5

© iStock.com/FatCamera

Assessment of Young Children With Delays or Disabilities

$SAGE edge™

Master the content at edge.sagepub.com/gargiuloecse

Learning Outcomes

After reading this chapter, you will be able to

- Explain the primary objectives of assessment in early childhood special education for children from birth through age eight

- Describe the types of assessment procedures used in early childhood special education

- List recommended practices for conducting appropriate assessments of young children including those with known or suspected delays or disabilities

- Differentiate between assessment for determining eligibility and assessment for individual program planning and implementation in early childhood special education

- Explain the importance of opportunities for family involvement and the emphasis placed on family preferences and priorities in the program planning and implementation process

- Describe four methods that can be used to collect assessment information for young children with delays or disabilities

- Identify the steps in a naturalistic assessment process

- Explain the importance of progress monitoring and evaluation in programs serving young children with delays or disabilities and their families

DEC Recommended Practices

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

Assessment

- A1. Practitioners work with the family to identify family preferences for assessment processes.

- A2. Practitioners work as a team with the family and other professionals to gather assessment information.

- A3. Practitioners use assessment materials and strategies that are appropriate for the child's age and level of development and accommodate the child's sensory, physical, communication, cultural, linguistic, social, and emotional characteristics.

- A4. Practitioners conduct assessments that include all areas of development and behavior to learn about the child's strengths, needs, preferences, and interests.

- A5. Practitioners conduct assessments in the child's dominant language and in additional languages if the child is learning more than one language.

- A6. Practitioners use a variety of methods, including observation and interviews, to gather assessment information from multiple sources, including the child's family and other significant individuals in the child's life.

- A7. Practitioners obtain information about the child's skills in daily activities, routines, and environments such as home, center, and community.

- A8. Practitioners use clinical reasoning in addition to assessment results to identify the child's current levels of functioning and to determine the child's eligibility.

- A9. Practitioners implement systematic ongoing assessment to identify learning targets, plan activities, and monitor the child's progress to revise instruction as needed.

- A10. Practitioners use assessment tools with sufficient sensitivity to detect child progress, especially for the child with significant support needs.

- A11. Practitioners report assessment results so that they are understandable and useful to families.

Author's 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

The availability of a comprehensive assessment process for young children with delays or disabilities is an integral component of high-quality early intervention (EI) and early childhood special education (ECSE) services for children from birth through age eight. To implement recommended assessment practices, early childhood practitioners must consider the purposes of assessment, guidelines for conducting appropriate assessments, and strategies for linking initial assessment with program planning, implementation, and progress monitoring. In this chapter, we provide an overview of the objectives and characteristics of assessment in early childhood special education, discuss recommended assessment practices, and describe the processes used to conduct assessments for the purposes of screening, eligibility determination, program planning and implementation, and progress monitoring. These assessment processes are designed to meet the Individuals with Disabilities Education Act (IDEA) regulations, as well as provide children with optimal learning experiences.

Overview of Assessment in Early Childhood Special Education

First, we focus on the definition of **assessment** to understand the comprehensiveness of the assessment process. We note that *assessment* is a broad term as evidenced in the definitions that follow. McLean, Hemmeter, and Snyder (2014) provided a simple definition explaining that assessment is

▲ Assessment information is collected in a variety of ways to document the progress each child is making.

the process of gathering information for decision making. This definition suggests that assessment is a dynamic, ongoing process allowing for various decisions to be made about children with delays or disabilities. These definitions indicate that assessment is a systematic collaborative process for obtaining information from a variety of sources (for example, observations, interviews, portfolios, assessment instruments) to be used in making judgments about each child's characteristics, needs, and progress, and whether practitioners should do anything differently. The Division for Early Childhood (2014) emphasizes the importance of employing a variety of ongoing methods to gather information from

multiple sources, which includes the family and other significant individuals (for example, child care providers), not only to identify and plan learning targets but also to monitor each child's progress and revise instruction as needed [DEC Recommended Practices A6, A9]. McConnell and Rahn (2016) support this dynamic view of assessment and define assessment as "the systematic collection and evaluation of information to determine what if anything to do differently" (p. 90).

Next, the origin of the word *assessment* is considered, which can be traced to the Latin word *assidere* meaning "to sit beside." Assessment in early childhood special education is designed to be an experience through which practitioners and families work together and exchange information to benefit a child's growth, development, and learning (Division for Early Childhood, 2007, 2014). Therefore, assessment in early childhood should be *assidere* viewed as a fact-finding and problem-solving process shared by families and practitioners.

Figure 5.1 illustrates the components of the assessment process in early childhood special education, which are discussed in the sections that follow. As can be seen, collaboration among practitioners representing multiple disciplines

and families is needed throughout each step of the assessment process.

Assessment Objectives in Early Childhood Special Education

Assessment information is gathered to be used in making a decision in one or more of the following four areas:

1. Screening
2. Eligibility
3. Individual program planning and implementation
4. Progress monitoring and evaluation

As noted by McCormick (1997), "assessment, planning, intervention, and evaluation are overlapping activities" (p. 223). In reality, various types of assessment may occur simultaneously on several different levels for different purposes. The different assessment objectives or purposes necessitate the use of assessment instruments and procedures by qualified practitioners representing multiple disciplines.

FIGURE 5.1 ● **Components of a Collaborative Assessment Process in Early Childhood Special Education Leading to Goals and Outcomes**
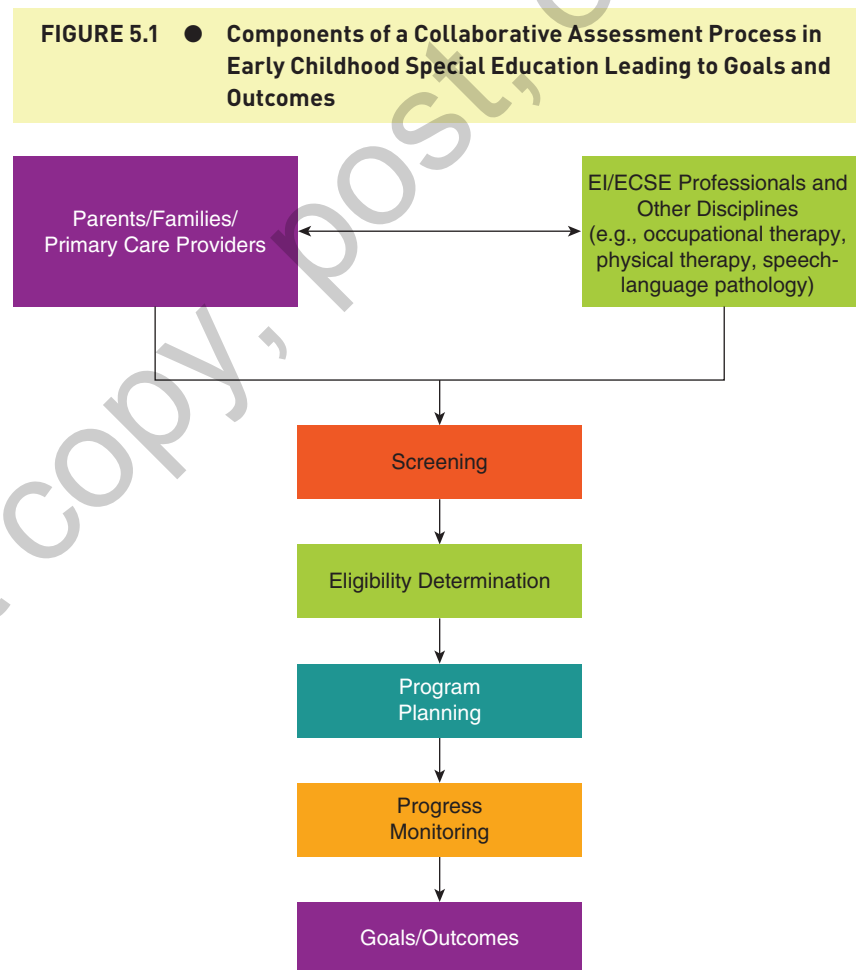
Source: Adapted from D. Bricker. *Assessment, Evaluation, and Programming System (AEPS®) for Infants and Children*, 2nd ed., vol. 1 (Baltimore, MD: Paul H. Brookes, 2002), p. 19.

Types of Assessment in Early Childhood Special Education

Because early childhood is a unique period of development, appropriate assessment instruments and procedures are designed specifically for young children. Common assessment procedures in early childhood special education include norm-referenced tests, criterion- or curriculum-based instruments, observations, interviews, and other measures. Because there are many purposes of assessment, instruments designed for one purpose are in most cases inappropriate to use for a purpose other than that for which they were intended (Kritikos, LeDosquet, & Melton, 2012; McLean et al., 2014). The assessment instruments and procedures selected depend on several factors, such as the purpose of the assessment, state and program guidelines, professional preferences, and family preferences. In addition to standardized tests, informal assessment measures are recommended that are less prescriptive and more specific to the context in which they are used.

Assessment Instruments

Depending on the purpose of the assessment, specific types of tests are appropriate (Andersson, 2004; Kritikos et al., 2012). Of the assessment measures used with young children, formal testing is the procedure most frequently used during the initial phases of assessment (for example, screening, eligibility determination). During formal testing, **standardized tests** are administered; however, **tests** have many limitations. In fact, many practitioners have cautioned against the overreliance on tests and describe them as predetermined collections of questions or tasks for which predetermined types of responses are sought in order to determine a score. In other words, a standardized test is one by which an individual child's **performance**, or a child's behavior that is exhibited while putting specific skills into action, is interpreted in relation to the performance of a group of peers of the same age group who have previously taken the same test, or a "norming" group. We acknowledge that the behavior or performance of young children is variable; therefore, it is difficult to compare young children based on a single test.

Norm-referenced tests provide information about how a child is developing in relation to a larger group of children of the same age. They provide a score that is relative to the scores of other children in a particular group—that is, the source of the norms (Cohen & Spenciner, 2015). Norm-referenced measures have certain advantages; they compare young children to other children of the same age for eligibility purposes, report reliability and validity information, and usually can be administered in a short period. A disadvantage of norm-referenced assessment measures, particularly for children with delays or disabilities, is that the administration of norm-referenced tests usually takes place in unfamiliar settings (for example, clinic, testing room) rather than the natural environment (for example, home, classroom, playground). Another problem is the lack of useful information that norm-referenced tests provide for determining functional, appropriate outcomes. Further, norm-referenced measures often are biased against children with delays or disabilities and children from culturally or linguistically

Iakov Filimonov/Alamy Stock Photo

▲
Professionals and parents work collaboratively to gather assessment information.

diverse backgrounds. **Bias** is described as any characteristic that unfairly discriminates against a child based on gender, socioeconomic status, or cultural or linguistic background (Losardo & Notari-Syverson, 2011).

Norm-referenced tests for children from birth through age five result in quantitative scores, often reported as **developmental age scores** (for example, the average age at which 50 percent of the normative sample achieved a particular raw score) and **percentile ranks** (for example, the percentage of the same-aged population that performed at or below a given score). The developmental age for children with delays or disabilities usually will differ from their chronological age depending on the effects of each child's delay or disability. For early primary-level students, ages five though eight, norm-referenced tests provide standard scores, percentile ranks, and grade-level equivalents in various subject areas (for example, reading, math, science) (Sattler, 2014). This allows early childhood special educators to compare a child's performance to performances of other children of the same age.

Criterion-referenced assessments are used to determine whether a child's performance meets established criteria or a certain level of mastery within various developmental domains (for example, cognitive, motor, self-care) or subject areas (for example, math, literacy). Numerical scores represent the proportion of the domain or subject area a child has mastered. Specific strengths of criterion-referenced instruments are that they offer a continuum of skills linked to the curriculum that can be useful for program planning and implementation and monitoring individual child progress. Criterion-referenced measures may be administered in the natural environment, and they allow practitioners to adapt or modify items so that children can demonstrate their skills and competence. Limitations of criterion-referenced instruments are that they are time consuming to administer and may include items that are inappropriate for some children. Criterion-referenced measures may be biased against children with delays or disabilities, as well as children representing culturally or linguistically diverse backgrounds.

Curriculum-based assessments are similar to criterion-referenced assessments; however, curriculum-referenced instruments are used to interpret a child's performance in relation to specific curriculum content. In most cases, curriculum-based assessment instruments are most relevant for

program planning and implementation purposes (Cohen & Spenciner, 2015; Sattler, 2014). They are used to identify a child's entry point in an educational program, as well as modifying instruction.

Although a detailed description of the psychometric aspects of assessment instruments is beyond the scope of this chapter, it is important for these concepts to be understood by those who are responsible for the selection of specific assessment instruments for any phase of the assessment process. Reliability and validity are two of the psychometric concepts to be considered. **Reliability** refers to the consistency or dependability of an assessment instrument over time and across observers. In other words, does the test measure what it is supposed to measure in a dependable manner?

