practices E2]. Three strategies will be discussed that fit within these guidelines: the arrangement of physical space, the selection and use of materials, and the use of structured activities (Division for Early Childhood, 2014; Gargiulo & Bouck, 2018).

As described in Chapter 7, the typical guidelines used when arranging any learning environment include quiet areas that are located away from noisy areas, high-interest materials that are accessible to children, materials that are safe and stimulating, adequate space to provide easy movement throughout the classroom, and an environment that can be easily monitored by adults (DeArment, Xu, & Coleman, 2016; Sandall & Schwartz, 2008). Research has provided evidence to support the use of additional environmental strategies when children with delays or disabilities are included within a setting. The physical environment may be used by early childhood special educators to develop individual goals for children in the classroom and promote children's access to and participation in learning experiences [DEC Recommended Practices E3]. A teacher, for example, may want to promote lunch- or snack-time

conversation by placing certain children in proximity to the child working on social communication goals. Another teacher working with a child who is highly distractible may design quiet, isolated play areas for the child away from the large group and assign a friend to explore with him. Even within the designated space, other aspects of the environment warrant attention, which include limiting the amount of materials available to children, attending to the specific considerations related to the individual child with a delay or disability (use of a walker, adaptive seating to maintain trunk control, or a wheelchair for access), and monitoring the number of adults and their behavior (Horn et al., 2016).

Attention should be given to the selection and use of materials. Materials should be safe, multidimensional, and developmentally appropriate for the children within the learning environment. In addition, early childhood special educators can select toys known to promote high levels of engagement based on the child's preference, monitor the child's access to the materials, and adapt the use of toys or materials (DeArment et al., 2016; Grisham-Brown & Hemmeter, 2017).

Some toys or materials result in more isolated play, while others appear to result in more interactive play (Barton, 2015; DeArment et al., 2016). Toys that are more likely to result in higher social interactions are blocks, dolls, trucks and cars, items that encourage social dramatic play (dress-up, cooking), and games that have multiple parts (Mr. Potato Head, farm or zoo animals). Materials that are more likely to result in solitary play include books, puzzles, and art activities (painting, paper-and-pencil drawing). Obviously, how an early childhood special educator structures the use of these more solitary materials will impact the level of interaction. For instance, preschoolers can share a book, each taking turns reading, holding the book, and turning the pages. The selection of the materials should be driven by the goals of the early childhood special educator in the structured play setting. At times the goal may be to promote interactive play, which involves more social and communicative exchanges, while at other times it may be to promote the use of appropriate toy play behavior.

Material selection also should be determined by the level of interest and preferences of the child [DEC Recommended Practices INS1]. Young children with delays or disabilities are more likely to engage with high-interest toys and materials. Preschoolers, for example, are more likely to show high levels of engagement and are less likely to exhibit inappropriate behavior when participating in high-interest activities (Sandall, Hemmeter, Smith, & McLean, 2005). Asking family members or the child is an excellent way to ensure that the activities, materials, and toys are preferred by the child.

While child choice and preference are important, adults may want to provide some guidance to young children who consistently select the same activities, materials, or toys. The teacher or parent could observe the child as he or she makes choices of toys, materials, and activities across a specific period of time. Then the adult could provide suggestions for play or introduce new materials with a high-preference toy as a way of expanding a child's choice to new, and perhaps more challenging, activities. This could be accomplished by coupling the child's choice of materials with that of the adult.

Examples of how child preferences can be combined with adult guidance are as follows. Every day, three-year-old Analise selects blocks during play. One day, the early childhood special educator adds farm animals, suggesting that together they build barns, corrals, and beds for the animals. On another day, she adds zoo animals to the block activity and asks Analise, “What could we do with these animals and blocks?” Peter, age two, chooses to bang together toy objects (blocks, pretend food) on a daily basis and appears to be reinforced by the noise he makes while playing. The early childhood special educator could add to the activity containers with big spoons for stirring and suggest that they cook. Later she can add dolls and bears to the activity for a pretend snack time. In this way, she has extended his play with the materials and still provided an auditory reinforcer as the blocks (or food) are stirred. In both of these examples, the early childhood special educator still has provided the child with a choice (using the preferred materials), while expanding the activity or the way the child uses the materials. In a home visit, a service provider could show an older sibling how to manipulate preferred materials by giving cues on how to model building a house with blocks. The sibling asks her brother to “build one like mine.”

Another environmental strategy that could enhance engagement is the provision of structure within the activity. Planned, structured play activities embedded or integrated in the usual classroom activities or routines result in increased social interactions between children with and without disabilities (Grisham-Brown & Hemmeter, 2017; Sandall & Schwartz, 2008). Examples of planned embedded structure include setting rules for a specific activity, identifying children’s roles within the activity, asking children to generate ways that they could play within an activity, and identifying a theme for the play (“Let’s make pizza with the Play-Doh. What kind of pizza will you make today?”). Another way of structuring the activity is to analyze and monitor the accessibility of the materials. Infants or toddlers who have easy access to every toy may have a decreased need for communicating or socializing within their environments. Alternating the availability of some materials and toys across the day or week may be an effective strategy for promoting engagement. In essence, the novelty of a toy is maintained through the regular rotation of materials. Restricting access to high-interest toys may result in higher levels of communicative attempts. By placing preferred materials within the child’s field of vision, but out of reach, the result would be increased child requests for preferred toys and snacks.

Promoting Acceptance

Promoting acceptance is a strategy that can be viewed as creating and preparing the social environment to be more accepting of a child with a delay or disability. It is a strategy that supports engagement with peers and one that is easily overlooked when preparing a class for young children with delays or disabilities.

While positive attitudes toward children with delays or disabilities and subsequent social relationships among children with and without disabilities are an anticipated

benefit of inclusion (Gargiulo & Bouck, 2018; U.S. Department of Health and Human Services & U.S. Department of Education, 2015), empirical evidence is mixed. However, in one synthesis of literature on early childhood inclusion published over the last twenty-five years, Odom, Buysse, and Soukakou (2011) identified two research points applicable to the benefits of inclusive environments. First, the reviewed research implies that both children with disabilities and peers without disabilities can benefit from an inclusive educational environment. Second, inclusion can be implemented in different forms. Perceptions and attitudes of parents, teachers, other professionals, and members of the community concerning inclusion (children with delays or disabilities learning and developing relationships with peers without disabilities) can be influenced by several factors such as adult beliefs, policies, and the resources available to implement inclusive programs and evaluate outcomes (Barton & Smith, 2015; Odom, 2002; U.S. Department of Health and Human Services & U.S. Department of Education, 2015).

Across studies, it is apparent that the placement of children with delays or disabilities alongside peers without disabilities does not automatically ensure acceptance without adult mediation, which means actively promoting understanding and acceptance of children with disabilities. However, children with delays or disabilities placed in inclusive or natural environments make developmental progress at least comparable to children with disabilities in segregated environments (Noonan & McCormick, 2014). In other words, children with delays or disabilities in inclusive environments appear to learn as much as children in segregated environments. Promoting acceptance of children with delays or disabilities may be one of the essential elements for achieving authentic inclusion in later years beyond the preschool setting.

Guidelines are available that provide suggestions for creating accepting environments for young children (Sandall & Schwartz, 2008). In addition, teachers can use specific strategies within early childhood settings to actively promote acceptance of children with delays or disabilities. Prior to the transition of a child with a delay or disability into a general early childhood classroom, teachers can prepare children without disabilities by providing information about the child with the delay or disability (Favazza & Ostrosky, 2016; Lane, Stanton-Chapman, Jamison, & Phillips, 2007). Effective strategies for increasing understanding and promoting acceptance of children with diverse abilities include the use of active and independent involvement in activities for children with delays or disabilities; access to cooperative activities, stories, and guided discussions that highlight similarities as opposed to differences and structured social opportunities; or a combination of these activities (Favazza & Ostrosky, 2016; Ostrosky, Mouzourou, Dorsey, Favazza, & Leboeuf, 2013).

Favazza and Ostrosky (2016) found that kindergartners who had contact with children with delays or disabilities expressed low levels of acceptance of children with delays or disabilities. After a six-week intervention, the same kindergartners who were provided with stories and guided discussions about children with disabilities and opportunities for



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▲ Adults can often facilitate understanding and acceptance of children with disabilities.

social interaction with children with delays or disabilities had more accepting attitudes than children who did not have these types of experiences. When these same children were assessed two years later, the positive attitudes were maintained. The authors speculate that what contributed to this long-term acceptance was the children's exposure to these components, as well as the fact that the stories and guided discussions about children with disabilities also were provided to the parents of the children without disabilities. In this way, teachers and parents alike were involved in promoting acceptance of children with diverse abilities.

