

Chapter 13

IDENTIFICATION OF LEARNING PROBLEMS

It was once said that the moral test of government is how that government treats those who are in . . . the shadows of life, the sick, the needy and the handicapped.

—Hubert H. Humphrey

Issues and Themes

There never was a time when so many children with disabilities were attending public schools as there is now. One out of every 12 children and youth between the ages of 5 and 20 has been diagnosed with a serious mental or **physical disability**. Clearly, the schools have an important role to play in the identification and education of these children.

During the 1970s, the federal government assumed a proactive stance regarding the education of children with disabilities. This position was fostered by the outcome of federal court challenges initiated by parents and advocates for students with disabilities. The first federal legislation to address the needs of children with disabilities was section 504 of the Rehabilitation Act of 1973. The second major piece of legislation was the Education for All Handicapped Children Act of 1975. This law became known by its *Federal*

Register number, P.L. 94-142. Provisions of the law were strengthened and it was reauthorized in 1986 as P.L. 99-457. The No Child Left Behind Act of 2002 has proven to be a challenge to those benignant policies expressed in the laws of the 1970s. Beyond the classroom, and throughout all aspects of American life, the rights of people with disabilities are protected by the Americans With Disabilities Act of 1990.

Classroom teachers are often first to notice the disabling conditions affecting children (Barkley, 1998). In about 10% of the cases, pediatricians, parents, and/or preschool teachers are the first to note the child's possible special needs. However, 90% of the time it is the classroom teacher who is first to identify a learning problem. The **referral** process provides steps and procedures that schools follow in identifying and implementing programs to meet the special needs of children with disabilities.

The first intervention after the initial screening by the classroom teacher usually involves an **Instructional Support Team (IST)**.¹ If the recommendations of this committee prove to be ineffective, the next step for the child may involve a psychoeducational diagnostic assessment. This large-scale assessment is carried out by a multiple-disciplinary team. Once identified as having a significant educational or physical disability, the IDEIA guarantees the child a thorough and efficient education. This education must follow an educational program designed to meet the individual needs of the identified child. The Individualized Educational Program (IEP) is developed and periodically monitored in consultation with the child's parents (Kamphaus & Frick, 2002).

Once a child has been identified as needing special educational services, and the IEP has been initiated, annual testing becomes an ongoing requirement. This provides continuous monitoring and evaluation of the child's progress and educational development. There is some question about the efficacy of special education programs, but this is the best alternative open to educators working in this age of accountability (Kaznowski, 2004; Shaw & Gouwens, 2002).

There are several thorny issues raised by the NCLB Act involving the use of high-stakes tests in grade promotion/retention, report card grades, and as part of graduation requirements for special needs children. All too frequently these contentious problems become matters of litigation. Researcher David Berliner has written, "We note in passing that only people who have no contact with children could write legislation demanding that every child reach a high level of proficiency in three subjects, thereby denying that individual differences exist" (Berliner & Nichols, 2007, p. 48).

Of all the special education issues, perhaps the largest is that of attention and focus. It is not possible for a child to learn without focusing on the task of learning and attending to the educational process. Unfortunately, 9% of elementary school children have significant difficulty doing this. These

children are usually diagnosed as having **attention-deficit/hyperactivity disorder (AD/HD)**. There is no direct physiological measure for this disorder, and the primary diagnostic tools are observational checklists.

Beyond attention and focus there are a number of specific curriculum areas where children may experience significant learning problems or have identifiable learning disabilities. Diagnostic tests for reading, language, and mathematics disabilities have been developed and published for use in the schools.

Another method of leveling the playing field of the classroom is to provide all children who have one or more disabilities with certain accommodations on tests and other forms of classroom assessments. Most states have provided for accommodations to meet the needs of students with disabilities on the statewide mandated assessments.