If T. J. were tested on two different occasions within a short time, would his performance and score on the test be similar each time? If so, the tester could assume with some confidence that the results were reliable or free of error. Also, if two different examiners who independently tested T. J. should obtain similar test results, or if several children were given the same test and received different scores, the tester would want to know that the variability in the scores was actually due to the differences in their abilities. The examiner needs to feel confident that the test is consistently measuring what it is designed to measure. Reliability is important for generalizing about children's learning and development. Reliability is represented by a figure between .00 and 1.0, with values closer to 1.0 providing evidence of better reliability (Kritikos et al., 2012).

Another important psychometric property of an assessment instrument is **validity** or the extent to which an assessment instrument measures what it was designed to measure. For example, if T. J. was given a test to measure his pragmatic language, the test items should represent a comprehensive range of pragmatic skills (for example, turn-taking, greeting others). Validity is represented by a figure between .00 and 1.0, such that values closer to 1.0 indicate better validity. Several different types of validity should be of concern to early childhood special educators, as well as practitioners representing other disciplines. The first is **content validity**, which refers to how well the test represents the content it purports to measure. A second type of validity is **instructional validity**. This is the extent to which the information gained from an assessment instrument would be useful in planning intervention programs for young children with delays or disabilities. A third type of validity, **construct validity**, focuses on the degree to which a test addresses the constructs on which it was based. A fourth type of test validity is **concurrent validity**. This type of validity is concerned with how well a test correlates with other accepted measures of performance administered close in time to the first. Finally, **predictive validity** focuses on the extent to which a test relates to some future measure of performance. When practitioners are selecting an assessment measure, attention should be focused on the reliability and validity information reported in the manuals of the assessment instruments (Sattler, 2014).

Authentic Assessment

A type of assessment based on the premise that the behavior of young children must be observed in natural settings during real-life situations. **Authentic assessment** represents the process of observing, recording, collecting, and otherwise documenting what children do and how they do it for the purpose of making educational or intervention decisions (Keilty, LaRocco, & Casell, 2009; Losardo & Notari-Syverson, 2011). Information can be gathered through a variety of processes and organized to provide a comprehensive overview of a child's performance on meaningful tasks in real-life situations over time (Cohen & Spenciner, 2015; Division for Early Childhood, 2007; Losardo & Notari-Syverson, 2011). Authentic assessment is implemented easily in home-based programs for infants and toddlers or inclusive classrooms for preschool and early primary children, as well as other natural environments.

Observational assessment is an example of the way in which authentic information can be gathered. Observational assessment is a process of gathering recordings of children's behavior in real-life situations and familiar settings. Assessment procedures often include systematic observations of the interactions between children and their families, primary caregivers, or peers. Several different assessment instruments or strategies can be used to structure observations

▲ Observation of a child's performance during everyday learning activities provides valuable information during the assessment process.

and organize information that is gathered such as checklists, rating scales, and structured observations (Division for Early Childhood, 2007, 2014; Hanson & Lynch, 1995) [DEC Recommended Practices A7].

Play-based assessment is an example of an observational procedure used frequently in early childhood education for infants, toddlers, and preschoolers. According to Losardo and Notari-Syverson (2011), "the context of play provides a comprehensive, integrated view of a child's interaction with people and objects within a meaningful context" (p. 80). During play, children spontaneously and authentically demonstrate knowledge, skills, and behaviors. Play-based assessment provides a nonthreatening method to collect information about the level of development of young children in a play situation, which allows them to demonstrate behaviors that they usually exhibit in natural settings.

An **interview** is an assessment method where questions are asked by the interviewer to gain information from the interviewee. In early intervention and early childhood special education, interviews can be conversations between the assessor(s) and families or caregivers, teachers, siblings, or the child and are used to gather information about the areas on which to focus during the assessment process, specific information about the child (for example, how a child responds to various situations), the family preferences or desires, daily routines, functional skills, or other types of information that may be relevant to the assessment process (McWilliam, 2010). Because interviews take place with a particular purpose in mind, it is important to have some structure to ensure that the intended goal(s) are achieved. Although they may require some structure (for example, preliminary preparation, introduction, inventory/questions, summary, closure), interviews should be flexible enough for everyone to feel comfortable with the process (Turnbull, Turnbull, Erwin, Soodak, & Shogren, 2015).

Recent assessment trends indicate a need for an increased focus on the *process* of assessment rather than just the *product* with a greater emphasis on informal processes (Division for Early Childhood, 2014; Neisworth & Bagnato, 2005). A recommended informal process is an **arena assessment**, which is based on a transdisciplinary model with practitioners representing multiple disciplines along with the child's family participating in the assessment. Arena assessments have been reported as effective for use with infants, toddlers, and preschoolers and are frequently used by those serving these populations.

As you may recall from the previous chapters, transdisciplinary teams plan and provide services within and across discipline boundaries to deliver services. Figure 5.2 provides a visual example of the practitioners from multiple disciplines in an arena assessment along with the child and family members, who usually are seated in a circle around the child. The team jointly collects information about specific developmental areas, as well as the interrelatedness of these areas within the child. One or more of the team members and parent/family members interact(s) with the child while others observe, record information, and score test protocols. Using an arena assessment process, practitioners from multiple disciplines with input from the family complete a comprehensive and integrated assessment report.

Guidelines in the Assessment of Young Children With Delays or Disabilities

Driven by many years of experience and research demonstrating the limitations of traditional, single-dimensional assessment procedures, recommended practices have emerged (Division for Early Childhood, 2007, 2014; McConnell & Rahn, 2016; Neisworth & Bagnato, 2005).

FIGURE 5.2   ●   Example of Arena Assessment Conducted With a Young Child
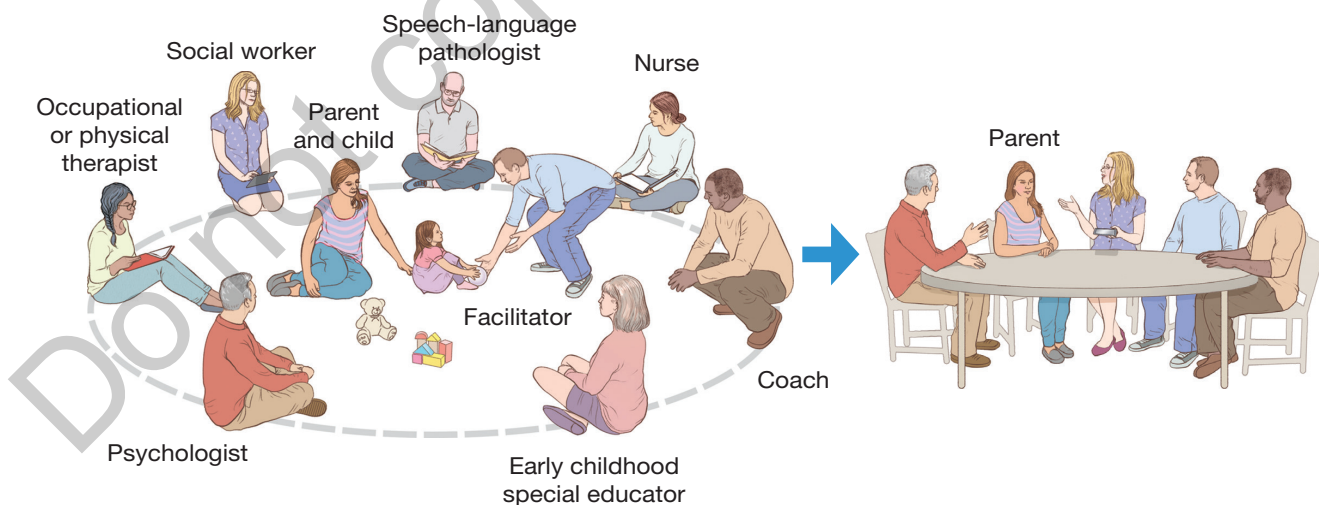
TABLE 5.1 ● Examples of Assessment Characteristics in Early Childhood Special Education

Characteristics	Examples
Team-based	Assessments are conducted by a team, with equal status afforded to the family and practitioners representing multiple disciplines.
Family-centered	Family is involved in all aspects of the assessment process based on each family's preferences.
Multidimensional	Assessment information is collected in a number of child domains and behaviors (as appropriate) to provide a holistic and comprehensive view of each child.
Multimethod	Assessment information is collected using a variety of formats and techniques, such as direct testing, observation, and interviews.
Multisource	Assessment information is collected from a number of sources knowledgeable about the child, including families, caregivers, and practitioners.
Multicontext	Assessment occurs in multiple environmental contexts, including the home, school, child care, or other relevant natural environments.
Culturally appropriate	Assessment respects and is responsive to the unique culture of each child and family.
Strengths-based	Assessment procedures are designed to identify strengths, concerns, resources, needs, and priorities for intervention planning; emphasis is placed on assessing resources, strengths, and concerns, rather than deficits.
Ongoing and collaborative	The collection of assessment information is an ongoing, collaborative process among families and practitioners representing multiple disciplines.

FEATURE 5.1

REPRESENTATIVE WEB RESOURCES

- **Division for Early Childhood (DEC),** www.dec-sped.org
- **Early Childhood Technical Assistance Center,** http://ectacenter.org/eco/pages/faqs.asp
- **IDEA Child Find Project,** www.childfind-idea-il.us/About.aspx

There is growing consensus that assessment should be considered a process, not a single procedure. Most experts in the field of early childhood special education acknowledge that assessment is a process that involves ongoing, collaborative, systematic observation and analysis.

Because assessment in early childhood special education involves multiple disciplines, this requires a blending of assessment models and an understanding of different methods and terminology used by practitioners representing various disciplines so that the information is useful to all members of the team. All assessment information must be combined, including information from families, to make important decisions about the child's need for services, individually targeted skills, and methods to be used in providing support to the child and family (Kritikos et al., 2012). Table 5.1 displays the recommended assessment characteristics and processes discussed throughout this chapter. Web resources are included in Feature 5.1.

Recommended Assessment Practices and Standards

Practices and standards for the assessment of young children with delays or disabilities have been established through legislation, literature, and professional organizations such as the Division for Early Childhood (2007, 2014; Neisworth & Bagnato, 2005). The assessment of young children requires a careful subjective and objective appraisal of a child's performance in natural learning environments. Thus, practitioners representing multiple disciplines, as well as the child's family, are included in the assessment process to collect holistic, authentic information.

Team Process

As described previously, the Individuals with Disabilities Education Improvement Act of 2004 requires a multidisciplinary

team to be involved in the assessment of young children. A multidisciplinary team refers to the involvement of two or more practitioners representing different disciplines in early childhood special education activities (for example, early childhood special educators, physical and occupational therapists, speech–language pathologists) (Kilgo & Aldridge, 2011). Transdisciplinary teams, the type of team model often used and recommended in early intervention and early childhood special education, are composed of family members and practitioners representing a variety of disciplines who address specific assessment questions. For example, children with sensory impairments (for example, auditory or visual) or children with developmental needs (for example, communication delays, movement issues) require practitioners on the team to have expertise in those areas (for example, vision specialist, speech–language pathologist, physical therapist, occupational therapist).

The DEC Recommended Practices (Division for Early Childhood, 2014) emphasize a team approach in which practitioners work with family members and other practitioners from a variety of disciplines throughout the assessment process. Families are encouraged to identify their assessment preferences and participate in gathering assessment information [DEC Recommended Practices A1, A2]. For example, members of the family may indicate the best time of day for the assessment to occur and how they would like to participate. Prior to a play-based assessment that is scheduled following the child's morning nap, the speech–language pathologist and early childhood special educator work with the mother in determining the child's interests and favorite toys and routines. The mother elects to observe and facilitate as needed during the assessment.

Multiple Assessment Domains

The Division for Early Childhood (2014) advises that the assessment of young children should cover all areas of development and behavior to gain a holistic and comprehensive estimate of their abilities, needs, and preferences [DEC Recommended Practices A4]. Further, the DEC points out that early childhood assessment materials and strategies must be appropriate for infants and preschoolers, match their ages, and accommodate for their individual characteristics and developmental levels across all domains [DEC Recommended Practices A3]. This may be interpreted to mean that materials and activities should be carefully selected to match children's chronological age so that the materials and activities focused on during the assessment process are congruent with those of their peers without disabilities. However, this also means that the selected materials and strategies must meet the individual needs of each child.