In addition to actively promoting acceptance through interventions within a center-based program, early childhood special educators, other professionals, and families can examine the environment to determine if children without disabilities are exposed to individuals with special needs (DeArment et al., 2016; Favazza & Ostrosky, 2016). We recommend that teachers examine their classrooms to determine if children with disabilities are represented in toys, displays, materials, and media, and *how* they are depicted (in ways that highlight similarities? as contributing members of society? in a variety of roles?). In addition, teachers need to be discriminating when selecting materials such as books about children with disabilities. It is important to select books that promote acceptance and emphasize similarities as opposed to differences and disabilities (see Table 9.1). Research clearly indicates that placement alone will not guarantee acceptance. However, early childhood special educators, families, and other professionals can actively promote acceptance and create more accepting environments by utilizing some of the previously mentioned strategies.

The Provision of Prompts and Praise

“Practitioners plan for and provide the level of support, accommodations, and adaptations needed for the child to access, participate, and learn within and across activities and routines” (Division for Early Childhood, 2014, p. 11) [DEC Recommended Practices INS4]. Teacher-mediated or direct instruction involves choosing the behavior to be taught. The early

childhood special educator selects a specific time to teach a behavior directly to the child. Through discussion, instructions, demonstration, modeling, and the use of concrete examples, the teacher/adult provides direct instruction and practice opportunities. The teacher/adult then follows the instruction with prompts and praise. Prompts and praise are strategies that teachers/adults can employ to promote engagement within the inclusive preschool setting. Praise can be defined as a verbal reinforcement (“I like the way you are sharing those blocks”) or a tangible reinforcement (stickers, access to desired activities, or “happy faces”). **Praise** is an effective technique for promoting child engagement among children who have special needs. **Prompts** are defined as any assistance or help given by another person (teacher/adult) to assist young children in knowing how to make a desired response or behavior (Grisham-Brown & Hemmeter, 2017; Sandall & Schwartz, 2008) [DEC Recommended Practices INS7]. Early childhood special educators can identify a variety of prompts by the type of assistance they provide. Common prompts include direct and indirect verbal prompts, model prompts, partial or full physical prompts, spatial prompts, pictorial prompts, and cued prompts.

- *Direct verbal prompts* are simple statements that provide support for a child in a current task. For example, when a child is trying unsuccessfully to turn on the faucet, the early childhood special educator (or parent, adult, or peer) can say, “Try turning it the other way.” This simple statement may be enough for the child to be successful as he or she attempts to turn on the faucet. Direct verbal prompts or instructions should be short, clear, and focused on the behavior. Instructions and verbal prompts should be stated in positive language such as “Point to the big car.”
- *Model prompts* actually supply the child with the desired behavior. The model prompt can be verbal or gestural or a combination of the two. For example, an early childhood special educator may Velcro the child's shoe while saying, “I'll do this one, and you do the next one.” In this way, the child is supported in the dressing activity by a modeled verbal and gestural prompt.
- *Physical prompts* can provide partial or physical support. Guiding a child's elbow as he or she lifts a spoon, cup, or lunch tray is an example of a partial physical prompt. A full physical prompt for the same behavior might involve hand-over-hand assistance with the early childhood special educator holding the child's hands as he or she is grasping the object (spoon, cup, or tray).
- *Spatial prompts* involve placing an object in a location that will more than likely increase a desired response. For example, placing paper towels (for wiping paint off of hands) near the sink and placing clips on the clothesline where children will go to hang their completed artwork are examples of spatial prompts.

TABLE 9.1 • Teacher Resource: Representative Books Portraying Children With Disabilities

| Title | Author, Date, Publisher | Description |
|--|--|--|
| <i>All Kinds of Friends, Even Green!</i> | Ellen B. Senisi, 2002, Woodbine House | A boy in a wheelchair writes about two iguanas. While one iguana has a physical difference, he can do the same things as other iguanas. |
| <i>Andy and His Yellow Frisbee</i> | Mary Thompson, 1996, Woodbine House | Andy, a boy with autism, has problems making friends and talking to people. A girl at school realizes she can become friends with Andy. |
| <i>Be Quiet, Marina!</i> | Kristen DeBear, 2014, Starbright Books | Two young girls, one with cerebral palsy and one with Down syndrome, overcome their frustrations with each other and become friends. |
| <i>Can You Hear a Rainbow?</i> | Jamee Riggio Heelan, 2002, Rehabilitation Institute of Chicago | Chris is deaf and uses hearing aids. He uses sign language and reads lips to communicate, while also doing all the things other children do. |
| <i>Cookie</i> | Linda Kneeland, 1999, Turtle Books | Molly cannot talk and learns sign language to tell her parents she wants a cookie. Using sign language makes her life much easier. |
| <i>The Deaf Musicians</i> | Pete Seeger and Paul Dubois Jacobs, 2006, G. P. Putnam's Sons Books for Young Readers | A group of deaf musicians frequently plays in the subway attracting crowds, showing that deaf musicians can make music also. |
| <i>Don't Call Me Special</i> | Pat Thomas, 2005, Barron's Educational Series | The author explains things children with disabilities can do, describes adaptive equipment, and discusses when to help or avoid helping. |
| <i>Extraordinary Friends</i> | Fred Rogers, 2000, Puffin | The author explains that when children meet people who are different, they should not be afraid to talk to them or to learn more about them. |
| <i>Ian's Walk</i> | Laurie Lears, 1998, Albert Whitman & Company | Ian, a boy with autism, gets lost at the park. His sister realizes the best way to find him is to see things through his eyes. |
| <i>Moses Goes to a Concert</i> | Isaac Millman, 2002, Square Fish | Moses, who is deaf, goes to a concert where the percussionist is also deaf. He learns that she plays drums by feeling vibrations. |
| <i>My Friend Isabelle</i> | Eliza Woloson, 2003, Woodbine House | Two friends (one with Down syndrome) are very different but still have a lot of fun together and share a great friendship. |
| <i>Sarah's Surprise</i> | Nan Holcomb, 1990, Jason & Nordic Publishers | A young girl who cannot speak is upset when she cannot sing happy birthday to her mom. She learns to sing using her communication device. |
| <i>Someone Special, Just Like You</i> | Tricia Brown, 1995, Henry Holt & Co. | The author highlights that children with disabilities such as blindness, deafness, or Down syndrome can do the same things as their peers. |
| <i>Susan Laughs</i> | Jeanne Willis, 2000, Henry Holt & Co. | A young girl with a physical disability dances, sings, hides, and shows emotions such as happiness and sadness. |
| <i>The Night Search</i> | Kate Chamberlin, 1997, Jason & Nordic Publishers | A young girl who is blind does not want to use her cane. After getting lost, she realizes that a cane is a valuable tool for helping her find her way. |

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|------------------------------------|--|--|
| <i>We Can Do It!</i> | Laura Dwight, 2005, Starbright Books | Five young children with varying abilities do things differently while also successfully participating in a variety of activities. |
| <i>We'll Paint the Octopus Red</i> | Stephanie Stuve-Bodeen, 1998, Woodbine House | A boy is born with Down syndrome. His sister worries her brother will be different but learns he will be able to do many things she also enjoys doing. |

Source: Adapted from P. Favazza and M. Ostrosky, *The Making Friends Program: Supporting Acceptance in Your K-2 classroom* (Baltimore, MD: Paul H. Brookes, 2016). Adapted from M. Ostrosky, C. Mouzourou, E. Dorsey, P. Favazza, and L. Leboeuf, "Using children's books to support positive attitudes toward peers with disabilities," *Young Exceptional Children*, 18(1), 2013, pp. 30-43.



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▲ Prompting is a strategy frequently used to teach skills to young children with delays or disabilities.

- *Visual/pictorial prompts* involve providing assistance through the use of pictures (drawings, photographs, Rebus cue cards, picture symbol systems), colors, or graphics. Using different colors for different children or placing a red mark or the letter C on Cathy's cup are examples of visual prompts. Placing photographs depicting the steps to hand washing above the sink is a pictorial prompt.
- *Cued prompts* can be verbal and/or gestural and involve drawing direct attention to a specific aspect or dimension of a stimulus or task. Two examples of a cue are "Pick up your paintbrush (or spoon)" and "It's time to paint (or eat)" while pointing to the handle of the brush (or spoon). Cued prompts are used to focus on the most relevant characteristic or dimension of the stimuli.