Learning Objectives

By reading and studying this chapter you should acquire the ability to do the following:

- Describe the size of the population of special needs students attending public schools in the United States, and suggest several reasons for the continuing growth in the percentage of children in need of special education services.
- Describe what elements teachers should collect as part of an informal evaluation of a child who may be “at risk.”
- Record anecdotal observations of children in an educational setting.
- Describe appropriate accommodations that should be made to “even the playing field” for children with disabilities during a test or examination.
- Explain the operation of an Instructional Support Team.
- List who should participate on a multidisciplinary team.
- Describe the elements that should be included in an Individual Educational Program.
- Discuss the process of conducting a curriculum-based assessment.
- Describe the major diagnostic indicators of attention-deficit/hyperactivity disorder.
- List and describe several tests that can be used in the identification of AD/HD.
- Describe the prevalence of reading disorders among elementary school children.
- Differentiate between standardized achievement tests and diagnostic tests.

INCIDENCE

The number of children receiving services for special education in the United States has never been greater, nor has it ever represented a larger proportion of the population of students enrolled in the schools. In 2003 there were 5,728,000 children enrolled in special education programs. This represents about 8% of the school-age population. Over 90% of these students were not identified until they began to attend public school. (To see the state-by-state breakdown of children with disabling conditions, go to www.ed.gov/about/reports/annual/osep/2003/index.html.) The critical point is that primary-grade teachers have a central role to play in the early identification of those children who will need special assistance. The necessity for teachers to be vigilant for, and have sensitivity to, the signs that a child may need special support cannot be overstated.

Early intervention programs for preschool children who are at risk for disabilities were part of the original Individuals With Disabilities Education Act (1986). That Act focused on the families of young children who were most at risk and provided direct service to the child and his or her family (Scarborough et al., 2004). Follow-up research has shown that early intervention with preschool-aged children with special needs can reduce the long-term supplemental educational costs for assisting them later in their educational careers (Wybranski, 1996). It is not just the teacher of young children who must be cognizant of special education instructional methods; all teachers teach children with special needs every day (Alvarado, 2006; Gaetano, 2006).

INFORMAL SCREENING

Teachers have a major advantage over parents regarding the early identification of children who may need learning support. The simple fact that teachers see a large number of children each year provides them with a basis for comparison unavailable to parents. The familiarity teachers have with so many children facilitates a primary-grade educator's ability to recognize a child who is at risk for a significant learning problem. In addition to the teacher, the elementary school guidance counselor is also part of the early-identification process. In the best of circumstances, each fall the counselor should observe the youngest students both in and outside of the classroom. The role of the counselor is also to consult with the primary-grade teachers about the beginning students and their progress.

As a normal part of the educational process, primary-grade teachers should create portfolios containing work samples for each child. These materials will help with parent conferences and also provide the core elements

needed in the process of identifying learning problems (see Chapter 9). The portfolio should contain samples of writing, audio tapes of the child's oral reading, art work, standardized test scores, as well as the **anecdotal observations** made by the teacher.

Anecdotal Records

Whenever a particularly telling incident occurs for a child who is at risk, the teacher should jot down a brief note to serve as a reminder, and at the first free moment write the details of the anecdotal incident. These anecdotal reports should be dated and provide a timeline and location for the occurrence. The incident should be described in a factual, straightforward way. The anecdote should not contain any value statements or judgments by the teacher. It should only list the people involved (actors) and the specifics of what they did and said. An **anecdotal record** can be described as an ongoing temporal record of an occurrence or incident. Box 13.1 is an example from a teacher's anecdotal observation of a second-grade child during recess.

BOX 13.1 Sample Anecdotal Observation

Subject: Richard P. (RP)
Location: School Playground
Start time: 10:05 am
Date: Wednesday, November 1, 2006

10:05 RP runs from the mid-hall door onto playground
10:07 RP is the first to find the 12 in. rubber ball and he takes it into his custody
10:08 RP begins bouncing the ball and running and dribbling it
10:10 Three other boys approach RP and ask to use the ball for a game
10:11 RP raises his voice and refuses to stop bouncing the ball alone
10:12 Ms. Padula, recess aid, stands between RP and the group of other boys, now 7 in number
10:13 Ms. Padula expresses to RP that "the ball is there for all to enjoy and use during recess"
10:13 RP throws the ball into the face of the largest of the boys in the group
10:14 Ms. Padula shouts for RP to follow her back into the school
10:14 RP runs away and tries to exit the school yard
10:16 RP is quickly overtaken by Mr. Blackburn, the teacher of record for the recess period
10:19 RP seated on the bench in the school principal's outer office, he appears to be crying

NOTE: Created from hypothetical data.