Cultural Considerations

As we have described, it is essential that the child's and family's cultural and linguistic backgrounds are considered in the assessment process to limit bias and promote communication and collaboration among the family and practitioners (Division for Early Childhood, 2007; Lynch & Hanson, 2011). In designing the process, the team must use the most effective strategies for gathering information based

▲ Assessment is a process requiring a collaborative effort between families and professionals that occurs on an ongoing basis.

on each child's and family's unique background, primary language(s), and cultural expectations (Hanson & Espinosa, 2016). The Division for Early Childhood (2014) advises that assessments must be conducted in the child's dominant language with additional languages addressed as well if the child is learning other languages [DEC Recommended Practices A5]. Another consideration is that the child-rearing practices or patterns of adult–child interaction may be different in a child's culture, which may have a confounding influence in the assessment process.

Lynch and Hanson (2011) offer a number of practical suggestions for collecting information about young children from diverse cultural and linguistic backgrounds. They recommend using alternative approaches to traditional assessment and provide specific suggestions for conducting observations of children and interviews with families. In addition, Losardo and Notari-Syverson (2011) developed detailed guidelines to use in the assessment process with children and families representing diverse cultural and linguistic backgrounds, which are shown in Table 5.2.

Young children who potentially will be eligible to receive early intervention or early childhood special education services are characterized by their diversity along many dimensions, including culture, ethnicity, language, geographic location, family structure, socioeconomic status, and others (Hanson & Espinosa, 2016; Lynch & Hanson, 2011). Practitioners have struggled for many years with how to employ appropriate, nonbiased assessments of young children that do not penalize them based on their cultural background or experience. A **culturally biased assessment** is one that measures only skills and abilities valued by the dominant Western culture. Thus, those children from nondominant or non-Western cultures are placed at a unique disadvantage. Problematic situations often exist when traditional, standardized assessment measures are used that are culturally biased.

An example of potential bias can be found in a commonly used screening instrument that contains a test item that asks four- to six-year-old children to indicate "what a shoe is made of" with the acceptable answer being "leather." A child whose familiarity with shoes is limited to tennis shoes,

TABLE 5.2 ● Guidelines for Assessing Young Children From Diverse Cultural and Linguistic Backgrounds

Before the assessment:

Learn about the child's and family's cultural and linguistic backgrounds:

   Determine whether an interpreter will be needed.

   Determine whether written assessment materials will need to be translated.

Discuss where and when the assessment will take place:

   Identify the natural contexts in which the child spends time.

   Ask about the types of activities that occur naturally within the home and other familiar settings.

   Gather toys and materials that are culturally appropriate and familiar to the child.

Identify the developmental behaviors to be observed:

   Decide whether to use a curriculum-based assessment.

   Choose whether to assess across developmental domains.

   Understand whether a child's performance during an assessment is due to cultural differences or reflects a developmental delay or disability.

Determine the role that the family will assume in the assessment process:

   Learn which family members interact with the child on a regular basis.

   Discuss the role that the family will assume in the assessment process.

   Discuss the importance of following the attentional lead of the child.

During the assessment:

Explain the purpose of and procedures for the assessment to the child, the family members, and any others who will participate in the process.

Use culturally appropriate activities and materials.

Observe the parents' interaction style with the child.

Utilize an interpreter as needed.

Assist the parents in direct testing if needed.

Ask parents to report on developmental skills that were not observed during observations and direct testing.

After the assessment:

Review the information gathered during the assessment:

   Meet with the family and other team members to discuss the information gathered during the assessment.

   Ask the parents if the child played and behaved in a typical fashion.

   Ask the parents if the results of the assessment are representative of the child's abilities.

   If appropriate, solicit feedback from the interpreter about the cultural appropriateness of the social and communication styles used by the facilitator.

Source: Adapted from A. Losardo and A. Notari-Syverson. *Alternative Approaches to Assessing Young Children*, 2nd ed. (Baltimore, MD: Paul H. Brookes, 2011). p. 67.

sandals, or flip-flops would not be given credit for providing the correct answer if he or she answered "rubber," "cloth," or "plastic." This item would be missed due to the child's lack of familiarity with leather shoes and would indicate that items on this test are culturally biased for this child.

As can be seen, there are many potential problems associated with cultural bias in assessment instruments and processes; therefore, those administering assessments must strive for accurate and appropriate assessments of children from diverse backgrounds, which requires attention to the uniqueness of each child's cultural background and experience. Cook, Klein, and Chen (2016) recommend the following five techniques to accomplish a culturally fair assessment:

1. Use multiple assessment techniques within naturalistic settings, involving the families as significant partners in the process.

2. Examine test items and materials to be certain they are not biased against children or families of various cultural backgrounds.

▲ Professionals must pay careful attention to the uniqueness of each child's background and experience to avoid cultural bias during the assessment process.

3. Examine test manuals to determine whether the group to which the child is being compared is culturally compatible.

4. Provide directions in the child's native language.

5. Use a transdisciplinary (or multidisciplinary) process so that multiple practitioners, along with the family, can contribute.

Assessment Purposes and Processes in Early Childhood Special Education

The remaining portion of this chapter focuses on the purposes of assessment in early intervention and early childhood special education. The types of assessment are discussed in the order of screening, eligibility, program planning and implementation, and progress monitoring and evaluation. Table 5.3 provides a definition of each type of assessment

TABLE 5.3 ● Description of the Types of Assessment in Early Childhood Special Education

Type of Assessment	Information Gathered	Decision(s) Usually Made	Occurs When
Screening			
A procedure designed to identify children in need of referral for more in-depth assessment.	Potential for developmental disability or delay; vision; hearing; health and physical disabilities.	Should the child be referred for more in-depth assessment?	Prior to entry into a program.
Eligibility			
A comprehensive diagnostic process to determine if a child meets the criteria to be eligible for early intervention or early childhood special education services.	Comprehensive diagnostic information that is standardized, norm-referenced, and comparative.	Is the child eligible for services as specified in the state's criteria for eligibility (0–3, 3–5, K–3)?	Prior to entry into a program.
Individualized Program Planning and Implementation			
A procedure used to identify desired outcomes or goals for the IFSP or IEP and how to design instruction.	Evidence of the child's skills and behaviors; family preferences and priorities; family resources and strengths; settings in which the child spends time and the demands of those settings.	What routines, activities, materials, and equipment; style(s) of learning; and adult and peer interactions may work best?	Ongoing process; intensively at the beginning of a program year, during the first several weeks of entry in a program; during and immediately after any major changes in a child's life.
Progress Monitoring and Evaluation			
A process of collecting information about a child's progress toward outcomes, the family's satisfaction with services, and the program's effectiveness.	Evidence of the child's skills and behaviors compared to those skills at entry into the program; family satisfaction and indication of priorities having been met; the child's ability to be successful in the setting he or she spends time in.	Effectiveness of programming for an individual child or group of children; changes in a child's skill and behaviors; family's satisfaction; program's overall effectiveness	Ongoing basis to determine if intervention is effective and outcomes have been achieved; at the end of a program year; or when determined by administrative policy and funding sources.

Source: Adapted from M. Davis, J. Kilgo, and M. McCormick. *Young Children with Special Needs: A Developmentally Appropriate Approach* (Austin, TX: Pro-Ed, 1998), p. 73. Adapted with permission.

and describes the kind of information gathered, the types of decisions made, and the time at which the information is gathered.

Assessment teams must consider the purpose of each assessment and gather initial information at the onset of the process. The following are some general considerations, which will vary depending on the purpose of the assessment.

- What is the purpose of this assessment, or why is it being conducted (for example, screening, eligibility, program planning and implementation, progress monitoring, program evaluation)?

- What are the characteristics of the child (for example, age, physical abilities, communication skills, temperament, delay or disability)?

- Who will take the lead or coordinate the assessment (for example, early childhood special educator, physical therapist, speech–language pathologist)?

- Where will the assessment sessions take place (for example, home, child care program, classroom, playground)?

- Who will be involved in the assessment (for example, parents, other family members, early childhood special educator, related service practitioners), and what roles will these individuals assume (for example, facilitator, observer, assessor)?

- When will the assessment sessions take place (for example, in the morning, after child's nap)?

- How will the assessment be conducted (for example, formal testing, observation, interview)?

- What areas of development or content will be assessed? Will all integrated developmental domains or content areas be the focus of the assessment?

- What assessment instrument(s) will be used (for example, formal test, observational checklist, play-based measure, family interview)?

- How will the assessment area(s) be set up (for example, amount of space needed, equipment or materials needed)?

- What skills or behaviors are important to the child's family, and what are the family's priorities (for example, walking, talking, social skills, eating, toileting, literacy)?

- What skills or behaviors are important to the child in his or her environment (for example, communicating, toileting, turn-taking, following directions)?

- What adaptations are necessary for the child to display optimal skills (for example, use of an alternative communication system, adaptive seating, assistive technology)?

A plan can be formulated regarding how the assessment process will be implemented for each child and family based on the answers to these questions and the family's preferences. The assessment plan may address one or more purposes of assessment discussed in the sections that follow.

Screening Young Children

Assessment information can be collected for the purpose of deciding whether unrecognized problems require further assessment. In reality, the screening process begins immediately following birth. Routine examinations of infants serve as a means of predicting abnormalities. One of the first screenings experienced by infants and their families is the administration of the **Apgar Scale** (Apgar & James, 1962). Infants are screened at one-minute and five-minute intervals following their birth in the following areas: (a) heart rate, (b) respiration, (c) reflex response, (d) muscle tone, and (e) color (see Figure 5.3).

For newborns, the five-minute Apgar has been found to be an accurate predictor of future developmental progress (Batshaw, Roizen, & Lotrecchiano, 2012). A low Apgar score may indicate that further medical assistance is needed or that a referral should be made for a more in-depth assessment. Blood and urine tests are additional routine procedures used to detect metabolic disorders, such as a **PKU screening** to detect phenylketonuria (PKU). Through early identification of PKU and appropriate intervention, which includes a restricted diet, many of the adverse outcomes associated with PKU, such as intellectual disability, can be prevented.

In early childhood special education, **screening** is an assessment procedure designed to determine, from within a large population of children, those who need to be referred for further assessment in one or more areas of development (Losardo & Notari-Syverson, 2011). **Referrals** for screenings usually are made by practitioners from various disciplines who encounter young children whom they suspect of having delays or disabilities.

According to federal legislation, each state must establish a **Child Find** system of locating children who may have delays or disabilities, which makes them eligible for early childhood special education services. Child Find requires community and interagency collaboration with practitioners from a variety of disciplines and agencies (for example, Head Start, education, social services, public health) working together throughout this process. Child Find teams are responsible for conducting public awareness campaigns to inform the community so that referrals for screening will be made. Advertisements often are disseminated through the local media, grocery stores, shopping malls, or other places frequented by families of young children. Practitioners who often make referrals are from high-risk nurseries, health clinics, pediatricians' offices, community programs, or schools. Because of extensive Child Find efforts, families, other caregivers, and members of the community also make referrals (IDEA Child Find Project, 2004).

Screenings can be accomplished by using a variety of procedures, including specific instruments or checklists,

FIGURE 5.3 ●   The Apgar Scale

			1 min.	5 min.
Heart rate	Absent	0		
	Less than 100	(1)		
	100 to 140	(2)	1	2
Respiratory effort	Apneic	(0)		
	Shallow, irregular	(1)		
	Lusty cry and breathing	(2)	1	2
Reflex response	No response	(0)		
	Grimace	(1)		
	Cough or sneeze	(2)	1	2
Muscle tone	Flaccid	(0)		
	Some flexion of extremities	(1)		
	Flexion resisting extension	(2)	1	2
Color	Pale blue	(0)		
	Body pink, extremities blue	(1)		
	Pink all over	(2)	0	1
		TOTAL	4	9

observations of the child, and parent/family interviews. Screening involves a brief examination to determine if a child's skills are adequate or whether there are discrepancies from typical expectations that warrant further assessment. A screening procedure may last anywhere from five to fifteen minutes. Although the Child Find process varies from state to state, many states offer screenings for preschoolers prior to entering kindergarten. In some states, screening is mandatory before children enter kindergarten. The purpose is to identify children with potential developmental, vision, and/or hearing concerns, and so on. As stated earlier, the results of screening determine whether children have the potential for a developmental delay or disability and should be referred for a comprehensive evaluation to determine if they are eligible for services (IDEA Child Find Project, 2004). Table 5.4 contains sample instruments that are often used for screening purposes.

A screening instrument should be selected based on specific criteria. Accuracy, for example, is important for several reasons. Some children who need services may be missed and are, therefore, not referred if a screening instrument is not accurate. Sometimes children who do not need services are referred for further assessment, and, thus, overreferral also is a problem when a tool is not accurate. A screening instrument's rate of under- and overreferral is related to its sensitivity and specificity.

▲
The screening process begins immediately after birth through routine examinations of newborns, using such measures as the Apgar Scale.