There are several important points to remember when using praise and/or prompts (Sandall et al., 2005). These include the following:

1. Early childhood special educators should carefully plan for the provision of praise/prompts. Prompting strategies are effective in a variety of settings for

infants, toddlers, preschoolers, and primary-level students. However, teachers and other adults should remember that prompting is a strategy used to teach a skill. As soon as the skill is mastered, a plan to remove the prompting should be incorporated so that the child can work toward independence in doing the skill. Prompting should not be applied when it is not necessary to support the child's behavior. Providing unnecessary prompts could result in a child becoming overly dependent on the adult and decreasing his or her own level of independence.

2. Early childhood special educators and other adults should be certain that they have the child's attention when presenting a prompt or praise. The impact or effectiveness of a prompt or praise may be lost unless the child is paying attention and actively engaged in the activity.
3. Prompts should be selected and subsequent praise provided that is the least intrusive while at the same time the most effective for the individual child. For example, a cued prompt (touching the paintbrush) or physical assistance (moving the child's hand to the brush) with a young child with a visual impairment may be less effective and more intrusive than a verbal prompt of "We are going to paint. Everyone, find a paintbrush. Wow! Now we are ready to paint." Not only are the prompt and subsequent praise likely to be successful in assisting the child, but they do not single out the child from the rest of the group at the art table, and a spatial prompt (the paintbrush) has been provided for everyone.
4. The prompts or praise can be changed or faded as the situation warrants. Ideally, a child should perform a task with fewer and fewer prompts and less praise provided. This implies that the teacher or other adults should keep a careful watch on the effectiveness and necessity of prompts and praise to sustain the child's behavior. If a particular strategy is not effective or is not producing the desired results, teachers should shift to another prompt/praise strategy.

5. Early childhood special educators should always consult with the related service personnel (speech-language pathologist, occupational therapist, physical therapist) before applying prompts or changing prompts that they have recommended. Changes in child prompts could be harmful to a child or counterproductive to the objectives that the various therapists have recommended. In addition, it is important to have the same expectation for the use of prompts/praise provided by all adults (teachers, teaching assistants, parents, other professionals).

Accepting Different Levels and Types of Participation

The teacher-mediated strategy of accepting different levels and types of participation allows a child with diverse abilities to become more engaged in a group activity. Children learn best in small groups (Harris & Gleim, 2008). The approach requires the teacher to make adjustments in his or her expectations about levels or ways a child participates in group activities. When a child is unable to participate at the same level as his or her peers in a group activity, the expectations for participation can be adjusted. When a child uses only a portion of the response, it is referred to as **partial participation**. Examples of partial participation include the following: In a game of Simon Says, the leader says, “Touch your toes.” The child extends his hands downward but does not touch his toes. In another situation, the early childhood special educator accepts a single-word response as opposed to a whole- or partial-sentence response in a group discussion. For example, during sharing time, a teacher may have two children come to the front of the group. The early childhood special educator prompts the first child to ask the other child questions about an object brought for sharing time. The prompted questions could be “What do you have?” “What do you do with it?” and “Where did you get it?” The questions for the second child could be shortened to his or her accepted level of participation with verbalizations like “What have?” or “Have?” “What do?” or “Do?” and “Where get?” or “Get?”

Adapted participation occurs when a child may use an alternative means to participate. Examples include a child who orients his head or eye gaze instead of pointing or verbalizing, a child with speech delays who uses a communication board, a youngster with a visual impairment who plays with a sensory ball that emits an auditory signal, or a child with an autism spectrum disorder who uses a structured work system to promote classroom participation in small group activities (Carnahan, Harte, Schumacher-Dyke, Hume, & Borders, 2011). These are all examples of adapted participation that enable a child with a delay or disability to fully participate in group activities. For principles to integrate technology in the classroom for young children with special needs, see the Teacher Technology Tips feature.

Monitoring Communicative Input

Monitoring communicative input is another strategy that enables children with diverse abilities to participate in group activities. The adjustment of the timing and complexity of the teacher or other adult’s communication can have an impact on a child’s ability to interact within group activities. Examples include the use of simple vocabulary and shorter sentence length, a variation in intonation and rate of speech, contingent responses, and scaffolding. For example, while young children learn word meanings of objects, people, and actions that are in their immediate surroundings, they usually can understand and attend to input that is slightly above their level of comprehension. Videotaping a group activity is an excellent strategy for examining the level of communication used when speaking to children. Is it understandable by all children? Does the teacher need to alter his or her communicative input by simplifying the vocabulary or shortening the length of sentences in directives? In this way, the adult matches the receptive and cognitive levels of the child and thus enhances the possibility of every child’s participation in group activities. Likewise, videotaping parents or other family members when playing with a child is another way to use this strategy with younger children and provide consistency in communicative input across caregivers.

Varying the speaker’s intonation level may provide cuing to certain tasks. For example, an early childhood special educator may state, “We are going outside today,” with appropriate intonation and enthusiasm placed on the words *going* and *outside*. Providing verbal input to a child at a slower rate may allow for more processing time and provide more precise cues for relating language to actual events. For example, when giving directions to a child, a pause while the child is moving through the steps enables the child to process each individual step along the way. In a hand-washing activity, an early childhood special educator could say, “Go to the sink.” (Pause as the child moves toward the sink.) “Turn on the water.” (Pause while the child reaches the sink and turns on the water.) “Wash your hands.” (Pause while the child washes her hands.) This strategy could be coupled with task analysis when addressing self-care skills with younger children.



Steve Debenport/Stock

▲ Children learn best in small groups.

TEACHER TECHNOLOGY TIPS

PRINCIPLES FOR INTEGRATING TECHNOLOGY

1. Start with the child. Technology should be considered for all children with delays or disabilities. Let the individual needs of the child and the demands of the curriculum drive the selection of the technologies and the ways they are used.
2. Consider all areas of development. Technology applications can be applied to natural learning opportunities and enhance participation in the natural or inclusive environment. Consider the following areas: (a) motor, (b) communication/language, (c) cognitive, (d) social interactions, and (e) adaptive.
3. Consider technology to increase children's ability to participate in less restrictive environments. Use both high-tech and low-tech options such as voice output, picture and word cues, touch screens for tools for prewriting and early literacy, and making choices.
4. Consider age and developmental appropriateness for choosing technology use with young children. Ask for input from other professionals (occupational therapist, physical therapist, speech–language pathologist).
5. Customize the technology. Features such as the ability to control the content and instructional parameters make it easy to adapt activities to the children's needs.
6. Monitor children's work on the computer or with other technologies. Use performance data collected by the technology in making intervention and instructional decisions.
7. Consider the functionality of the technology. Address the level of the children's independence when selecting the technology.
8. Consider the environment in which the technology will be used. Look for available supports if needed and address any challenges that might hinder successful use.
9. Teach children to use technology as a tool. Provide opportunities and encouragement for practice. Technology can help children compensate for delays or disabilities and allow for achievement of greater levels of independence.
10. Extend the benefits of technology to teachers, families, and other professionals. Technology is an important tool for adults, as well as children.

Source: Adapted from R. Gargiulo and E. Bouck, *Special Education in Contemporary Society*, 6th ed. (Thousand Oaks, CA: Sage, 2018); R. Gargiulo and D. Metcalf, *Teaching in Today's Inclusive Classrooms: A Universal Design for Learning Approach*, 3rd ed. (Boston, MA: Cengage Learning, 2017); K. Stremel, Technology Application. In S. Sandall, M. Hemmeter, B. Smith, & M. McLean (Eds.), *DEC Recommended Practices: A Comprehensive Guide for Practical Application* (Longmont, CO: Sopris West, 2005); National Association for the Education of Young Children & the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College, (2012), *Technology and Interactive Media as Tools in Early Childhood Programs Serving Children From Birth Through Age 8*. Available at <https://www.naeyc.org/resources/topics/technology-and-media/resources>.

Peer-Mediated Strategies

Peer-mediated strategies are a collection of procedures that involve the use of peers to promote the learning and behavior of children with delays or disabilities (Grisham-Brown & Hemmeter, 2017; Schwartz & Woods, 2015) [DEC Recommended Practices INS8]. This may involve having peers model specific behaviors. Peers may be taught how to initiate social interactions with children with delays or disabilities. This may involve teaching peers to respond to social interactions from children with delays or disabilities or to serve as a tutor. Peer-mediated strategies have been effective in promoting social and communication skills and accruing a positive outcome for young children with delays or disabilities (Stanton-Chapman & Hadden, 2011). Peer-mediated strategies involve carefully selecting peers who are typically developing, teaching selected peers specific ways to engage their classmates with disabilities, encouraging the peers to persist in their attempts with children with delays or disabilities, providing structured opportunities for the children to interact with one another



▲ Peer-mediated strategies are often effective in promoting social and communication skills in young children with disabilities.

so as to use the skills taught, and providing support (reinforcement and prompts by adults) during the structured

opportunities. Two types of strategies that utilize peers to mediate learning will be discussed: peer-initiation interventions and cooperative learning.