The anecdotal record should be free of any suppositions, guesses, or judgments about the child or the occurrence. This may be followed by a separate page where the teacher is free to provide his or her thoughts about what happened and why. For example, as November 1 is the day after Halloween, there may be a link between behavior and an alteration in RP's eating habits. It is also possible that the group of boys had teased him on the bus while on the way to school that morning. But, as these things were not directly observed, they are not part of the anecdotal record.

INSTRUCTIONAL SUPPORT TEAM

After the teacher and guidance counselor have conferred and reviewed what is known about a child who may have a learning problem, the next step is to meet with the child's parents. The purpose of such a meeting is to share information and determine if there is a strategy that the classroom teacher could use that would be supported at home by the parents. Only after this step has been taken, and the intervention efforts have been shown not to provide enough help for the child, would the teacher and counselor make a referral for intervention by an Instructional Support Team (IST). This step must also include the school's principal, as he or she will be directly involved in the process, and the child's parents, who are integral to the process.

Membership

The IST should include the classroom teacher, other senior teachers, a guidance counselor, educational specialists who work with children in that school (e.g., reading, art, music, and physical education teachers and the school librarian), a school nurse, and the principal or assistant principal of the building. This committee should meet as soon as a referral is received. This committee may address the educational problems the child is experiencing even though the problems are not severe enough to require special education. Parents should be part of the IST process and attend the meeting of the IST. All communications with the child's home must be in the language that the parents can understand. This can be a significant challenge, because over 50 different primary languages are common among those attending

public schools in the United States (Salvia, Ysseldyke, & Bolt, 2007). The careful application of this process can meet the requirements of **section 504** of the Rehabilitation Act of 1973 (P.L. 93-112).²

First order of business for the instructional support team is the task of reviewing the problem and all the information that the classroom teacher has brought together in the referral process. As the plan is discussed and tentatively developed to help the child, the parents should be involved and meet regularly with the IST. They should serve as members *pro tempore* during all meetings. This level of parent involvement serves the function of enlisting them into the effort. Parental participation also serves to provide the IST with an invaluable source of information about the child when he or she is not in school. Each year children spend 15% of their time in school while the rest of their time is under the protection and control of their parents. Educators must always remember that parents can feel outnumbered and outgunned by the process. It is easy for parents to become defensive and angry during the committee meetings. For that reason, schools should initiate training for the staff involved with the IST committee that is focused on communication and consensus building (O'Donovan, 2007).

The outcome of the IST meeting should be a written instructional support program for the child. This instructional support program is a guide for the teacher as well as a set of educational activities that the parent should do with the child at home.

Schedule

The IST should meet on a regular basis to review the progress of the child and discuss ideas and educational strategies with the classroom teacher. These ongoing IST meetings also provide a forum in which the teacher can express his or her frustration if the efforts are not working. It is usual that toward the end of the school year a final IST meeting is held that also includes the child's parents. If possible, the teacher(s) who will work with the child in the next grade should also be present. At this final meeting the child's progress for the year may be summarized and ideas for the parents and child to work on over the summer presented and discussed. Also, tentative plans for the next year could be outlined.

When the new school year begins in the fall, it is the responsibility of the new teacher to carry out the ideas and plans spelled out in the child's instructional support plan, and enunciated again at the end of the year conference.

REFERRAL, ASSESSMENT, AND THE IEP COMMITTEE

When the intervention program is found not to have had the desired effect, a second more formal referral should be made. The referral organizes and presents all of the initial IST materials along with the instructional support plan, the interim IST reports, and any new assessment scores from tests administered since the initial referral. This effort may be coordinated by the guidance counselor or the lead teacher on the IST.