BSIP/Contributor via Getty Images

TABLE 5.4 ● Selected Screening Instruments Used in Early Childhood Special Education

Instrument	Age Range	Domains/Content Areas	Publisher
Ages and Stages Questionnaires (3rd ed.) (ASQ-3)	1–66 months	Communication, gross motor, fine motor, problem-solving, personal-social	Paul H. Brookes
Battelle Developmental Inventory (BDI-2) (2nd ed.)	Birth–7 years, 11 months	Personal, social, adaptive, motor, communication, cognition	Riverside Publishing Company
Developmental Indicators for the Assessment of Learning (4th ed.) (DIAL-4)	2–6 years	Motor concepts, language, behavioral	Pearson Education
Denver Developmental Screening Test (2nd ed.) (DDST-II)	Birth–6 years	Personal-social, fine motor, adaptive, language, gross motor	Denver Developmental Materials Inc.
Brigance Early Childhood Screens III	3–5 years, Grades K–1	Physical, language, academic/cognitive, self-help, social-emotional skills	Curriculum Associates
Boehm Test of Basic Concepts (3rd ed.)	3–5 years, 11 months	Understanding of verbal instructions (space, quantity, time)	Psychological Corporation
Preschool and Kindergarten Behavior Scales-2	3–6 years	Social skills and problem behaviors	PRO-ED

FIGURE 5.4 ● Potential Outcomes for Screening

	Referred for Evaluation	Not Referred for Evaluation
Eligible for special services	Sensitivity (accurate referral)	False negative (underreferral)
Not eligible for special services	False positive (overreferral)	Specificity (accurate nonreferral)

Sensitivity refers to a screening instrument's ability to identify children who need additional assessment. The less sensitive a screening instrument is, the greater the number of underreferrals or false negatives there will be from the results (see Figure 5.4). A **false negative** designates a child who needs special services but was not referred because of the screening. **Specificity** refers to the capacity of a screening procedure to accurately rule out children who should not be identified. In other words, a test that is specific will not refer children who do not need further assessment. Losses in specificity result in an increased number of overreferrals or false positives. A **false positive** designates a child who has been referred because of the screening but does not need special services. The levels of sensitivity and specificity measure the screening instrument's validity, which tells us the extent to which a test measures what it purports to measure. Great care should be taken when selecting screening instruments to ensure that they are indeed valid and accurate. When an instrument is accurate, the likelihood of inappropriate referrals is minimized.

The simplicity of a screening instrument is another important criterion. The administration and scoring of instruments should be quick, easy, systematic, and usable by practitioners from multiple disciplines. Ideally, a screening instrument should be inexpensive to administer yet still be accurate. Another important criterion of a screening instrument is that it should be comprehensive, focusing on multiple areas (for example, educational, health, behavioral, and environmental concerns). However, it is important to note that some assessment instruments are designed to look specifically at one area, such as language.

Another criterion is that screening assessment instruments should provide for family input and involvement. Because of the wide range and variations in typical development and behavior during the early years, the screening process for infants and young children is often difficult. Parent involvement can alleviate some of these difficulties. Most screening instruments include observations, parent/family reports, or some combination of the two. A comprehensive

MAKING CONNECTIONS
T. J.'S MOTHER AND THE ASSESSMENT PROCESS

T.J.'s mother was initially reluctant to participate in the assessment process by completing questionnaires and answering all the questions about T. J.'s development. It wasn't because she didn't care about T. J.—that wasn't the case at all. She simply did not understand the usefulness of this information and how important her role was in the assessment process. Although she was reluctant at first to have

T. J. participate in the screening and for him to be referred for a comprehensive assessment, she soon developed a relationship with the service providers, learned to trust them, and became more involved as a member of the team during the assessment process and beyond. As described in Chapter 3, trust is an important component of the development of strong and effective parent–professional relationships.

screening process includes the gathering of information about a wide range of children's abilities, and, of course, parents/families have the most extensive information. A technique that has been used to gather information is a parent-completed screening questionnaire. Although parent-completed questionnaires provide important developmental information, not all parents are willing or able to complete independent questionnaires. This determination is made after considering each family's desire and ability, which may change over time. See the accompanying Making Connections feature for an example of how T. J.'s mother gradually became more comfortable with participation in the assessment process.

Determining Eligibility for Early Childhood Special Education Services

After it is determined during the screening process that a young child needs further assessment, a comprehensive **eligibility** assessment occurs to determine whether infants, toddlers, preschoolers, and early primary-aged children do, in fact, meet the eligibility requirements for early intervention or early childhood special education services. This phase of the process is conducted by a team of practitioners representing multiple disciplines (for example, special education, speech–language pathology, physical therapy, and others as determined by the individual characteristics of each child). A battery of assessment instruments determines if a child meets the eligibility criteria according to state and federal requirements of the Individuals with Disabilities Education Improvement Act of 2004.

Eligibility Criteria

Over the past several years, much discussion has occurred regarding eligibility criteria and categories for infants and toddlers, preschoolers, and early primary-level children with delays or disabilities to receive early intervention and

special education services. Recall from Chapter 2, according to federal legislation, each state determines the eligibility criteria for infants and toddlers. Through IDEA 1991, each state was given the option to use a developmental delay eligibility category for preschoolers. In the absence of an identified disability, children can be determined eligible for receiving services based on the particular eligibility criteria established within their state (for example, 25 percent delay in one or more developmental domains). Of course, this decision depends on state and local eligibility criteria that specify precisely how eligibility is determined in a particular program.

For early primary-level children, IDEA 1997 allowed for the developmental delay eligibility category to be extended to age nine if states desire. However, states and localities still are required by IDEA and its amendments to develop definitions of developmental delay thoughtfully so that the outcome will be eligibility procedures that are based on knowledge of young children with delays and disabilities and will ensure appropriate services for them and their families. Children within the three- to nine-year-old age range may also qualify for special education services by meeting the criteria for an IDEA disability category, such as visual impairment, hearing impairment, or autism. This process was explained in greater detail in Chapter 2.

Eligibility Procedures and Instruments

To determine if young children meet the eligibility guidelines for early intervention or early childhood special education services, procedures must be used to determine if a child's skills are significantly different from the skills of a large group of children whose development falls within the typical range. This determination traditionally has been made by comparing a child's performance to the expected performance of children of the same age; therefore, the assessment instruments are administered in a specific manner. For example, the same materials, directions, and scoring procedures are used each time a tool is administered. Although

norm-referenced assessment instruments traditionally have been required as the primary means for determining eligibility, many leaders in the field of early childhood special education have suggested the use of curriculum-based measures for eligibility purposes (Bagnato, 2005; McLean, 2005). As stated previously, recommended practice suggests that no major decision about a child's eligibility should be made based *solely* on the results of a single test. Decisions regarding eligibility should be based on multiple assessment measures and processes.

A sample of the numerous instruments used for eligibility determination is included in Table 5.5. Many other instruments are available, depending on the age of the child, that allow practitioners to evaluate strengths and

needs in specific developmental domains (for example, communication, social) and content areas (for example, language literacy, mathematics). What these instruments have in common is that they all measure a child's skills and development as compared to those of a norm group of children who have previously been given the test. If a child's test scores fall significantly below the scores of the children in the norm group, this serves as a signal that the child may have a developmental delay or disability and be eligible for early childhood special education services.

The team collaborates to determine a child's eligibility for services by reviewing his or her health records and medical history, determining his or her current level of

TABLE 5.5 ● Select Assessment Instruments for Determining the Developmental Status of Young Children

Name of Instrument	Age Range Addressed	Domains or Content Areas	Results
Battelle Developmental Inventory (2nd ed.) (BDI-2), Riverside Publishing Company	Birth–7 years, 11 months	Personal-social, adaptive, motor, communication, cognitive ability	Developmental levels in each domain
Bayley Scales of Infant Development (3rd ed.) (Bayley-III), Pearson Assessment	Birth–42 months	Cognitive, language, motor, social-emotional, adaptive	Standardized scores for mental and motor development; descriptions of social-emotional and adaptive behavior
Carolina Curriculum for Infants and Toddlers With Special Needs (3rd ed.) (CCITSN-3), Paul H. Brookes	Birth–36 months	Personal-social, cognition, cognition-communication, communication, fine motor, gross motor	Status in each curriculum domain
Carolina Curriculum for Preschoolers With Special Needs (2nd ed.) (CCPSN-2), Paul H. Brookes	2–5 years (for example, developmental age)	Personal-social, cognition, cognition-communication, communication, fine motor, gross motor	Status in each curriculum domain
Developmental Assessment of Young Children (DAYC), PRO-ED	Birth–5 years, 11 months	Cognition, communication, social-emotional development, adaptive behavior, physical development	Standard scores, percentile ranks, and age equivalents in each curriculum domain; general development quotient (GDQ)
Hawaii Early Learning Profile Strands (Birth to age 3 years), VORT Corporation	Birth–36 months	Regulatory/sensory, cognitive, language, gross motor, fine motor, social-emotional, self-help	Developmental age levels in each domain
Hawaii Early Learning Profile (HELP 3–6) (2nd ed.), VORT Corporation	3–6 years	Cognitive, language, gross motor, fine motor, social-emotional, self-help	Developmental age levels in each domain
Learning Accomplishment Profile-Diagnostic (3rd ed.) (LAP-D 3), Kaplan Early Learning Company	30–72 months	Fine motor, gross motor, cognition, language	Child's skill level in comparison to normative scores

Source: Adapted from J. Taylor, J. McGowan, and T. Linder, *The Program Administrator's Guide to Early Childhood Special Education: Leadership Development and Supervision* (Baltimore, MD: Paul H. Brookes, 2009), p. 74.

functioning in major development areas, and assessing his or her individual strengths and needs. Observations and other assessment procedures should be used to support the findings from the assessment instruments. By collecting additional information from the child's family and other caregivers and observing the child's behavior in natural settings, examiners can make an informed decision about the presence of a developmental delay or disability and need for services.

Parents and other family members can add valuable information to the eligibility decision by participating in the assessment process in a variety of ways. Families can provide information informally through discussions with team members; they can complete questionnaires, checklists, or parent reports; and/or they can be present with their child during the assessment. Often, they can provide valuable feedback regarding the skills or behaviors the child is demonstrating (for example, whether this is typical behavior, other skills or abilities the child has demonstrated, and other supplemental information).

The Division for Early Childhood (2014) encourages practitioners to supplement assessment results with clinical reasoning as they determine a child's functioning levels and eligibility for services [DEC Recommended Practices A8]. **Clinical reasoning** is defined as informed opinion or evaluation derived from intuition and/or personal experience of practitioners.

Early childhood practitioners are encouraged to be sensitive to families when discussing eligibility assessment information. Following are recommendations developed by Cohen and Spenciner (2015) for practitioners sharing eligibility information with families:

- Provide family members with an opportunity to receive the assessment report in a one-to-one setting rather than during a large team meeting (for example, parent–teacher meeting), which allows the family time to ask questions and reflect on the information prior to the larger, full-staff meeting.

- Be honest and straightforward regarding the delay or disability and eligibility for services.

- Be sensitive to families if they are not ready to hear details.

- Allow time for families to express their feelings.

- Be willing to say when you do not know the answer to questions.

- Offer to provide additional information and suggest additional resources.

- Be available to the family for further discussions.

- Of course, arrange to have a native-language interpreter available if families need assistance.

If a child meets the eligibility criteria and is determined eligible to receive early childhood special education services,

the next step in the process is assessment for program planning and implementation.

Assessment for Individual Program Planning and Implementation

The initial assessment procedures used to determine eligibility are distinctly different from the assessment procedures necessary for individual program planning and implementation. To plan efficient, effective programs for young children with delays or disabilities, appropriate **program planning and implementation assessment** is required. An ongoing process is needed that focuses on children's skill levels, needs, backgrounds, experiences, and interests, as well as the family's preferences and priorities. Ongoing assessment provides the basis for constructing and maintaining individualized programs for young children with delays or disabilities. Table 5.6 illustrates the major differences in assessment for eligibility and assessment for individual program planning and implementation purposes.

Of critical importance is the link between assessment and curriculum to ensure that program content is meeting the needs of all children and the concerns of their families (Neisworth & Bagnato, 2005). As explained previously, in recent years, formal assessments have been found to be inappropriate for program planning and implementation, which has resulted in a shift away from the use of formal assessment measures toward the use of informal means of assessment (for example, curriculum- or criterion-based instruments, observations, family reports, and play-based measures) with young children. These methods are discussed later in this chapter. Assessment procedures that are appropriate for determining a child's eligibility for services (for example, standardized, norm-referenced instruments) should not be used in isolation and should not be relied upon to plan instruction or interventions for young children with delays or disabilities (Bagnato, 2007; McLean, 2005; Neisworth & Bagnato, 2005).

To accurately appraise the child's strengths and needs, assessment for individual program planning and implementation should focus on the whole child within the context of the natural environment (for example, home, child care, preschool, or school settings). Collecting information of this nature is critical to designing individualized programs and planning appropriate interventions and supports for young children with delays or disabilities and their families.