Peer-Initiation Interventions

The interventions that are among the most effective for increasing social behaviors such as initiating, responding, and sharing are peer-mediated strategies (Barton, Reichow, Wolery, & Chen, 2011). An early childhood special educator selects peers who are typically developing who are known to be highly social, attend school regularly, have little or no history of negative interactions, have adequate attention spans and the comprehension to participate in the training sessions, and have the willingness to participate in the special play groups.

The early childhood special educator instructs the selected peers about ways to interact with children with delays or disabilities, such as how to initiate an exchange (“Ask for a toy” or “Ask Sam to play with you”) or suggest a play theme (“Let’s play grocery store. You be the clerk”). After practicing the strategies with the teacher and other peers who are typically developing, the children are then given brief structured play opportunities (ten to fifteen minutes in length) for using the strategies with classmates with delays or disabilities. When creating structured play sessions, the early childhood special educator or other adults carefully arrange the environment to promote interactions. (See the previous section in this chapter on environmental arrangements.) For example, during an art activity, the teacher/adult provides the supplies and suggests that the children make a picture to hang in the classroom. The teacher then prompts the peers to model cooperative behaviors such as sharing (“Please give T. J. a paintbrush”); requesting materials (“Maria, say, ‘Please give me the blue paint’”); complimenting other children (“That’s a colorful rainbow”); and making suggestions to the group (“You can add clouds to the sky, Sam”).

During the structured play sessions, the teacher/adult remains close by, providing prompts and reinforcement as needed. Instructional resources are available that provide guidelines for promoting social and communication skills such as sharing, initiating, responding, learning alternative ways to initiate, and utilizing persistence in social attempts. The following five suggestions are for early childhood special educators and other adults to use when implementing naturalistic interventions or incidental strategies with typically developing peers and children with delays or disabilities:

1. *Observe to identify peer models.* Pair a child with a disability with a more skilled partner.
2. *Set up a novel or preferred high-priority activity.* Children are attracted to activities that are new and different in the classroom or other settings. For example, children with autism spectrum disorders may respond positively when a preferred or high-priority activity is offered. Use small, well-defined

play areas for activities like building, dramatic play, and computer use.

3. *Invite a peer to join an activity.* Introduce and facilitate the play activity with typically developing children as well as children with delays or disabilities (Stanton-Chapman & Hadden, 2011).
4. *Help children to enter activities.* Children with delays or disabilities often do not know how to enter an activity or begin to engage in play with others. Early childhood special educators may model social skills, such as obtaining another child’s attention, responding to another child, requesting desired items, and negotiating the play process.
5. *Position children to maximize interaction.* Pay attention to where the adults and children are seated. Make sure children are in close proximity to one another to maximize interaction opportunities. Place a peer with more advanced skills next to a child with disabilities.

Teachers/adults should be encouraged to adapt strategies according to the individual needs of the children in the particular class or setting. For example, children with delays or disabilities may need to be taught alternative means of communication (the use of a communication board) or gestural methods of initiating a response (tapping a peer who has a hearing impairment, waiting until the peer is looking before speaking).

Cooperative Learning

Another strategy that can utilize peers to mediate learning and child engagement is **cooperative learning**, which is defined as an intervention strategy in which small groups of heterogeneous learners are actively involved in jointly accomplishing an activity (Gargiulo & Bouck, 2018). The goals of cooperative learning are to foster cooperative interaction, to teach cooperative learning skills, and to promote positive self-esteem. Research has supported the effectiveness of cooperative learning in promoting positive social interactions



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▲ Cooperative learning can promote social and communication skills.

between children with and without disabilities. Cooperative learning can be used as a strategy for promoting social and communication skills of preschoolers with disabilities in a typical preschool setting. Preschool and early primary children with delays or disabilities will have more opportunities to practice skills in social and communication behaviors (taking turns, asking/offering assistance) when placed in cooperative learning situations in inclusive classroom environments. Gargiulo and Bouck (2018) emphasize that cooperative learning is an effective strategy for integrating learners with delays or disabilities into the general education classroom.

According to Lewis, Wheeler, and Carter (2017), cooperative learning has been shown to increase opportunities for children with disabilities to experience success in the classroom environment. Cooperative learning uses the social dynamics of the group to support social interactions and friendships, teaches children to encourage one another, and celebrates the success of peers. The four essential elements of cooperative learning include positive interdependence, communication (or face-to-face interactions), accountability of all members, and group process (with emphasis on interpersonal skills) and are described below:

1. *Positive interdependence is promoted.* Members of small groups work together and depend on each other to complete the task.
2. *Communication is required.* To achieve the common goal, the early childhood special educator can encourage or facilitate interactions and communication among the group members as necessary. Materials can be strategically placed to require members to ask for them.
3. *Accountability is expected.* Every member of the group is responsible for contributing to the final product. Within the activity, each child with a disability could have his or her individual objectives embedded into the activity. While children may be working on a common project, the objectives may vary according to the needs of the individual child.
4. *Group process is expected.* As two or three children work together, they are expected to follow basic formats such as taking turns, listening, initiating, and responding.

In addition to these strategies, Noonan and McCormick (2014) provide several suggestions for adapting cooperative learning for use with young children with delays or disabilities, which include the following:

- A unit with clear objectives should be selected, listing the cooperative skills to be taught.
- A series of lessons or activities can be planned in which the embedded skills will be taught.
- Children can be assigned to dyads or three-member groups that remain intact for the duration of all

lessons/activities within the unit (one child with a delay or disability should be within the dyad).

- Cooperation should be encouraged by the way materials are distributed.
- Activities should be prefaced with specific explanations and demonstrations of what it means to be cooperative (“Sit next to your partner” or “Take turns with the glue”).
- Children should be assisted and monitored carefully, providing prompts and praise as warranted.
- The child should be evaluated and provided with feedback (“Did you like working together?” “What was the hardest or easiest part?” “How does it feel when you help a friend?” “Who helped you?”).

Cooperative learning may be better suited for older preschoolers or early primary-grade students, and the teacher/adult may need to be more involved the first few times that cooperative learning is used to ensure that children understand the nature and process of the activity. Clearly, more research is needed in this area to determine how cooperative learning in early childhood settings could better utilize peers as models, guides, and partners in learning. For an example of the use of cooperative learning strategies within an early primary classroom, see the accompanying Making Connections feature.

Routine-Based Strategies

Routine-based strategies take advantage of already occurring events and predictable routine activities such as snack time, diapering, or circle time, play, and transitions (Johnson, Rahn, & Bricker, 2015; Schwartz & Woods, 2015) [DEC Recommended Practices IN5]. Many routine-based strategies are appropriate for use with infants as well as toddlers, preschoolers, and early primary students.

For routine-based strategies to be successful, early childhood special educators and parents need to understand that daily activities that have a specific purpose (snack time is for eating) can also serve as an instructional time. For example, snack time also could be a time for promoting fine motor skills such as reaching or using the neat pincer grasp to eat raisins, Cheerios, or cheese cubes, as well as gross motor skills such as trunk control. The same activity could be used to promote communicative attempts such as verbally or gesturally requesting “more,” making a choice when asked, “Do you want an apple or an orange?” and responding by pointing, signing, or saying “Apple.” Therefore, before starting routine-based instruction, it would be important that all involved with the child (teachers, assistants, parents, other professionals) are able to recognize the variety of skills that can be promoted within the same routine activity.

Play-Based Intervention (Strategies)

As described in previous chapters, play is a logical and natural activity for incorporating skills of children with disabilities.



MAKING CONNECTIONS

USING COOPERATIVE LEARNING AND ACCOMMODATIONS IN A PRIMARY CLASSROOM

Cheryl Chinn is a first grader introduced to us in the vignette in Chapter 2. Cheryl is a child with a diagnosis of attention deficit hyperactivity disorder. Her parents, teacher, and school staff team developed a Section 504 plan with accommodations designed to help her remain on task during instruction. Additionally, Cheryl needs extra time and less work per assignment. She has a homework notepad that goes home daily to increase the outcome of completed class work and homework assignments. In class, Mrs. Newman, Cheryl's teacher, has taken advantage of some other accommodations that have been successful for Cheryl. For example, during math meeting or reading circle time, Cheryl is most often seated close to Mrs. Newman. Having this environmental accommodation of proximal seating allows Mrs. Newman to monitor Cheryl's off-task behaviors quickly and quietly to keep her on task more often. Mrs. Newman uses Cheryl as the book holder or page turner to keep her

actively involved with the instruction. Throughout the day, Mrs. Newman chooses a peer helper to work with Cheryl. In math centers or quiet reading time, Cheryl and her peer partner often go to a quiet part of the room. Mrs. Newman is careful when she chooses the peers and has three to five students whom she routinely picks who are good role models for Cheryl. This peer intervention technique has been successful, as Mrs. Newman has noted that Cheryl will follow the peer's model. Also, on the playground at recess, Cheryl has been observed to play consistently with these peer models in an age-appropriate manner. Finally, when working on class projects for science, social studies, or unit time, Mrs. Newman uses cooperative learning activities. She is careful in placing Cheryl in a group where she can contribute her talents and observe good work and study habits. All of the above strategies have had a positive effect on Cheryl's classroom performance.