Parent Participation

Before any diagnostic testing can be done, the school must have written approval from the child's parents. This whole process may require an initial home visit by a school social worker. A number of states including Pennsylvania provide specialized certification and licenses for school social workers. The parents should be brought up-to-date with the child's progress and provided with the reasons for a new round of assessments. The entire process along with a statement of the child's rights should be thoroughly explained. This explanation should be made using nontechnical, clear language. If the parents do not speak English, this meeting and all subsequent conferences should include an interpreter. Also during a home visit the parents should be requested to attend the meeting of the Individual Educational Program (IEP) committee.

For more information, see "Considerations on Point" at www.sagepub.com/wrightstudy

Case in Point (13a)

Significant disabilities such as sensory loss or severe neurological problems are normally identified and well known by the child's family long before the youngster enters school. Mild or marginal mental retardation, attention-deficit/hyperactivity disorder, and other less obvious disabilities are frequently not identified until the child is in school. For this reason it is often the educators who must work with the parents as they come to an understanding of the nature of their child's disability.

Many times parents grieve over what they feel is a loss of their child's potential for a good life. This process of reaching acceptance takes time. To prepare for meeting with parents, educators should collect reading material about the child's condition and brochures and other literature from advocacy groups. After the parent is introduced to the nature of the child's condition, these materials will provide a bridge to help open conversations about planning a course of action to help their child with disabilities. The school should encourage the formation of advocacy groups for the parents of children with disabilities and provide such groups with meeting space and other support. The pupil services department of every school system should develop programs that could be presented to these advocacy groups. Programs could include topics such as the following:

1. Introducing your friends and family to the problems associated with your child
2. Helping neighbors work with their children to better understand your child's disability
3. Educating others on the difference between the normal, occasional misbehavior of your child and the behaviors that may be a function of his or her condition
4. Learning to advocate for your child:
 - In regard to the thoughtless language of others . . . (e.g., "your retarded kid")
 - In regard to the planning for your child's future
 - For inclusion in age-appropriate activities beyond school
 - With educators and in the development of educational (and testing) plans for your child
5. Learning to accept and channel the compassion that others will want to show for you and your child
6. Learning the support and opportunities guaranteed by legislation such as the Americans With Disabilities Act of 1990

An important resource for teachers who are not trained in special education and for the parents of children with special needs is available at www.nclld.org/content/view/978.

This important Web page was established by the National Center for Learning Disabilities in 2006 and provides state-by-state information on the rights of children with disabilities. It also provides important information about the resources available to help the families of children with special needs.

Box 13.2 Referral Form for a Multidisciplinary Team**SPECIAL STUDENT SERVICES REFERRAL FORM**

Date of Referral _____

Student _____ Birthdate _____ Sex _____ Grade _____

School _____ Homeroom Teacher _____

Parents' Name _____

Address _____

Phone #: Home: _____ Work: _____

Interventions Tried Prior to Referral

Referring Person's Signature _____

- | | |
|--|---|
| <ul style="list-style-type: none"> ❖ What best describes child's social reactions? <ul style="list-style-type: none"> <input type="checkbox"/> Adequate group involvement <input type="checkbox"/> Few friends <input type="checkbox"/> No group involvement <input type="checkbox"/> Belligerent ❖ What best describes how child responds to constructive criticism? <ul style="list-style-type: none"> <input type="checkbox"/> Evaluates realistically <input type="checkbox"/> Hurt, discouraged <input type="checkbox"/> Rejects, becomes hostile ❖ What best describes how others react to child? <ul style="list-style-type: none"> <input type="checkbox"/> Actively accept him/her <input type="checkbox"/> Protect him/her <input type="checkbox"/> Tolerate him/her <input type="checkbox"/> Ignore him/her <input type="checkbox"/> Reject him/her ❖ What best describes child's attitudes toward rules and authority? <ul style="list-style-type: none"> <input type="checkbox"/> Acceptance <input type="checkbox"/> Overly conscientious <input type="checkbox"/> Mild resistance <input type="checkbox"/> Blames others <input type="checkbox"/> Hostile resistance | <ul style="list-style-type: none"> ❖ What best describes child's self-control and emotional expression? <ul style="list-style-type: none"> <input type="checkbox"/> Realistic expression of emotions <input type="checkbox"/> Little emotional response <input type="checkbox"/> Impulsive and unpredictable <input type="checkbox"/> Physical and/or verbal aggression ❖ What best describes child's independence while working? <ul style="list-style-type: none"> <input type="checkbox"/> Works well independently <input type="checkbox"/> Subtle resistance to help <input type="checkbox"/> Excessive reliance on others <input type="checkbox"/> Refuses to accept help ❖ What best describes child's attention span? <ul style="list-style-type: none"> <input type="checkbox"/> Average <input type="checkbox"/> Long <input type="checkbox"/> Short ❖ What best describes child's oral comprehension? <ul style="list-style-type: none"> <input type="checkbox"/> Quick understanding <input type="checkbox"/> Average <input type="checkbox"/> Slow to understand |
|--|---|