Collecting Information for Individual Program Planning and Implementation

The purpose of assessment for program planning and implementation is to answer a number of questions related to each child's abilities, the desired child and family goals/outcomes, the types of services to be provided, and the intervention strategies to be implemented. Assessment

TABLE 5.6 ● Comparison of Assessment for Eligibility and Program Planning in Early Childhood Special Education	
Assessment for Eligibility	**Assessment for Program Planning and Implementation**
Compares a single child to a large group of children.	Identifies the child's current levels of developmental skills, behaviors, and knowledge.
Uses instruments, observations, and checklists with predetermined items or skills.	Determines the skills and behaviors necessary for a child to function in the settings where he or she spends time.
Determines if a child's skills or behaviors fall below a specified cutoff level.	Determines the skills, behaviors, or knowledge that the child's family and primary caregivers have set as priorities for the child to learn.
Designed to differentiate children from one another.	Designed to determine the individual child's strengths, interests, and learning style.
Assessment instrument items do not necessarily have significance in the everyday lives of young children.	Assessment instrument items are usually criterion-based or curriculum-based, or focus on functional skills that have importance in the everyday lives of young children.

Source: Adapted from M. Davis, J. Kilgo, and M. McCormick, *Young Children with Special Needs: A Developmentally Appropriate Approach* (Austin, TX: PRO-ED, 1998), p. 81. Adapted with permission.

information is used not only to plan individualized instruction, but also to make changes in the instruction a child is receiving. Decisions must be made to determine (a) what to teach, (b) how to teach it, and (c) what expectations are realistic for each child.

Early childhood special education practitioners employ recommended practices for conducting program planning and implementation assessment when they do the following:

- Select assessment instruments and processes that are individualized and appropriate for each child and family

- Report assessment results in a manner that is both useful for planning program goals/outcomes and understandable and useful for families [DEC Recommended Practices A11]

- Rely on processes that capture the child's authentic behaviors in routine circumstances within the natural environment [DEC Recommended Practices A7]

Assessment information collected for program planning and implementation purposes is used to develop an individualized family service plan (IFSP) or individualized education program (IEP) for each child and family. Recall from Chapter 2 that the IFSP and IEP are intended to be planning documents used to shape and guide the day-to-day provision of services to young children with developmental delays or disabilities. The IFSP is required for the provision of early intervention services for eligible infants and toddlers from birth to age three and their families. The IEP is used for special education services delivered to eligible children ages three

and older. IFSPs and IEPs contain individualized outcomes or goals that can be determined by conducting an inventory of the skills needed by the child to participate in a variety of natural environments as just described. This process allows information to be gathered that has relevance to each child and family. When this method is used, the IFSP or IEP should be developed according to the family's routines (for example, at home, at school, and in other environments) and priorities. Thus, outcomes and goals contained in the IFSP or IEP should be developed to reflect the necessary skills the child will need to participate in natural environments and routines within those environments (Noonan & McCormick, 2014).

When conducting assessments for program planning and implementation for young children with delays or disabilities, the following five objectives should be accomplished for each child and family:

1. The identification of appropriate outcomes or goals

2. The identification of unique styles, strengths, and interests

3. The identification of parents' priorities and outcomes or goals

4. The development of a shared and integrated perspective among practitioners and family members regarding the child's and family's strengths, needs, and resources

5. The creation of a shared commitment to collaboratively establish and carry out activities to meet outcomes or goals

Through the accomplishment of these objectives, the team members should be provided with the information necessary to make program planning and implementation decisions regarding the activities and strategies to meet the unique outcomes and goals of individual children and families.

Family Involvement in the Assessment Process

As stressed throughout this chapter, parents and other family members can provide a wealth of information about the child, as well as information about the family as a whole, and this requires parent–professional collaboration (Hendricks & McCracken, 2009; Slade, Eisenhower, Carter, & Blacher, 2018). Although addressing family concerns, priorities, and resources is not a new concept in early intervention for children from birth to three years old, it has received increased attention in recent years due to the emphasis on IFSPs for families with infants and toddlers and an increased emphasis on family-centered practices in all aspects of services for preschoolers and early primary-level students with delays or disabilities. Thus, it is most important for family members to be encouraged to become active members of their child's assessment team. If family members are willing and able to play an active role in the assessment process, their involvement will ensure the validity of the established outcomes and goals.

To help ensure that the family has input into the assessment process, an "outcome-driven" assessment process is needed. By using family-identified outcomes for the child as the starting point of the assessment, the family's vision for the child becomes the central focus of the assessment process (Turnbull et al., 2015). At what level would the family like to see the child functioning in terms of skills and abilities (for example, in the next six months, year, three years)? What are the family's priorities? For example, one family's top priority is for the child to be able to communicate and feed herself, while another family wants the child to be toilet trained and develop friendships with peers. Another family's top priorities are for the child to read and use assistive technology to communicate. Another question is what environments the family would like the child to be able to participate in. For example, does the family want the child to be in an inclusive kindergarten program? Family-identified outcomes are important to determine as part of the assessment process.

An effective early childhood special educator recognizes the uniqueness of each family and realizes the importance of families having opportunities to provide input into the assessment process and serving as integral members of the team. Assessment information should be collected from families on an ongoing basis, should be an integral part of the planning process, and should be a collaborative effort; therefore, it is essential for families to develop trust and be confident that the assessment process will maintain privacy and confidentiality.

A family-centered approach suggests that families participate in the assessment process at the level that is comfortable for them. Regardless of the degree to which the

family members choose to participate in the assessment process, the way they participate, or the format in which they provide information, family members' participation and the information they provide serves an invaluable purpose in program planning (Slade et al., 2018). Turnbull et al. (2015) emphasized that families should be offered options for participating in the assessment process. Some of the areas in which families can provide input include the following:

- Collaborate with practitioners in planning the assessment process (for example, where, when, and how it will take place, who will be involved)

- Determine to what extent they want to be a part of the assessment process

- Provide information about their children's developmental history, play and interaction preferences, interests, and daily routines and schedule

- Provide information about the settings where their children spend time and the demands placed upon their children in those settings

- Report on their children's current skills, where and how those skills are used by the children, and under what circumstances the skills are exhibited

- Report on their children's strengths, abilities, and needs in multiple settings

- Share information about their children that will not be gained through traditional measures

- Share their priorities, resources, and concerns

- Share their vision for their children's future

Gathering information from families about their concerns, priorities, and resources is an important component of the assessment process (Kilgo & Raver, 2009). Each family's preferences must be considered before information is

Zak Waters/Alamy Stock Photo

▲
Information is collected about children's individual strengths and needs in major developmental areas to determine their eligibility for services.

gathered. Some potential areas in which information can be gathered from families include their need for support, information, education, services, and so forth. Information can be collected from families in a variety of ways—through interviews, observational methods, parent reports, instruments, and other measures. An ongoing conversational approach with families, in lieu of formal family interviewing, is recommended to promote relaxed and natural conversations with families. Some families may prefer providing information through a written format, such as a family-needs questionnaire or checklist. However, in most instances, informal assessment instruments and processes are preferred (Banks, Santos, & Roof, 2003; Turnbull et al., 2015).

Along with the different instruments available to identify family concerns, priorities, and resources, some early childhood special education programs have developed their own measures. Regardless of the measures used, families should be encouraged to identify their concerns and resources and determine their priorities for their children and the family as a whole. Practitioners should realize that the range of concerns families may have is considerable. Families of young children with delays or disabilities often feel overwhelmed and unsure of where to begin. Practitioners can provide information to help them sort out their concerns and make decisions about their priorities. It is likely, however, that their concerns and priorities will change over time. Examples of possible family concerns include how their children's medical needs can be met or how their children will be treated when they begin preschool. Family priorities, for example, might be how to learn more about the child's disability or how to communicate with the child. Family resources might include reliable transportation, relatives who live nearby, and community support. Examples of how this information is incorporated into an IFSP can be seen in Appendix D.

Assessment in the Natural Environment

For assessment information to be useful, emphasis must be placed on the context in which children develop and the influence of the environment on skill acquisition. It is essential that the environment(s) in which a child functions and the skills needed to be successful in those environments are considered during the assessment process (Vanderheyden, 2005). Thus, assessments in the natural environment provide opportunities for children to perform skills across multiple domains of development within the context of routines in the natural environment (for example, home, center, community) [DEC Recommended Practices A7].

The demands placed upon children by the contextual aspects of the natural environment can have a tremendous influence on their development and the skills or behaviors they display. For example, if T. J. lives in a neighborhood in which all the children learn to ride bicycles at an early age, then he may be motivated to learn to ride his bike at a young age as well. Or if a family lives in a warm climate and goes to the beach or pool on a frequent basis as a family activity, then the children may be likely to learn to swim or participate in water sports at an early age.

A naturalistic assessment considers the skills needed by a child to participate in his or her natural environment

throughout the day. The specific natural environment, expectations, and levels of participation are defined by the child, the family and other primary caregivers, the community, and the family's culture. This type of assessment is distinctly different from the type of traditional child assessment in which the child's skills are observed and recorded. McCormick (1997) described the naturalistic assessment process emphasizing that functional goals and objectives are to be generated within the natural environment with a two-fold purpose of this process:

1. To generate information about the social, educational, and functional activities and routines in natural environments where the child is to be an active and successful participant

2. To determine the resources and supports needed for the child to participate in and receive maximum benefits from activities and routines in the environments (p. 237)

The product of a naturalistic assessment provides more than the skill level at which a child is functioning; it provides a greater understanding of the context and environmental

▲
To get an accurate idea of a child's typical behavior and abilities, assessment information should be collected in natural environments.

BSIP SA/Alamy Stock Photo

expectations that are important for the child. For example, when a naturalistic assessment takes place for T. J. at a Head Start center, the observer notices that there are several times in which the children are required to make transitions from one activity to another during the morning routine when prompted by the teacher. These transitions are an important part of this environment. Based on this observation, the team learns that these transitions are important requirements within the environment in which T. J. will be participating. With this information, the team conducting the assessment will know to focus on T. J.'s ability to make transitions like the ones that occur in his early childhood program.

The contexts, conditions, and expectations identified through naturalistic assessments assist the team members in identifying the specific skills that should be examined during the assessment process. Furthermore, the assessment in the natural environment allows the assessment team to determine the skills necessary for the child to be successful in his or her current settings. In other words, the result of the ecological assessment is a **protocol**, or assessment format, that can be followed to decide the skill areas on which to focus and the specific skills to be observed during the assessment.

A naturalistic assessment regards the family members and other primary caregivers as critical contributors to the assessment process. Family members and caregivers may include parents, siblings, grandparents, child care providers, or other significant people in a child's life, such as neighbors. These individuals, in addition to teachers and other practitioners, will determine which of the child's skills are important to focus on during the assessment. Conducting assessments of children within their natural environments requires a step-by-step approach. By assessing the environments in which children live and the expectations associated with those environments, the skills to be targeted can be better determined. Program planning and implementation can logically grow from the assessment information that is collected.

The best place to determine if a child has a **functional skill** is in the environment(s) where he or she uses that skill. A functional skill is a basic skill that is required on a frequent basis (for example, eating, toileting, requesting assistance, turn-taking) in the natural environment. For example, if eating independently during mealtime is an important skill for a child, the assessment team will know to conduct some portion of the assessment during a meal, either at home, at school, or in another setting. An assessment in the natural environment results in a more precise and useful child assessment. The assessment team will know the skills on which to focus, the materials or activities the child prefers, and the setting(s) in which to conduct the assessment. The result of a thorough assessment in the natural environment is a road map for the program planning and implementation phase of the assessment process.

Methods and Procedures for Collecting Information

The DEC Recommended Practices (Division for Early Childhood, 2014) provide evidence-based standards to address and methods and procedures to employ when gathering useful assessment information for individual planning. The whole child should be considered when planning programs for young children with delays or disabilities rather than segmenting students' abilities in the various developmental or content areas. In Maria's case, for example, she has a diagnosis of Down syndrome with delays in several developmental domains (for example, communication, self-care, cognitive skills). In order to meet her multiple needs, program planning and implementation assessment should be holistic and address all areas of development, which function together to perform most tasks.

Another recommended assessment practice noted by Neisworth and Bagnato (2005) is that the assessment team should use only those measures that have high treatment validity (for example, link assessment, individual program planning and implementation, progress evaluation). To ensure that the entire process is linked, the selection of appropriate instruments and measures is of critical importance. Criterion- or curriculum-based instruments are recommended to establish a link between assessments for program planning, implementation, and progress monitoring.