Play provides an avenue for children to master their thoughts and actions and contributes to children's cognitive, physical, and social/emotional development. Through play, children have opportunities for learning through exploration, self-expression, imitation and imagination, interpretation of situations, negotiation of relationships, and utilization of social and communicative behaviors such as turn-taking, sharing, initiating, and responding (Schwartz & Woods, 2015; Stockall, Dennis, & Rueter, 2014).

Linder (2008) has developed **play-based interventions (strategies)** for incorporating and promoting skill acquisition in the play arena. This approach utilizes a transdisciplinary model (see Chapter 4) whereby all service providers (early childhood special educators, assistant teachers, occupational therapist, speech-language pathologist, physical therapist) and parents or other family members observe and assess the child during play. Each service provider supplies information about the child related to his or her discipline area while watching the child at play with peers or an adult. The goals for the child are developed based on this transdisciplinary-based assessment and incorporated into the child's playtimes while at school. Using this approach, related service personnel provide support and consultation to teachers for promoting and supporting child goals in regularly occurring playtimes. The transdisciplinary approach is characterized by sharing of expertise through frequent, ongoing communication with all caregivers and training these caregivers to implement interventions. For example, if a toddler exhibits delays in fine motor skills, the occupational



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▲ Instructional goals can often be embedded in play activities.

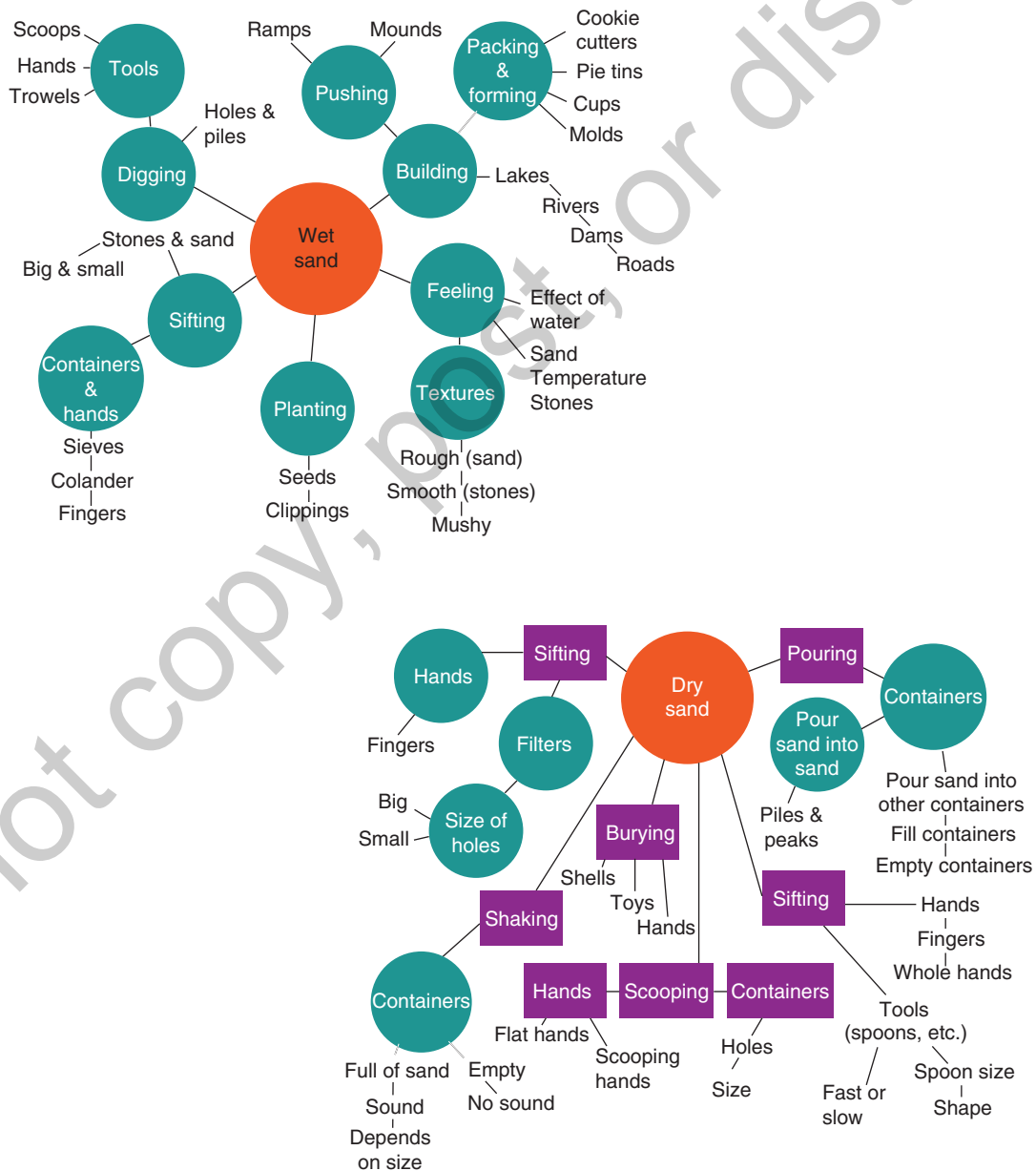
therapist would provide information and training to the family, teachers, and other adults on how to address these skill areas during play activities at home and in the program or classroom the child attends [DEC Recommended Practices INS1, INS3, INS13, and TC1].

Embedded child-directed play provides an excellent resource for teachers/adults to integrate concepts and instructional goals of children with diverse abilities into play. For example, using wet and dry sand, fine motor skills (digging, shaking, grasping) and cognitive and communicative skills (vocabulary, concepts such as wet, dry, under, fast, slow, size, texture) are incorporated into sand play (see Figure 9.1). A

teacher/adult could examine typical play activities in the preschool setting (Play-Doh, water play, dress-up, transportation toys) and generate a variety of skills that can be addressed within the play setting (Johnson et al., 2015). Likewise, the early childhood special educator can assist parents in examining play materials at home, and together they can generate ideas for promoting skill acquisition.

When setting up activities, it is important to provide a range of difficulty in order to support active engagement. This strategy enables all children to be successful by participating at their own level with a variety of materials. For example, providing some puzzles with pegs for easy grasp,

FIGURE 9.1 • Play-Based Instruction



Source: From K. Dolinar, *Learning Through Play* (1e). © 1994 Cengage Learning, Inc. Reproduced by permission.

others without knobs, some with two to three pieces, and others with seven to eight pieces allows many options for children with varying levels of fine motor abilities. During art, a variety of drawing implements (brushes with adaptive grips or of different sizes) can be provided, or within the social-dramatic play area, clothing of different sizes with a variety of fastening devices (snaps, buttons, zippers) and shoes that slip on, buckle, have Velcro straps, and lace up can be provided. In this way, teachers/adults can structure an activity to address the diverse abilities of children that will ultimately challenge and provide success for all.

Activity-Based Instruction or Intervention

Johnson et al. (2015) define **activity-based instruction or intervention** as “an approach that uses behavioral principles to encourage child interaction and participation in meaningful (authentic) daily activities with the explicit purpose of assisting the child in acquiring, generalizing, and strengthening functional skills” (p. 4). While it was designed to be used with children with disabilities, it can easily be adapted for use with all children in an inclusive setting. Activity-based instruction uses the child’s interest while addressing goals and objectives in routine, planned, or child-initiated activities. Activity-based instruction takes advantage of naturally occurring antecedents and consequences to develop skills that are functional and can be generalized across people and settings.

Two features of this approach are effective when working with young children. First, multiple goals from a variety of the developmental domains can be addressed in one activity. Additionally, the approach provides reinforcement for children for participating in planned activities that are motivating to them. It requires careful planning of the schedule to ensure that activities will occur throughout the child’s day in which the child’s goals can be addressed. Johnson et al. (2015) demonstrate how a typical preschool classroom schedule can provide multiple opportunities to address a child’s targeted goals. (See the accompanying Making Connections feature.)