- ❖ What best describes child's ability to follow directions?
 - Follow appropriately
 - Needs continued explanation
 - Ignores directions
- ❖ What best describes child's verbal expression?
 - Clear expression of ideas
 - Poor expression of ideas
 - Cannot express ideas

Current Achievement (Estimate if data unavailable)

	Grade Level	Performance Level
Reading	_____	_____
Language Arts	_____	_____
Mathematics	_____	_____

Records Review

Hearing Screening: Date: _____ Results: _____
 Vision Screening: Date: _____ Results: _____
 Other Relevant Health Information: _____

Preschool Experience: Yes ___ No ___ N/A ___ (If yes, attach any relevant documents)

Days Absent Last Year: _____ Days Absent Current Year: _____ Grades Repeated: _____

Currently receiving (Mark all that apply.):

- Title I
- Speech
- OT/PT
- Language
- Individual Guidance
- Other (explain) _____

The following records are attached (*required for all referrals; + as applicable):

- *Cumulative Records
- *Discipline Records
- +State Assessment Test Scores
- +Competency Scores

Parents' and/or student's native language or other primary mode of communication if other than English (specify): _____

State reason you believe this child has a disability (impairment and a need for special education) such as academic and non-academic performance and medical information; any special programs, services, interventions used to address this student's needs and the results of those interventions, etc.

Membership

The multidisciplinary team and its parallel Individual Educational Program (IEP) committee normally include the school psychologist, a special education teacher, a school nurse, the school social worker, the school's principal or assistant principal, a guidance counselor who is familiar with the child, educational specialists, and specialized therapists as needed (e.g., physical therapy, occupational therapy, a speech specialist and/or hearing specialist, and a teacher certified for the visually impaired), and the child's parents (for more on the IEP, see below). On occasion these meetings may also include a pediatric psychiatrist, neurologist, ophthalmologist, or physiatrist.

Schedule

The best practice is to have two meetings; the first is of the multidisciplinary team. Frequently the time pressures on school make scheduling difficult. The first committee meeting is a time when the plan for the child's assessment is discussed and responsibilities for testing assigned. During the first meeting of the multidisciplinary team, it is normal to discuss the child's strengths and solicit and discuss the parents' ideas for their child's education. It is also a time to discuss the child's performance on standardized tests and state-mandated assessments. During the first meeting the school psychologist (or another testing expert) normally makes a presentation of test data to the parents. The parents need to have accurate but understandable information to make an informed decision. The instruments that will be used in the full psychoeducational diagnostic assessment should also be carefully explained to the parents during that first meeting. A written record should be maintained of all phases and steps in the process, including the written request to the parents to attend the meetings, all recommendations, major observations, and the final documentation and IEP.

At the second meeting, multidisciplinary team members can morph into an IEP committee. Before an IEP can be written, the multidisciplinary team must decide if the child is eligible for special education services. If the committee determines that the child has a significant impairment that makes learning excessively difficult, then he or she exceeds the threshold for being entitled to special services.

Once a special education entitlement decision has been made, the IEP committee writes the child's educational plan using the data and recommendations brought together by the multidisciplinary team. Once again the parents should attend the IEP meeting. During this second meeting, the IEP for the child is finalized and discussed and possibly modified. A signed copy

is given to the parents and another is kept in the school's records. No special educational services can be provided to the child if the parents have objections to any part of the IEP.