As described previously, a criterion-based assessment instrument is one in which a child's response(s) is compared to a predetermined criterion or level of performance in an area of knowledge or skill, rather than to the response(s) of a group of children or normative group. Results are typically reported as levels of proficiency, such as an emerging skill or mastery of a skill. The criteria used to determine if a child has acquired a skill often are flexible ones that can have different interpretations for different settings. On curriculum-based measures, each assessment item relates directly to a specific educational objective in the program's curriculum. Curriculum- and criterion-based measures provide a level of flexibility that is not available with standardized, norm-referenced instruments. Because the skills being assessed are within a natural context, represent specific skills that have been determined by the child's family and other team members to be valuable to his or her development, and are generally in a developmental sequence, they often can be very useful in program planning and implementation. On a cautionary note, it is important to remember that many curriculum- or criterion-based instruments are drawn from items on standardized tests, thus decreasing their relevance to the child's unique needs and to the necessary program planning to meet those needs. Curriculum-based measures do allow team members to determine how important skills are within the context or environment in which they are used.

As shown in Table 5.5, there are several widely used, curriculum-based assessment instruments that provide a strong linkage to program planning and implementation. The Assessment, Evaluation, and Programming System (AEPS) (Bricker, 2002) is one example of a comprehensive instrument designed to use observational techniques to obtain assessment information within the context of the natural environment. The AEPS and other curriculum-based measures usually are multidomain instruments that subdivide major developmental milestones into smaller increments. For example, the AEPS subdivides fine motor skills into three strands—reach, grasp, and release—and functional use of fine motor skills. Each of the strands is further divided into goals and objectives that link the assessment process to the preparation of an educational plan to guide intervention.

MAKING CONNECTIONS
PROGRAM PLANNING FOR T. J.

The chart below shows characteristics of individual program planning and implementation assessment, a description of the procedures used, and examples of T. J.'s assessment process.

Characteristic	Procedure	Example
Assessment includes a variety of assessment measures administered in a variety of settings.	The assessment procedures include the curriculum-based measures, teacher-developed and informal tests, direct observation in natural settings (for example, home, classroom), and interviews with those who know the child best.	The teacher uses developmental measures to assess T. J.'s communication, motor, and cognitive development. She devises testing situations to determine how he performs specific skills. She observes him during play sessions with peers to note his social interaction, play, and communication skills. She observes him at lunch and in the bathroom to identify his self-care skills. She interviews his parents, former teachers, and therapists to secure additional information.
Assessment results provide a detailed description of the child's skills, abilities, and interests.	The results include a description of (a) the child's developmental skills in all relevant areas, (b) what the child can and cannot do, and (c) the factors that influence the child's skills, abilities, and interests.	The teacher analyzes the results of the assessment activities, summarizes what T. J. can do in each area, and describes the factors that appear to influence his performance (for example, favorite toys, peers, assistance needed with different tasks, interesting and motivating activities).
Assessment activities involve the child's parents and other family members.	The parents/family should receive information from practitioners; observe assessment activities; provide information about the child's development, needs, and interests; gather new information; and validate the assessment results.	The teacher plans the assessment with the family. She asks the family members about how T. J. performs specific skills and spends his time, as well as their concerns and goals for him. She encourages them to observe during the assessment and asks them to gather information on skills at home. She reviews the results and asks them to confirm, modify, and qualify the findings.
Assessment activities are conducted by team members representing multiple disciplines.	Frequently, assessment information is needed from the following disciplines: speech–language pathology, physical therapy, health (for example, nurses, physicians), nutrition, special education, and sometimes others.	The teacher coordinates the assessment activities of the team. Because of T. J.'s communication delays, a speech–language pathologist participates in the assessment process. An audiologist assesses his hearing, a physical therapist and an occupational therapist participate to determine and assess his motor skills, and the early childhood special educator assists the kindergarten teacher in determining his social and cognitive skills.
Assessment activities result in the identification of high-priority objectives.	Assessment activities identify more skills than possible to teach; therefore, the most critical skills are identified. All team members, including the family, are involved in this decision. Skills are selected if they are useful to the child, have long-term benefits, and/or are important to the family.	After the results have been analyzed, the team reviews the findings. They discuss the skills T. J. needs to learn that will be most useful, will result in long-term benefits, and are most important to his family. The most important skills are listed as goals on his IEP.

The items on the AEPS, as is usually true with curriculum-based measures, follow a typical developmental progression. The curriculum activities that correspond to test items are designed to teach skills related to the identified needs of the individual child. Another example of a curriculum-based instrument is the Carolina Curriculum (Johnson-Martin, Attermeier, & Hacker, 2004; Johnson-Martin, Hacker, & Attermeier, 2004), which provides developmental markers for assessing young children across developmental domains. The Carolina Curriculum also provides suggestions for modifying test items for children with motor or sensory impairments. Another instrument, the Hawaii Early Learning Profile (HELP) (Parks, 2007; VORT Corporation, 2010), provides developmental assessment and curriculum activities for home and preschool environments. For early primary-level students between the ages of five and eight, a variety of curriculum- and criterion-based assessment instruments are available in various content areas (for example, language and literacy, mathematics, science, social studies).

Criterion- and curriculum-based assessment instruments are examples of measures that can be used to collect information for program and intervention planning and progress monitoring. Other methods include informal, teacher-made tests; play-based measures; observations; and interviews with family members or other primary care providers.

The accompanying Making Connections feature contains a description of the characteristics of assessments and examples of the various types of information that can be gathered to design and implement programs for young children with delays or disabilities. In individual program planning for T. J., the team could use a criterion-based instrument to measure his abilities in cognitive, communication, and motor development. They could devise situations to determine how T. J. performs skills in the context of the natural environment(s), such as riding a tricycle, eating a meal, and communicating with peers. More than likely, the team would also observe social interactions during a play situation with his peers.

▲
Useful information is collected in the natural environment about a child's self-care skills such as eating independently.

Progress Monitoring and Program Evaluation

The final purpose of assessment to be discussed involves **progress monitoring and program evaluation**. As previously described, the efficacy of early intervention and early childhood special education has received much attention during recent years with the result being an increased awareness of the importance of ongoing progress monitoring and evaluation as it relates to the improvement and expansion of services for young children with delays or disabilities and their families. Progress monitoring of outcomes helps ensure continuous feedback that is necessary to inform decision making about all aspects of early childhood special education services.

Early childhood programs must have a set of procedures for collecting and using data to monitor the effectiveness of program efforts (Sandall, Schwartz, & Lacroix, 2004). A comprehensive evaluation plan in early childhood special education services should represent the scope of the most important components of intervention: the child, the family, and the program. Without this critical feedback regarding these interlocking components, early childhood special education services can never fully meet the desired outcomes for young children with disabilities and their families. Table 5.7 shows the questions, purposes, and procedures that are the focus of assessment conducted for program monitoring and evaluation.

As suggested for many years, evaluation in early childhood programs must be multidimensional and comprehensive (Division for Early Childhood, 2014; Grisham-Brown & Hemmeter, 2017; Neisworth & Bagnato, 2005). For children receiving early childhood special education services, the measurement procedures should match the specific outcomes for which they are designed. This usually includes information that reflects the children's attainment of targeted skills documented on the IFSPs or IEPs, state and/or program standards, and global outcomes. In addition, the outcomes of various family variables (for example, family satisfaction, family outcomes) should be measured. Last, specific aspects of the overall program should be evaluated using the recommended practice standards promulgated by the major professional organizations, such as the Division for Early Childhood of the Council for Exceptional Children and the National Association for the Education of Young Children.

An ongoing evaluation plan is recommended that encompasses a schedule of data collection. This schedule includes initial program planning assessment, ongoing monitoring of IFSP and IEP outcomes or goals, family outcomes, evaluation of program effectiveness, and annual evaluation across all program participants. Ongoing examination of child outcomes provides the team with realistic feedback about each child's progress. In addition, systematic data-based evaluations hold practitioners accountable not only to themselves but to the children and families they serve. All measures should be conducted on a schedule that includes a **formative assessment**, which is conducted

TABLE 5.7 ●   Program Monitoring and Program Evaluation

Assessment Questions	Purposes	Procedures
• Once intervention or instruction begins, is the child making progress?	• To monitor the child's program	• Curriculum- or criterion-based assessments
• Should the intervention or instruction be modified?	• To understand the appropriate pace of intervention	• Observations
• Should the intervention or instruction be modified?	• To understand what the child is capable of doing prior to and following intervention	• Interviews • Checklists • Family reporting • Portfolios • Permanent product samples • Journals
• Has the child met the goals of the IFSP or IEP?	• To determine whether the program was successful in meeting the child and family outcomes (IFSP) or child goals (IEP)	• Curriculum- or criterion-based assessment measures
• Has the child made progress?	• To determine if adjustments are needed	• Observations
• Has the program been successful for the child and family?	• To determine if the program was successful in meeting the child's IFSP or IEP outcomes or goals	• Interviews • Questionnaires
• Does the child continue to need services?	• To determine if the child continues to need services	• Family reports
• Has the program achieved its goals?	• To evaluate program effectiveness	• Surveys • Interviews

Source: Adapted from L. Cohen and L. Spenciner, *Assessment of Children and Youth with Special Needs*, 5th ed. (Upper Saddle River, NJ: Pearson Education), p. 309–310. Copyright © 2003. Adapted by permission of Pearson Education.

▲ Assessment information must be collected over time to monitor the progress of individual children and the overall effectiveness of the program.

Susan Woog-Wagner via Getty Images

during program operation, and a **summative assessment**, which is done at the end of the year or at the completion of services. Formative assessment examines children's learning to improve the quality of teaching and overall learning rather than for evaluating the progress of individual children. These types of assessments usually start at the beginning of the year and are ongoing. Summative assessments, on the other hand, summarize learning to gauge if children have met overall program outcomes and goals. Most standardized measures are summative and are not designed to provide feedback during the learning process and, therefore, are conducted at the end of the program or school year.

Monitoring Child Progress and Outcomes

Collecting individual, child-focused information can serve as a valuable monitoring tool to provide input about child outcomes and program effectiveness. Data should be collected regularly and systematically and used in making intervention decisions. A variety of methods are recommended to ensure a collection of reliable, valid, and useful progress-monitoring data (Branscombe, Castle, Dorsey, Surbeck, & Taylor, 2014). Adequate time must be allowed to review and interpret the data to inform and change practice. Such data may be collected through direct observation of child behaviors, permanent product samples (for example, photos,

TABLE 5.8 ● Methods of Recording Data to Monitor Progress in Early Childhood Special Education

Monitoring Method	Description of Data Collection Procedure
Event recording (frequency count)	Each occurrence of the target behavior is recorded, and at the end of the observation, a total number of occurrences is calculated, yielding the number or frequency of behaviors. Best used with behaviors that are short in duration and have a clear beginning and end (for example, positive behaviors, such as requests and social initiations, or negative behaviors, such as hitting or screaming). Uses some indicator of the occurrence of the behavior, such as tally marks on a recording form.
Time sampling	Specific time intervals (for example, 30 seconds, 2 minutes) are selected and used in observing and recording the target behavior. Sampling methods yield an approximation of the frequency of behavior as opposed to a precise recording of actual frequency.
Partial-interval time sampling	A predetermined time interval is used, and the target behavior is recorded if it occurs during any part of the interval, yielding a percentage of total intervals (or percentage of observation) that the behavior is observed. Occurrence of the target behavior is recorded only once during an interval regardless of whether there are additional occurrences of the behavior. Best used with frequently occurring behaviors.
Whole-interval time sampling	A predetermined time interval is used, and the target behavior is recorded if it occurs and is maintained during the entire interval. If the behavior begins and ends before the interval has elapsed, the target behavior is not recorded as occurring. This method yields a percentage of total intervals (or percentage of observation time) that the behavior is observed. Best used with behaviors that are longer in duration; otherwise, the method will underestimate the occurrence of the behavior.
Momentary time sampling	Interval is divided into a "rest" part and a "watch" part. Observation of the target behavior occurs only for a portion of the predetermined time interval or during the "watch" part of the interval (for example, last 5 seconds or a 15-second interval). The target behavior is recorded as occurring only if it occurs during the "watch" part of the interval. This method yields a percentage of total intervals (or percentage of observation time) behavior is observed and is best utilized with high-frequency behaviors or behaviors that are longer in duration.
Duration	The elapsed time between onset and offset of the target behavior is recorded. Duration data can be summarized by each occurrence or by the total duration of the behavior during the period of observation. Observer starts the stopwatch when the behavior begins and stops the watch when the behavior ends. Best used with behaviors with a clear beginning and end, where the dimension of interest is how long behavior lasts and where the behavior is longer in duration.
Latency	The elapsed time between the prompt of request for behavior and the performance of the target behavior is recorded. Observer starts the stopwatch when the prompt or request is given and stops the watch when the target behavior is initiated. Latency data can be summarized by each occurrence. Best used with behaviors that have a clear beginning and are signaled by some type of prompt (for example, compliance).