This is an excellent strategy for infants and toddlers whose objectives can be embedded into daily routine activities at home or in center-based programs. In this way, the likelihood of skill generalization is increased as instruction occurs across settings within activities where the behaviors naturally occur. For example, a parent can address grasping and across-the-midline reaching with an infant or toddler with cerebral palsy by careful placement of a cup of favorite juice during snack time or a favorite toy during bath time. There are many aspects of activity-based instruction that make it appealing to programs as they implement developmentally appropriate practices. Children with motor or communication delays who utilize forms of assistive technology in the home or classroom can benefit from an activity-based approach. Various adapted toys, mobility items, and communication devices can be embedded to be used in naturally occurring situations. In addition, an activity-based approach capitalizes on goals that are individually appropriate, utilizes naturally occurring events and reinforcers as opposed to applying artificial activities or

reinforcement, capitalizes on child-initiated transactions, and can be used by early childhood professionals and families alike in addressing child goals. (See the Teacher Technology Tips feature.)

Changing the Content of an Existing Activity

Changing the content of an existing activity is another strategy for embedding child goals into routine activities. For example, appropriate expression of and response to affectionate behavior may be a goal for a young child with an autism spectrum disorder who has difficulty demonstrating and receiving affection (hugs, pats on the back, handshakes). Research suggests that the modification of well-known games or songs is effective in promoting affection activities because children are paired with peers in pleasurable, nonthreatening activities, and there appears to be a desensitization to peer interaction during these activities (Vaiouli & Ogle, 2015). Early childhood special educators can use common group games and songs such as Simon Says and “The Farmer in the Dell” to incorporate affection activities (hugs, pats on the back, handshakes, high fives), and other songs can be used such as “When You’re Happy and You Know It” that include such phrases as “Shake a friend’s hand, give a friend a hug, pat your friend on the back.” As a result of this change in the routine song, children interact more with one another within group activities and during playtime, which often carries over to subsequent activities. At bath time, one dad chose to sing to his toddler, “This is the way we wash our tummy, wash our tummy, wash our tummy [foot, hand] early in the morning.” The goal was to increase the child’s language. The dad was providing names of body parts and naming the behavior (washing) within an enjoyable routine activity.

Transition-Based Instruction

Transition-based instruction is another example of using daily routine as an opportunity for learning. In using this strategy, the teacher/adult presents an opportunity for participating within the group while children are transitioning to other activities (Johnson et al., 2015; Sandall & Schwartz, 2008; Vaiouli & Ogle, 2015).

There are several advantages to using routine activities/games/songs to incorporate skills. Examples of regularly occurring transitions include going from free play to the snack table, lining up for outdoor play, and arrival and departure times. During this transition time, the teacher/adult obtains the attention of the children and asks them to respond to questions (“What is this?” or “I spy something yellow; what could it be?”) that match their level of functioning. This is an activity that is effective in teaching pre-academic skills such as letter names, shapes, and colors, while utilizing the frequently occurring transitions in children’s daily routines. Some children may respond by saying the word, others may respond with a word approximation, and others may use an initial letter sound. Likewise, singing songs during transition times is a strategy that allows for group responding at a variety of levels. In addition,



MAKING CONNECTIONS

ACTIVITY-BASED INSTRUCTION OR INTERVENTION

Date: April 2, 2018

Teacher's Name: Miss Linda

Child's Name: T. J. Browning

Write the classroom schedule in the left-hand column. Write the child's learning objectives across the top row. Fill the appropriate cells with a brief version of the plan for embedding the objective into the daily schedule.

| | Uses Short Phrases of Four to Five Words | Verbally Sequences Three Events in Sequence (Simple Stories) | Correctly Responds to "Wh" Questions | Shares or Exchanges Objects With Peers | Follows Adult Instructions | Participates in Activity for Ten Minutes | Prints First and Last Name |
|--------------------------------|--|--|---|--|--|--|-------------------------------------|
| Arrival | Greets adults, peers | | Responds to "What did you do last night?" | | | | |
| Planning | | Uses unit book for retelling | Uses unit book for questions | Participates in free play with two peers | | Attends morning group | |
| Work | Requests materials | | | Uses paired activities | Sorts dishes, building toys | Utilizes choice/preferred materials | Uses raised line paper |
| Recall | | | Recalls days of the week and weather | | | | |
| Snack | Requests preferred snack | Retells steps to make snack | | | Follows adult directions for manners and cleanup | | |
| Outside | | | | Uses paired activities with two to three peers | Follows adult directions for safety and time to go | | |
| Small-/large-group play | Facilitates verbal peer interactions | | | Uses paired activities | Follows center schedule | | Puts name on writing center product |
| Departure | Says appropriate goodbyes | | | | | | |

Source: Adapted from J. Johnson, N. Rahn, and D. Bricker, *An Activity-Based Approach to Early Intervention*, 4th ed. [Baltimore, MD: Paul H. Brookes, 2015].

TEACHER TECHNOLOGY TIPS

USING ASSISTIVE TECHNOLOGY WITH INFANTS, TODDLERS, AND PRESCHOOLERS

Assistive technology devices can be used to increase, maintain, or improve the abilities of all young children with delays or disabilities [DEC Recommended Practices E4 and E5]. Some examples of the ways in which assistive technology can be

used to improve play abilities of young children in early intervention and preschool special education are listed below. For additional illustrations of how assistive technology can benefit young children with delays or disabilities, see Chapter 10.

| | |
|---|---|
| Adapted commercial toys | <ul style="list-style-type: none"> • Highlighters—outline or emphasize to help in focusing a child's attention • Extenders—foam or molded plastic that may help children press small buttons or keys • Stabilizers—Velcro or nonslip materials that will hold a toy in place or connect a communication device to a crib • Confinement materials—planter bases, Hula-Hoops, box tops that keep toys from getting out of the child's field of vision |
| Positioning items | <ul style="list-style-type: none"> • Sling seats, Boppys®, sidelyers, wedges, floor tables, corner seats, Sassy Seats, rolled towels, and exersaucers all support children so that their hands are free to interact with toys more readily |
| Mobility items | <ul style="list-style-type: none"> • Walkers such as toy shopping carts or activity centers with wheels that a child can stand at and push to allow him or her to explore the environment • Low rocking and riding toys |
| Switches, adapted battery-operated toys, and interfaces | <ul style="list-style-type: none"> • Switches that allow for <i>on</i> and <i>off</i> function, battery adapters, timers, latch devices, and series adapters • Adapted computer mouse (for example, BIGmack switch) |
| Computer hardware | <ul style="list-style-type: none"> • Built-in touch screens • Enlarged keys • Alphabetical keyboards • Eye gaze systems |
| Communication items | <ul style="list-style-type: none"> • Devices that use recorded messages to incorporate language into play or provide a way to use a voice to communicate, such as LITTLE Step-by-Step, Say It Play It, Cheap Talk, and GoTalk |

Source: Adapted from S. Lane and S. Mistrett, "Let's Play! Assistive Technology Interventions for Play," *Young Exceptional Children*, 5(2), 2002, pp. 19–27. E. Bouck, *Assistive Technology* (Thousand Oaks, CA: Sage, 2017).

transitions provide an excellent vehicle for using fine motor skills (cleanup activities) or gross motor skills (mobility or ambulation). They do not require using new materials or a change in the existing structure or routine of the day at school or home. They do not require changes in personnel, except informing all personnel of how multiple skills can be incorporated in existing routines. Children with delays or disabilities can receive the attention needed without being singled out from the rest of the group. In addition, transition-based instruction may increase the likelihood

of the generalization of skills when the instruction occurs at the place and time when the desired behavior typically occurs. However, to be effective, routine-based instruction does require preplanning, ongoing monitoring for changes that are needed, and coordination with all personnel involved with the child. Through the use of routine-based instruction, related service personnel can consult with the early childhood special educator and parents, identifying times when child goals can logically be supported and promoted in daily routine activities.



Hero Images/Hero Images/Getty Images

▲ Embedding goals into routine activities is an effective instructional strategy.

Specific Naturalistic (Milieu) Strategies

Milieu strategies (or naturalistic strategies) are ideal for being used in early childhood settings because they reflect developmentally appropriate practice by using procedures that are child directed and teacher guided (Copple & Bredekamp, 2009). Milieu strategies are used to facilitate language skills, social interaction, and other skills that take advantage of prompting strategies, environmental arrangement, and responsive interactions (Grisham-Brown & Hemmeter, 2017). These strategies are effective when they are embedded into ongoing activities. These strategies highlight the DEC Recommended Practices on interaction as they focus on children and adults carefully responding contingently to each other. Variations of these naturalistic strategies include the use of incidental teaching, models and expansions, the mand-model procedure, time delay, and interrupted routines.