ASSESSMENT PROCESS

School Psychologist

Following the initial meeting of the interdisciplinary team, the task of evaluating the child to diagnose his or her specific areas of difficulty can begin. The role of the school psychologist is often central in this process. The school psychologist will coordinate a psychoeducational assessment, which may include assessments by other professionals such as the reading teacher, the school nurse, and the school social worker. The psychoeducational diagnostic assessment is likely to include an individually administered test of cognitive ability and several individually administered clinical tests of perception, personality, and learning style. The assessment may also include the clinical observations by the school psychologist of the child interacting with peers and when he or she is at free play.

Curriculum-Based Assessment

One important part of most assessment protocols involves **curriculum-based measurements (CBM)**. Curriculum-based measurements are conducted to identify problematic areas from the curriculum that is taught to the child. This specialized form of measurement is accomplished by noting the child's actual capability to perform the tasks that are seminal to the learning of any particular component of the curriculum. Once the child's capabilities are identified, the need for remediation can be established by an examination of the discrepancy between the child's performance levels to those of his or her peers. These measurements are carried out by using a series of curriculum probes (Burns, MacQuarrie, & Campbell, 1998). Each probe requires only a few minutes to complete and involves actual material used in the classroom. A probe might involve an assessment of the number of words the child can read in a minute or a brief test of the child's ability to solve multiplication problems involving two columns of numbers. CBM identifies the exact skills that need to be improved through remediation, thereby providing the precise data needed to develop an IEP. When the curriculum-based measurements are combined with more traditional measurements, including dimensions such as achievement on normative measures and cognitive/intellectual ability test scores, the

process is referred to as a curriculum-based assessment (CBA) (Lichtenstein, 2002). The combination of these measures with the personality and other noncognitive measures make up the psychoeducational diagnostic assessment.

In addition to the curriculum measurements that the school psychologist may employ, the school's educational specialists may use published instruments to make assessments of possible learning problems in specific curriculum areas. Examples of measurements of reading, language, and mathematics are included later in this chapter.

FORMAL ASSESSMENTS OF ATTENTION AND FOCUS

Children who cannot attend to the tasks involved with learning and who lack the ability to focus on classroom instruction will experience great difficulty in school. This disability was named by the American Psychiatric Association (APA) as attention-deficit/hyperactivity disorder (AD/HD), predominantly inattentive type (APA, 1994).

Incidence

Even though only 8% of school children receive special education, over 9% of all children have AD/HD. One implication of this imbalance is that more work needs to be done to identify AD/HD children in the primary grades. Only 20% of those children who are identified with AD/HD are girls. Thus, it is likely that 12% of all boys have this disorder (Committee on Quality Improvement [CQI], 2000). The diagnosis of AD/HD is often found to be associated (comorbid) with anxiety, conduct disorder, and/or severe oppositional behavior (CQI). Attention-deficit/hyperactivity disorder is also found among many children with problems in language and speech development as well as those who have difficulty learning to read. There is no definitive medical or psychological test to determine AD/HD (APA, 1994). There is, however, evidence for a genetic component to the problem (Chang, 2005). For that reason, the best method for identification of a child with attention deficit disorder (ADD) or AD/HD is by observation and the use of observational checklists.

There is a new research paradigm that is exploring a possibly distinctive neurological morphology among children with AD/HD (Chang, 2005). Research into the brain's architecture has been ongoing for years. For example, the importance of the right parietal lobe of the brain in learning logic and mathematics, and the left hemisphere in learning to read, are well established (Joseph, 2000). More recently, studies involving magnetic resonance imagery (MRI) of the human brain are expanding on this understanding of neurofunctions.

Brain research conducted on a human who is responding to environmental conditions and stimuli is in the earliest stage. These small-scale studies are tentative and incomplete in 2007, but they hold promise for the future (Plessen et al., 2006; Shaw et al., 2006).³

Another promising direction in research into understanding AD/HD is in the area of diet. There is proof that food additives have a negative impact on susceptible children, making it difficult for them to focus on learning and possibly increasing the child's activity level (Stevenson, et al. 2007). These findings have resulted in Great Britain's health service issuing a warning to parents to limit their child's intake of the food preservative sodium benzoate and a range of artificial food colorings.