Source: R. Hojnoski, K. Gischlar, and K. Missall, "Improving Child Outcomes with Data-Based Decision Making: Collecting Data," *Young Exceptional Children, 12*(3), p. 39. Copyright © 2009 Sage Publications, Inc. Reprinted by permission.

writing samples, video recordings), ongoing performance data collection, family reporting, and the use of curriculum- or criterion-based assessment measures (Grisham-Brown & Hemmeter, 2017; Grisham-Brown & Pretti-Frontczak, 2003; McAfee & Leong, 2011).

Assessment tools must be used that have sufficient sensitivity to detect child progress, particularly for young children with significant support needs [DEC Recommended Practices A10]. Regardless of the methods used, it is critical for data to be linked to children's goals and used to adjust the intervention and program activities in accordance with changes in children's development and progress made toward achieving their goals (Hojnoski, Gischlar, & Missall, 2009). Table 5.8 provides a description of some of the different methods or monitoring procedures that can be used.

The Making Connections features provide examples of how observational data are collected to monitor T. J.'s and Maria's progress, which includes anecdotal recording, interval recording, and time sampling. By using the anecdotal recording format, for example, early childhood special educators can make notes about significant events concerning a child's behavior and activities or record observations of the child's physical or emotional state on a given day, which may be factual or an interpretive form of data. If the information recorded is a teacher's subjective interpretation, this should be made clear in the written narrative. Anecdotal records may entail written notes on specific behaviors, including events that preceded and followed each behavior observed (for example, skill development for a child in a specific domain, what words a child

MAKING CONNECTIONS
MONITORING T. J.'s PROGRESS

T. J.'s teacher observed him in the classroom setting to monitor his progress in the area of fine motor skills. Below are two examples of the data collection methods she used, anecdotal recording and time sampling.

Example of Anecdotal Recording

Child's name: T. J.	Date: 1/22 Time: 9:20 a.m.
Observer's Name: J. K.	Location: Preschool Classroom

Anecdote

T. J. was playing with the small blocks. He was putting one block on top of another. He was having difficulty balancing the blocks on top of each other. He attempted to build a tower of three blocks. His teacher approached him, and he turned away. Just then, A. K., another child in the room, walked over to where T. J. was playing. T. J. picked up the blocks and started to take A. K.'s blocks. A. K. began to retrieve the blocks. Teacher noticed this incident and encouraged A. K. to move to another part of the room.

Comment

Need to find out why he was having difficulty balancing the blocks.

Why did T. J. turn away from his teacher? Need to observe T. J. in other settings.

Example of Time Sampling

Child's name: T. J.		Date: 3/19 Time: 11:10 a.m.
Observer's Name: J. K.		Location: Preschool Classroom
Time	**Observation**	**Comment:**
11:10	Watching block building	
11:12	Watching A. K. color	Switches hands
11:14	Writing name	
11:16	Moves to block area	
11:18	Playing with blocks	
11:20	Playing with blocks	Switches from right hand to left, right again
11:22	Playing with blocks	

MAKING CONNECTIONS
MONITORING MARIA'S PROGRESS

Maria's service coordinator developed a system to monitor her progress in toilet training and participation in play activities. Below are two examples of the data collection methods she used, anecdotal recording and time sampling.

Example of Time Sampling

Name: Maria Date: 2/16/2018

Objective: Maria will urinate when placed on potty

Key: D = dry, W = wet, V = vocalized, P = placed on potty, + = urinated in potty, − = did not urinate in potty

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 a.m.	D	D	D	D	D
8:30	W	W	P−	VP+	P+
9:00	D	D	W	D	D
9:30	D	D	D	D	D
10:00	D	VP−	D	D	D
10:30	VP−	D	D	VW	VP+
11:00	W	W	VP+	D	D
11:30	D	W	D	D	D

An Interval Record Using One-Minute Intervals

Behavior	Child	Total	Percentage	1	2	3	4	5	6	7	8	9	10
Requests help	Maria	9	90%	X	X	X	X	X	X	X	X	X	0

used during certain activities, and in what situations a child engaged in spontaneous communication). Anecdotal records may involve lengthier written narratives in some instances, describing the sequence of events when children exhibit certain behaviors (for example, temper tantrum, seizure, accident involving the child). Anecdotal records usually focus on the content or style of the behavior or the situations in which the behavior occurred rather than the frequency or duration.

A recommended format to record and monitor children's progress over time is a **portfolio assessment**, a type of authentic assessment system widely used in early childhood education. A portfolio assessment is a means to provide a purposeful and comprehensive overview of a child's accomplishments. More specifically, a portfolio is a systematic and organized record of children's work and behaviors that is collected at regular intervals that can be used for qualitative comparisons of their knowledge, skills, efforts, and progress over time.

The information that is collected via the portfolio assessment process meets many of the criteria required in program planning and progress monitoring. That is, it is collected over time, it relies on multiple sources of information, it collects information from many different individuals about children's skills, and, most importantly, it collects skill information in the setting where the child has demonstrated the skill. The information collected is used to document progress that is being made toward the accomplishment of each child's individual outcomes or goals.

As a purposeful collection of a child's work and progress, portfolios can serve as a record of teachers' and other team members' observations and comments about children's activities and behaviors, audio recordings of significant skills (for example, verbal communication skills), video recordings of important skills (for example, mobility), checklists of skills (for example, vocabulary words used spontaneously), photographs of children's work or activities in which they have engaged, a wide selection of the child's work (for example, artwork, writing samples), summaries of observations, anecdotal records of specific events, information shared by families, and any other evidence of children's skills and progress (Kritikos, McLoughlin, & Lewis, 2018). The information and materials that are included in a portfolio can be selected by any member of the team—the teacher, therapists, paraprofessionals, family members, or even the child.

A portfolio may simply be a container for carrying documents such as a notebook or pizza box covered in contact paper, or it may be created using an electronic format (Losardo & Notari-Syverson, 2011). No specific rules dictate a portfolio's appearance; however, a portfolio should be well organized so that relevant information and materials can be located with minimal effort. These collections are used as evidence to monitor the growth of the child's skills, behavior, knowledge, and even his or her interests, attitudes, or personal reflections. Table 5.9 provides guidelines for developing and implementing a portfolio assessment process. Depending on the specific purpose, the portfolio can be divided into different sections according to IFSP or IEP goals, types of

▲
Examples of children's work can be used to document their progress.

▲
Information is collected in a variety of activities and settings to provide a comprehensive overview of each child's progress.

documents (for example, photographs, drawings, anecdotal notes, test results, video or audio recordings), developmental or curriculum areas, sources of information (for example, teachers, therapists, family), or context (for example, classroom, home, community). The information and materials in the portfolio should be properly labeled with informative caption statements and summaries about children's progress.

Family Input in the Monitoring Process

If collected properly, family input is an invaluable resource in monitoring child and family status within the larger context of determining program effectiveness. As IFSPs or IEPs are implemented, information should be collected from families regarding the appropriateness of the outcomes and goals, the success of the plan in meeting the child's needs, and the family's concerns and priorities. The IFSP or IEP should be modified based on the feedback provided by the family or upon the family's request. In addition to families having opportunities to evaluate the effectiveness of the IFSP or IEP, they should have multiple opportunities

TABLE 5.9 ● Guidelines for Implementing Portfolio Assessment

- Start portfolios at the beginning of the year.

- Parents, caregivers, and other team members should identify in advance the purpose for the portfolio, as well as expectations for children's work.

- Children should be told the purpose of their portfolios.

- Establish types of documentation for each outcome or goal and criteria for evaluating work.

- Develop a plan for when and how data will be collected and by whom.

- Date all work promptly.

- Determine who will evaluate the portfolio.

- Identify ways to involve the child and the family in work selection and evaluation. When appropriate, teach children the skills needed to participate in this process.

- Portfolio contents should be representative of children's work, growth, and accomplishments.

- Explain to parents, caregivers, and children the reasons for selecting samples. If possible, allow children to participate in the selection process.

- Decide how to organize the portfolio to include

  ○ Content areas

  ○ IFSP or IEP goals

  ○ Themes

  ○ Chronological order of work

- Decide who will be responsible for the portfolio and where it will be stored.

- Establish clear, agreed-on guidelines to manage access to the portfolio and ensure confidentiality.

- Determine criteria for monitoring children's progress.

- Schedule quarterly conferences with children (when appropriate), family, teachers, and other team members to review the portfolio.

- At these meetings, discuss team member observations and documentation to check for subjectivity and bias.

- Frequent debriefings with other team members can help track the various types of documentation being gathered.

- Criteria for evaluating the portfolio may include

  ○ Quantity, quality, and diversity of items

  ○ Organization of the portfolio

  ○ Level of child involvement

  ○ Meaningfulness of caption statements

  ○ Quality of summary statements about growth and change

Source: Adapted from A. Losardo, and A. Notari-Syverson, *Alternative Approaches to Assessing Young Children,* 2nd ed. (Baltimore, MD: Paul H. Brookes, 2011), p. 13. Reprinted by permission.

to provide input into the overall effectiveness of the early intervention or early childhood special education program and the services they are receiving. Information can be collected regarding their perceptions of the program staff, the policies and procedures, the team process, and other aspects of services.

Overall Program Effectiveness

Program evaluation is defined as an objective, systematic process for gathering information about a program, or set of activities, that can be utilized for the following three purposes:

1. To ascertain a program's or school's ability to achieve the originally conceived and implemented goals

2. To suggest modifications that may lead to improvement in quality and effectiveness

3. To allow well-informed decisions about the worth, merit, and level of support a program warrants

For evaluation to be effective, it must be designed with a specific purpose in mind. Early childhood special education programs and schools must have well-developed purposes and evaluation plans prior to the beginning of services to increase

the programs' ability to document outcomes. For example, often the emphasis is on gauging the effectiveness of the curriculum in meeting the goals of the school or program.

Early childhood special education programs and schools that serve young children with delays or disabilities and their families must consider several issues when designing evaluation plans. Several years ago, Bailey, Wolery, and McLean (1996) posed questions to gain insight into the overall quality of a program, school, or classroom. These questions are still relevant today in determining overall program quality. Can the program, school, or classroom demonstrate each of the following?

- The methods, materials, and overall service delivery represent recommended practices.

- The methods espoused in the overall philosophy are implemented accurately and consistently.

- It attempts to verify empirically the effectiveness of interventions or other individual program components for which recommended practices have yet to be verified.

- A system is in place for determining the relative adequacy of child progress and service delivery.

- It is moving toward the accomplishment of program outcomes and goals.

▲
Assessment information must be collected over time to monitor the overall effectiveness of a program or school.

- The goals, methods, materials, and overall service delivery system are in accordance with the needs and values of the community and children and families it serves.

These answers can provide a clear and realistic framework for understanding and monitoring the operations and effectiveness of early intervention and early childhood special education programs.

Summary

Assessment of young children with delays or disabilities is a comprehensive process with overlapping components rather than a single procedure. Assessments of young children are conducted to help practitioners and families make informed, evaluative decisions at several levels. The type of decision to be made will determine the purpose of the assessment as well as the assessment instruments to be used and the processes to be followed. Depending on the purpose of the assessment, the assessment process can be formal and/or informal and can include testing, observations, interviews, portfolios, and other procedures.

Conducting appropriate assessments of young children has been the topic of discussion and debate for many years. Some of the major issues have included the following:

- The limited number of assessment instruments appropriate for young children

- The nature and characteristics of young children and families

- Culturally biased assessments

Recommended assessment practices have dramatically changed over the last several years. Because of the limitations of standardized and formal assessment instruments, informal procedures are more widely used with young children. It is important to remember that the key component of an appropriate assessment is for the assessment team members to gain an accurate representation of the child's current abilities and behaviors in the context of his or her natural environment.

Because assessment is an ongoing process that begins with screening and continues with eligibility, program planning and implementation, and progress monitoring and evaluation, assessments are conducted for different purposes. Screenings are conducted to identify children who may have a delay or disability. Through screenings, the determination is made if children should undergo more in-depth assessment procedures. Eligibility assessments determine if children meet the requirements of a given program or service. Program planning and implementation assessment is designed to collect information about the child's intervention and service needs. To determine the effectiveness of services

and intervention, children's progress toward the attainment of their individual outcomes or goals, as well as family outcomes, must be monitored. Progress monitoring should be conducted regularly and frequently and should take place in authentic, naturalistic settings.

This will provide a record of children's progress and indicate whether services and interventions should be modified or changed. Furthermore, information must be collected regarding family satisfaction and overall program effectiveness.

Key Terms

Check Your Understanding

1. Provide a definition of assessment in early childhood special education.

2. Identify and describe the four purposes of assessment in early childhood special education.

3. Describe four types of assessment procedures commonly used in early childhood special education.

4. Discuss problems or issues associated with the assessment of young children and provide suggestions for addressing them.