Incidental Teaching

Incidental teaching is a naturalistic strategy that has been effective in promoting communication and other skills in young children with diverse abilities (Curiel & Sainato, 2016; Schwartz & Woods, 2015). Incidental teaching is the use of naturally arising situations to teach skills. Incidental teaching is effective when used as a means to encourage peer interactions in the early childhood classroom and other natural settings [DEC Recommended Practices INS2].

Incidental teaching is *always* child-initiated. The environment is structured to increase the probability that the child will initiate an interaction with the teacher or adult [DEC Recommended Practices E3]. When the child initiates, the teacher/adult makes a more elaborate request for a certain behavior. If the more elaborate behavior is forthcoming from the child, the teacher/adult will praise and respond to the child's initiation. If the behavior does not appear to be forthcoming, the teacher/adult can prompt the child, then allow time for the child to respond. Finally, the teacher/adult will respond to the child's initiation. This strategy

takes advantage of children's initiations to promote communicative attempts and model more sophisticated language [DEC Recommended Practices INT3]. In addition to providing models, the teacher/adult can incorporate expansions, mands, and time delays within incidental teaching. The four steps for using incidental teaching include the following:

1. Identify the communication goals of the child and activities or opportune times to address these goals.
2. Arrange the environment to increase the likelihood of initiations from the child. This could involve placing high-interest materials or toys within view, but out of reach; intentionally selecting materials with which the child will need assistance (opening a can of Play-Doh); selecting materials that are new or novel to the child; or intentionally providing materials that have some pieces/parts missing.
3. Within close proximity of the child, watch and wait for his or her initiation.
4. When the child initiates, follow the steps below:
 - a. Focus on precisely what it is the child is requesting.
 - b. Ask for more elaborate language by saying, "Use your words," "What about the ball [swing, Play-Doh, cup]?" or "What do you need?"
 - c. Wait expectantly for a more sophisticated response from the child ("Want ball," "Yellow ball," "Push swing," or "Top off").
 - d. If the child provides more language, praise him or her, expand his or her statement, and provide the desired object or action ("You want the yellow ball"; "Push swing, please"; or "You want the top off").
 - e. If the child does not respond adequately, provide a model coupled with an expectant look and wait again for him or her to respond. Once the child imitates the model, provide what is needed (assistance or the desired object).



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▲ Incidental teaching incorporates naturally occurring events to teach skills.

The Model and Expansion

The model and expansion techniques involve providing the child with a verbal or gestural model and an expansion with new information. For example, after showing the child the desired object (ball, cup of juice), the teacher/adult says, “Ball” or “Say ‘ball.’” The teacher/adult then pauses expectantly, looking at the child. Once the child gives the desired response, the teacher/adult provides the desired object or action and an expansion of what the child said (“OK, you want the *blue* ball”).

The Mand Model

The mand-model technique differs from the previously mentioned incidental teaching strategies. Mand-model strategies are initiated by the teacher/adult and not the child. The mand-model technique involves the adult observing the child’s focus of attention and asking a non-yes/no question (a mand). The question presented is about the focus of the child’s attention. The teacher/adult waits for a response. If no response is evident, then a model is provided. The mand model is a directive and, therefore, is a more intrusive technique that can be used successfully in conjunction with and to augment child-initiated activities. The mand model can be embedded easily into children’s play or interactions. This model is often used with children with limited verbal or play skills (Grisham-Brown & Hemmeter, 2017). For example, when a child finishes her juice and obviously wants more (begins looking around for juice or looks inside cup), the adult says, “Tell [or show] me what you want.” The directive is always related to *exactly* what/where the child’s attention is focused at the time. If the child responds, the child is given what she wants and is provided with a verbal confirmation and expansion. Using the previous example, if the child responds by saying “Juice,” the adult could say, “Oh, you want the *orange* juice,” “Oh, you want *more* juice,” or “You want the *delicious* juice.” In this way, the adult has confirmed his or her response, given the desired object, and provided an expansion of the response with an additional word or descriptor. If the child does not respond or does not respond correctly, a model of the desired response should be provided for the child immediately followed by the desired object or action. The adult would verbalize, “Say ‘swing,’” then push her in the swing.

Time Delay

Time-delay procedures systematically employ a brief waiting period to teach the child to initiate an interaction and can be embedded into routine activities in the home, the classroom, or other environments. Time delay can refer to three different strategies as identified by Grisham-Brown and Hemmeter (2017):

1. Waiting for a child to initiate a behavior
2. Using constant time delay
3. Using progressive time delay

Simple time-delay procedures can occur throughout a child’s natural routine. An adult simply waits for the child to initiate a behavior. An example could be a mother opening the refrigerator and waiting for the child to initiate communication by asking for juice. Constant time delay occurs when the adult initially provides a prompt for a child to perform and then on subsequent trials delays the assistance for a fixed period of time (constant number of seconds). Progressive time delay occurs when the adult provides a prompt for a child to perform and then on subsequent trials progressively increases the time before giving help. With the application of both constant time delay and progressive time delay, correct responses (with or without a prompt) are reinforced. Time delay is particularly effective in teaching language and response behavior to preschool children and older children with delays or disabilities (Sandall & Schwartz, 2008). For example, a child may be presented with high-preference objects within view but out of reach at the snack table. Once the child shows an interest in an object (juice, food, spoon), the teacher/adult waits briefly for the child to emit a desired behavior (for example, look expectantly at the adult, say “more,” say “juice,” orient eye gaze, reach). The desired behavior or range of desired behaviors is predetermined based on the child’s individual goals. Four steps in a time-delay approach include the following:

1. The teacher/adult faces the child with an expectant look. The desired object should be within the child’s field of vision (favorite toy, snack items, paints, or water play pieces). The adult should encourage eye contact.
2. The teacher/adult should wait a brief period of time (five seconds, ten seconds) for the child to initiate a request.
3. If the child responds, the teacher/adult provides the desired object.
4. If the child does not respond, the teacher/adult provides a verbal prompt (“Want juice”) or a physical prompt (hand-over-hand assistance in reaching toward the desired object) and reinforces the response by providing the desired object (Gomez, Walls, & Baird, 2007).

For an example of the use of a time-delay approach that is embedded within daily instruction, see the accompanying Making Connections feature.

Interrupted Routine

Interrupting a routine activity is another strategy that can be used to promote child engagement and to teach communication, social, cognitive, motor, and self-care skills (Johnson et al., 2015). Daily routines include caregiving routines (diaper changing, snack time, dressing and undressing), social routines (greeting and departure times, waking up from naptime), and activity routines (specific steps or actions that typically occur with a song or game).



MAKING CONNECTIONS

PLAN TO EMBED AND DISTRIBUTE TIME DELAY FOR MARIA'S GOALS

| Steps for Using Time Delay | Using Words to Request | Using Words for Actions | Increasing Muscle Strength and Fine Motor Skills |
|---|---|---|--|
| Step 1: Identify the skills to be taught. | Naming food and drink items. Using “want” or “please” forms. Naming toys when given the choice between two. | Naming actions she is performing (stacking, pushing, drinking, building, drawing, eating). | Using utensils (spoon, fork) and writing tools (crayons, markers). |
| Step 2: Identify the activities and routines for teaching. | Snack, lunch, and when given a choice of toys during free play. | Free play and during play on the playground. | Breakfast, lunch, or snack time and during art or writing activities. |
| Step 3: Decide how many and how often trials will be used. | Every time she makes a nonverbal request. | Ten times per day. At least two minutes and no more than ten minutes between trials. | About four times per day; every time she engages in art or writing activities at centers. |
| Step 4: Select an interval time delay procedure. | Constant time delay—response intervals are all the same length. | Progressive time delay—response time gradually increases over trials or days. | Constant time delay—response intervals are all the same length. |
| Step 5: Identify a task cue and controlling prompt. | Her nonverbal request (sign or gesture) and any choice she is given; the prompt is the verbal model. | Prompt is the verbal model: “Maria, what are you doing?” | Hand over hand at the center or prompt is physical guide. |
| Step 6: Select a reinforcer. | Receives the item she requested. | Continuing to play; praise for approximation or word Maria used. | Item and activity she enjoys and adult praise. |
| Step 7: Determine the number of zero-second trials to use. | Four days of zero-second trials. | Four days of zero-second trials. | Four days of zero-second trials. |
| Step 8: Determine the length of the response interval. | Ten seconds | Increase by one-second increments every two days; stop at fifteen seconds. | Ten seconds |
| Step 9: Select and use a monitoring system. | Count the number of requests, number of verbal requests using a prompt, and number of nonverbal requests. | Count the number of questions, number of action words using a prompt, and number of no responses. | Count the number of steps before the prompt and number of steps wrong before the prompt. |
| Step 10: Implement the plan and monitor use and effects. | Record how many requests occur and if the steps of time delay were completed correctly. | Record how many questions were asked and if the steps of time delay were completed correctly. | Keep track of the number of opportunities of using utensils and art/writing tools in which she was taught and if the steps of time delay were completed correctly. |

Source: Adapted with permission from M. Wolery, [2001]. “Embedding Time Delay Procedures in Classroom Activities.” In M. Ostrosky & S. Sandall, (Eds.), *Young Exceptional Children Monograph Series 3: Teaching Strategies: What to do to Support Young Children’s Development*, Missoula, MT: Division for Early Childhood. Pages 84–85. Copyright © Division for Early Childhood.