5. Describe at least five recommended procedural guidelines for conducting appropriate assessments of young children.

6. Describe how practitioners can ensure that assessment instruments and processes are culturally appropriate, sensitive, and responsive.

7. Differentiate between assessment conducted for screening purposes and assessment designed to determine eligibility for services.

8. Describe the difference between assessment to determine eligibility for services and assessment for program planning and implementation purposes.

9. Explain the importance of considering family preferences in the program planning and implementation process.

10. Describe strategies for including families in the assessment process and discuss the advantages of their participation in the assessment of young children.

11. Describe four different methods that can be used to collect assessment information about young children.

12. Provide a rationale for considering (as part of the assessment process) the environments or settings

where children spend time and the demands placed on them in those environments. Explain why naturalistic assessment has many advantages over traditional assessment practices.

13. Explain how each of the following levels of evaluation should be addressed in the overall

evaluation plan of an early childhood program in which children with delays or disabilities are served; (a) child level, (b) family level, and (c) program level.

14. Explain the importance of monitoring the progress of young children with delays or disabilities.

Reflection and Application

1. Observe the assessment process in an early childhood special education setting. What was the purpose of the assessment? Who was involved in the process? Where did it take place? What was done to prepare the environment prior to the assessment? How was rapport established with the child and family prior to the assessment?

2. Discuss with an early childhood special educator his or her role in each component of the assessment process (for example, screening, eligibility, program planning and implementation, and progress monitoring). Compare and contrast the roles of early childhood special educators serving infants and toddlers, preschoolers, and early primary students.

3. Examine several assessment instruments used in early childhood special education. Compare and contrast the instruments in terms of purpose, age range, domains, cost,

administration, psychometric properties, inclusion of the family, cultural and linguistic considerations, and usability of results for individualized program planning and implementation.

4. Review systems used to monitor progress within an early intervention, preschool, and early primary settings. How are they similar, and how do they differ? Interview an early childhood special educator for recommendations on how to monitor progress.

5. How could the families of Maria, T. J., and Cheryl be involved in the assessment process? What specific roles might the families play? How can early childhood special educators help support families in the roles they assume? In assessment for program planning and implementation and progress monitoring, explain how the early childhood special educator could provide support to the families to encourage their involvement.

References

Allen, K., & Cowdery, G. (2015). *The exceptional child* (8th ed.). Stamford, CT: Cengage Learning.

Andersson, L. (2004). Appropriate and inappropriate interpretation and use of test scores in early intervention. *Journal of Early Intervention, 27*(1), 55–68.

Apgar, V., & James, L. (1962). Further observation on the Newborn Scoring System. *American Journal of Diseases of Children, 104,* 419–428.

Bagnato, S. (2005). The authentic alternative for assessment in early intervention: An emerging evidence-based practice. *Journal of Early Intervention, 28*(1), 17–22.

Bagnato, S. (2007). *Authentic assessment for early childhood intervention: Best practices.* New York, NY: Guilford Press.

Bailey, D., Wolery, M., & McLean, M. (1996). *Teaching infants and preschoolers with disabilities* (2nd ed.). Upper Saddle River, NJ: Pearson.

Banks, R., Santos, R., & Roof, V. (2003). Discovering family concerns, priorities, and resources: Sensitive family information gathering. *Young Exceptional Children, 6*(2), 1–7.

Batshaw, M., Roizen, N., & Lotrecchiano, G. (2012). *Children with disabilities* (7th ed.). Baltimore, MD: Paul H. Brookes.

Botts, D., Losardo, A., & Notari-Syverson, A. (2007). Alternative assessment: The pathway to individualized instruction for young children. In E. Horn, C. Peterson, & L. Fox (Eds.), *Linking curriculum to child and family outcomes* (Young Exceptional Children Monograph Series No. 2, pp. 16–28). Missoula, MT: Division for Early Childhood.

Branscombe, A., Castle, K., Dorsey, A., Surbeck, E., & Taylor, J. (2014). *Early childhood curriculum: A constructivist perspective* (2nd ed.). New York, NY: Routledge.

Bricker, D. (Series Ed.). (2002). *Assessment, evaluation, and programming system (AEPS) for infants and children* (2nd ed., Vols. 1–4). Baltimore, MD: Paul H. Brookes.

Cohen, L., & Spenciner, L. (2003). *Assessment of children and youth with special needs* (2nd ed.). Upper Saddle River, NJ: Pearson Education.

Cohen, L., & Spenciner, L. (2015). *Assessment of children and youth with special needs* (5th ed.). Upper Saddle River, NJ: Pearson Education.

Cook, R., Klein, M., & Chen, D. (2016). *Adapting early childhood curricula for children in inclusive settings* (9th ed.). Upper Saddle River, NJ: Pearson Education.

Division for Early Childhood. (2007). Promoting *positive outcomes for children with disabilities: Recommendations for curriculum, assessment, and program evaluation.* Missoula, MT: Author.

Division for Early Childhood. (2014). *DEC recommended practices in early intervention/early childhood special education.* Retrieved January 23, 2018, from http://www.dec-sped.org/recommendedpractices

Dunst, C., & Espe-Sherwindt, M. (2016). Family-centered practices in early childhood intervention. In B. Reichow, B. Boyd, E. Barton, & S. Odom (Eds.), *Handbook of early childhood special education* (pp. 37–56). Cham, Switzerland: Springer.

Grisham-Brown, J., & Hemmeter, M. (2017). *Blended practices for teaching young children in inclusive settings* (2nd ed.). Baltimore, MD: Paul H. Brookes.

Grisham-Brown, J., & Pretti-Frontczak, K. (2003). Using planning time to individualize instruction for preschoolers with special needs. *Journal of Early Intervention, 26*(1), 31–46.

Hanson, M., & Espinosa, L. (2016). Culture, ethnicity, and linguistic diversity: Implications for early childhood special education. In B. Reichow, B. Boyd, E. Barton, & S. Odom (Eds.), *Handbook of early childhood special education* (pp. 455–472). Cham, Switzerland: Springer.

Hanson, M., & Lynch, E. (1995). *Early intervention: Implementing child and family services for infants and toddlers who are at risk* (2nd ed.). Austin, TX: Pro-Ed.

Hendricks, M., & McCracken, T. (2009). Screening, evaluation, and assessment in early childhood special education. In J. Taylor, J. McGowan, & T. Linder (Eds.), *The program administrator's guide to early childhood special education: Leadership, development, & supervision* (pp. 63–80). Baltimore, MD: Paul H. Brookes.

Hojnoski, R., Gischlar, K., & Missall, K. (2009). Improving child outcomes with data-based decision making: Collecting data. *Young Exceptional Children, 12*(3), 39.

IDEA Child Find Project. (2004). Retrieved January 23, 2018, from http://www.childfind-idea-il.us/

Johnson, J., Rahn, N., & Bricker, D. (2015). *An activity-based approach to early intervention* (4th ed.). Baltimore, MD: Paul H. Brookes.

Johnson-Martin, N., Attermeier, S., & Hacker, B. (2004). *The Carolina curriculum for infants and toddlers with special needs* (3rd ed.). Baltimore, MD: Paul H. Brookes.

Johnson-Martin, N., Hacker, B., & Attermeier, S. (2004). *The Carolina curriculum for preschoolers with special needs* (3rd ed.). Baltimore, MD: Paul H. Brookes.

Keilty, B., LaRocco, D., & Casell, F. (2009). Early interventionists' reports of authentic assessment methods through focus group research. *Topics in Early Childhood Special Education, 28*(4), 244–256.

Kilgo, J., & Aldridge, J. (2011). Ten years of transdisciplinary teaming: Lessons learned through a transformational process. *Focus on Teacher Education, 10*(3), 3–6.

Kilgo, J., & Raver, S. (2009). Building partnerships in culturally/linguistically diverse settings. In S. Raver (Ed.), *Early childhood special education—0 to 8 years: Strategies for positive outcomes* (pp. 27–49). Upper Saddle River, NJ: Pearson Education.

Kritikos, E., LeDosquet, P., & Melton, M. (2012). *Foundations of assessment in early childhood special education.* Boston, MA: Pearson Education.

Kritikos, E., McLoughlin, J., & Lewis, J. (2018). *Assessing students with special needs.* Boston, MA: Pearson Education.

Losardo, A., & Notari-Syverson, A. (2011). *Alternative approaches to assessing young children* (2nd ed.). Baltimore, MD: Paul H. Brookes.

Lynch, E., & Hanson, M. (2011). *Developing cross-cultural competence: A guide for working with children and their families* (4th ed.). Baltimore, MD: Paul H. Brookes.

McAfee, O., & Leong, D. (2011). *Assessing and guiding young children's development and learning* (5th ed.). Upper Saddle River, NJ: Pearson Education.

McConnell, S., & Rahn, N. (2016). Assessment in early childhood special education. In B. Reichow, B. Boyd, E. Barton, & S. Odom (Eds.), *Handbook of early childhood special education* (pp. 89–106). Cham, Switzerland: Springer.

McCormick, L. (1997). Ecological assessment and planning. In L. McCormick, D. Loeb, & R. Schiefelbusch (Eds.), *Supporting children with communication difficulties in inclusive settings: School-based language intervention* (pp. 223–256). Boston, MA: Allyn & Bacon.

McLean, M. (2005). Using curriculum-based assessment to determine eligibility: Time for a paradigm shift? *Journal of Early Intervention, 28*(1), 23–27.

McLean, M., Hemmeter, M., & Snyder, P. (Eds.). (2014). *Essential elements for assessing infants and preschoolers with special needs* (4th ed.). Boston, MA: Pearson Education.

McWilliam, R. (2010). *Routines-based early intervention: Supporting young children and their families.* Baltimore, MD: Paul H. Brookes.

Neisworth, J., & Bagnato, S. (2005). DEC recommended practices: Assessment. In S. Sandal, M. Hemmeter, B. Smith, & M. McLean (Eds.), *DEC recommended practices: A comprehensive guide to practical application in early intervention/early childhood special education* (pp. 45–69). Missoula, MT: Division for Early Childhood.

Noonan, M., & McCormick, L. (2014). *Young children with disabilities in natural environments* (2nd ed.). Baltimore, MD: Paul H. Brookes.

Parks, S. (2007). *Hawaii early learning profile (HELP) strands (0–3).* Palo Alto, CA: VORT Corporation.

Sandall, S., Hemmeter, M., Smith, B., & McLean, M. (Eds.). (2005). *DEC recommended practices: A comprehensive guide for practical application in early intervention/early childhood special education.* Missoula, MT: Division for Early Childhood.

Sandall, S., & Schwartz, I. (2008). *Building blocks for successful early childhood programs: Strategies for including all children.* Baltimore, MD: Paul H. Brookes.

Sandall, S., Schwartz, I., & Lacroix, B. (2004). Interventionists' perspectives about data collecting in integrated early childhood classrooms. *Journal of Early Intervention, 26*(3), 161–174.

Sattler, J. (2014). *Assessment of children: Cognitive foundations* (5th ed.). La Mesa, CA: Author.

Slade, N., Eisenhower, A., Carter, S., & Blacher, J. (2018). Satisfaction with individualized education programs among parents of young children with ASD. *Exceptional Children, 84*(3), 242–260.

Taylor, R. (2009). *Assessment of exceptional students: Educational and psychological procedures* (8th ed.). Boston, MA: Pearson Education.

Turnbull, A., Turnbull, R., Erwin, E., Soodak, L., & Shogren, K. (2015). *Families, professionals, and exceptionality: Positive outcomes through partnerships and trust* (7th ed.). Upper Saddle River, NJ: Pearson Education.

Vanderheyden, A. (2005). Intervention-driven assessment practices in early childhood/early intervention: Measuring what is possible rather than what is present. *Journal of Early Intervention, 28*(1), 28–33.

VORT Corporation. (2010). *Hawaii early learning profile (HELP)* 3–6 (2nd ed.). Palo Alto, CA: Author.

Winton, P., & Bailey, D. (1988). The family-focused interview: A collaborative mechanism for family assessment and goal setting. *Journal of the Division for Early Childhood, 2*(3), 195–207.

Woods, J., & McCormick, K. (2002). Toward an integration of child- and family-centered practices in the assessment of preschool children: Welcoming the family. *Young Exceptional Children, 5*(3), 2–11.

$\circledS$SAGE edge™

Get the tools you need to sharpen your study skills. SAGE edge offers a robust online environment featuring an impressive array of free tools and resources.

Access practice quizzes, eFlashcards, video, and multimedia at **edge.sagepub.com/gargiuloecse.**

Visit **edge.sagepub.com/gargiuloecse** to help you accomplish your coursework goals in an easy-to-use learning environment.