There are three ways of applying interrupted routines: providing an incomplete set of materials, withholding or delaying the provision of expected or high-interest items or events, and making “silly” mistakes. Many routines or activities require a set of materials such as clothing when dressing; food, drink, plates, and cups when having a snack; and paints, brushes, and paper during art. The teacher/adult simply sets up the materials for the activity or routine but does not provide all the needed materials in order to prompt an initiation by the child. The adult waits until the child says something about the missing item(s). For this procedure to be effective, the routine should be reinforcing, and it must require a known set of materials.

Withholding or delaying an expected action, event, or object is another way of applying interrupted routines. For example, during the finger play “Eensy Weensy Spider,” the adult “forgets” to do the next action in the sequence of hand motions. Or during snack time, the adult passes out the napkins and juice cups but withholds the crackers and tells the children, “Eat your crackers.” The omitted action or object will likely result in a protest response from the child or children. Purposefully withholding the object from one child could also prompt his peers to tell the child, “Tell Miss Micki that you did not get crackers.”

Making “silly mistakes” involves violating the function of an object or what children know to be the correct action or word. Examples of “silly mistakes” while dressing include putting shoes on hands or hats on feet. Also, the dad who routinely sang as he bathed his toddler changed some of the words once the routine and words were familiar to the child. He would sing, “This is the way we wash our hands,” while he was washing the child’s tummy. As he made the silly mistake, he looked at the toddler with an expectant gaze (raised eyebrows, mouth and eyes wide open), waiting for



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▲ Caregiving routines provide opportunities for developing a wide variety of skills.

the toddler’s protest, “Tummy, Daddy! Tummy!” Another example with older children would be to give the wrong response in a counting or color identification activity. These types of exchanges can increase child engagement and communication but require that the children know the correct or expected behavior.

When considering routines in which to use the interrupted routine strategy, the following characteristics need attention: (a) The routine should be established so that the child can anticipate the steps in the routine; (b) the routine should involve a variety of high-interest objects; (c) the whole routine should be completed quickly to increase the potential for multiple interactions; and (d) the routine should be functional to increase the probability of generalization. (See the Making Connections feature.)



MAKING CONNECTIONS

STRATEGIES FOR ADDRESSING MARIA’S GOALS/OUTCOMES IN NATURALISTIC SETTINGS

Based on the information presented in the vignette on Maria (see page 55) and the information on young children with cognitive delays, a variety of intervention strategies could be used to address the unique needs of Maria in the home setting. For example, Maria has the following goals/outcomes: (a) verbally request items that she wants, (b) use words for actions she is performing (pushing, running, cooking, drawing), and (c) increase muscle strength and fine motor skills, especially her ability to use utensils (spoon, toothbrush) and writing tools (crayons). Based on these goals/outcomes, Maria’s daily schedule could be examined to determine opportunities for addressing these skills in her routine activities. Specifically, during breakfast, lunch, or dinner, Maria could use eating utensils, and during an art activity, she could use a paintbrush,

markers, and crayons. In a discussion with the family, they noted that one of her favorite activities is art. Both of these activities could serve to strengthen her fine motor skills. Also, during each of these activities, materials could be withheld to encourage Maria to request the items she wants and needs. For example, she could be given the art paper without the paint or paintbrushes. The early childhood special educator could request that Maria name the action she is performing during the art activity. If Maria needs a model, the teacher could say, “You are drawing, Maria.” Or “You are painting with the paintbrush.” During mealtime, she could be given her cup without the juice. In this way, she would be provided with multiple opportunities to use the skills she is developing in a naturalistic setting (home) within routine activities.

Summary

This chapter focuses on current interventions and instructional strategies from the field of early childhood special education. Inclusive service provisions and practices for young children with delays or disabilities are highlighted as the method of choice for meeting individual needs in the child's least restrictive environment for the following reasons. First, inclusive practices meet the IDEA mandate for children with delays or disabilities to be educated with their age-appropriate peers without disabilities. Second, when children with delays or disabilities are included in typical classroom activities with early childhood special educators and other professionals providing individualized services and supports, we increase the likelihood of children generalizing and achieving functional and social goals alongside their age-appropriate peers and thereby their independence in future educational settings. Finally, inclusive practices may provide a multitude of opportunities for children with delays or disabilities to achieve active engagement in their educational environment. As stated earlier in this text, it is the responsibility of the collaborative team to create a plan that balances the individual needs of the child with the strategies and supports that will ensure success in meeting the individual goals and outcomes of each child and family.

This chapter began with two themes that continue throughout the text in our discussion of specific teaching strategies. *Evidence-based* and *recommended practices* were defined as methods used to guide early childhood special educators and other practitioners in determining *how* to choose the appropriate intervention or instructional strategy for young children with special needs. Both methods encourage practitioners to base

their decision making on current available research evidence, well-documented recommended practices from the professional literature, and the use of professional judgment when working collaboratively with families. We also provided one example of a method used to guide practitioners when making evidence-based decisions. The 5-Step Learning Cycle presents an outline for solving problems through the integration of multiple perspectives of professionals and families as well as other sources of evidence.

Finally, this chapter devoted much of its content to presenting best practice and general guidelines for creating appropriate educational and instructional environments for young children with delays or disabilities. Research has shaped these guidelines, providing specific strategies in each of four categories that have evidence to support their effectiveness when teaching young children with delays or disabilities. The four strategies include teacher-mediated, peer-mediated, routine-based, and specific naturalistic (milieu). Each section defines the particular strategy and provides examples of their usage in the home as well as the preschool or early primary classroom.

In summary, early childhood special educators and practitioners have the responsibility to make thoughtful choices when designing individualized instruction for young children with delays or disabilities. The key is to be flexible and to create collaborative, supportive teams of families and professionals. We believe that well-informed teams using current research and recommended practices will influence the ways in which we create the best possible educational experiences in the most appropriate environments.

Key Terms

| | | | | | |
|--------------------------|-----|--------------------------|-----|------------------------------------|-----|
| Evidence-based practices | 261 | Praise | 265 | Play-based intervention | |
| Recommended practices | 261 | Prompts | 265 | (strategies) | 272 |
| Embedded interventions | 262 | Partial participation | 268 | Activity-based instruction or | |
| Transition practices | 262 | Adapted participation | 268 | intervention | 274 |
| Assistive technology | | Peer-mediated strategies | 269 | Milieu strategies (or naturalistic | |
| interventions | 262 | Cooperative learning | 270 | strategies) | 277 |
| Engagement | 262 | Routine-based strategies | | | |
| Teacher-mediated | 263 | | 271 | | |

Check Your Understanding

1. Define evidence-based practices when applied to selecting intervention and instructional practices for supporting young children with delays or disabilities.
2. Define “active engagement” when referring to young children with delays or disabilities in an inclusive learning environment.
3. What factors should early childhood special educators consider when making environmental arrangements to promote engagement of young children with delays or disabilities within educational settings?
4. Describe the differences between the various types of prompts and assistance provided to young children with delays or disabilities.
5. What are some suggestions for planning naturalistic interventions for peer-mediated strategies for typically developing peers and children with delays or disabilities in the natural environment or inclusive settings?
6. Describe the elements of cooperative learning.
7. What is the difference between a time delay and an interrupted routine?
8. Describe the kinds of strategies that can be used to prepare the social environment for young children with delays or disabilities.
9. Provide an example of the model and expansion milieu instructional procedure.

Reflection and Application

1. Each morning, a particular preschool classroom has circle or group time. Some children rarely or never participate in this activity. Describe two teacher-mediated strategies that could be used to increase the level of child engagement during this group activity.
2. A child with delays in cognitive development is in your preschool classroom. She uses sign language to communicate. One of her goals is to indicate when she wants items (to request) using the sign “more.” Provide an example of how activity-based instruction could be used to address this goal throughout the daily classroom routine.

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Contemporary Issues and Challenges in Early Childhood Special Education

PART 4

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