All of the checklists used in the identification AD/HD include items to be answered by the parents. The combination of both school (teacher and counselor) and home (parents) observations makes a diagnosis by the school psychologist possible. The fact that having a child who exhibits the behaviors associated with AD/HD changes parenting behavior is well documented and needs to be considered in developing the IEP (Lin, 2001). A clinical interview of the parent by either the school's social worker or psychologist can provide the data to make this possible.

Parent education through seminars or support groups can go a long way toward overcoming the child's difficulty. Another factor to keep in mind when working with the parents of an AD/HD child is the very real possibility that one or both parents may also exhibit AD/HD behaviors. This means they may be forgetful with tasks and disorganized with complex paperwork.

Checklists

There are several checklists that are used to organize the observations of children thought to have ADD or AD/HD. The diagnostic guidelines provided in the APA's *Diagnostic and Statistical Manual, 4th ed. (DSM-IV)*, provide the basis for most of these checklists. The American Psychiatric Association suggests that a child may be diagnosed with AD/HD if he or she persistently exhibits an array of these behaviors at particular times in both school and home settings:

1. Inattention
 - a. Fails to follow through and complete tasks
 - b. Is easily distracted by the environment and others in it
 - c. Finds it hard to concentrate on schoolwork or sustain attention
 - d. Does not listen when spoken to
 - e. Is forgetful and tends to lose items (homework, lunch, books, etc.)

2. Hyperactivity
 - a. Will climb and roam
 - b. Constantly shifting from one task to another
 - c. Talks excessively
 - d. Is constantly on the go as if driven by a motor
 - e. Is restless and cannot remain seated for a long period
 - f. Does not play well with others (has few friends)
3. Impulsivity
 - a. Acts without thinking or planning
 - b. Frequently calls out in class
 - c. Frequently interrupts others and butts into conversations
 - d. Cannot wait before taking a turn
4. Early Onset

There should have been an early onset of the disorder, with the symptoms occurring before the age of 7, and the symptoms must have persisted for more than 6 months.

Jolene Huston, of the Agriculture Extension Service of the Montana State University, wrote a resource for parents and others who are learning to live with AD/HD in their families. This monograph can be seen here: www.montana.edu/wwwpb/pubs/mt200304.html.

AD/HD MEASUREMENT SCALES

There are over two dozen observational scales that have been published for the identification of attention-deficit/hyperactivity disorder (AD/HD). Five observational scales that are commonly used to gather data about children experiencing learning problems related to attention deficit are reviewed here. These same five scales are also widely used in research and are frequently cited in the educational psychology literature.

Behavior Assessment System for Children, 2nd Edition (BASC-2)

The BASC-2 can be described as a multidimensional approach to the assessment of a range of childhood disorders including attention deficit–hyperactivity. It was published in 2004 by American Guidance Service, a division of Pearson Education, and is used with children between ages 2 and 21

(Reynolds & Kamphaus, 2004). The system includes teacher, parent, and self-report personality questionnaires. It also has a formal student observation system and a form for collecting the child's developmental history. When analyzed as a whole, the instrument assesses the possibility of impairment in the child's "**executive function**" related to attention deficit.⁴

The BASC-2 was well normed and corrected for gender differences on all items. It has good internal consistency and test-retest reliability with Cronbach α' coefficients in the 0.90 range. The BASC-2 system exhibits good overall concurrent validity but exhibits a modest level of predictive validity for AD/HD children.

Each part of the BASC-2 takes about 30 minutes to complete. An analysis of the various data sources can be done using software available from the publisher. An enhanced clinical diagnostic software package—BASC-2, Assist Plus—is also available for school psychologists and clinicians. The BASC-2 requires that the professional interpreting the instrument be educated to what was once described as level B.⁵ (For information about these qualification levels see Chapter 12.) There is also a version of the BASC-2 that was published in Spanish. A validation study of the Spanish version in Puerto Rico raised questions about the construct validity and test-retest reliability of the parent questionnaire (Perez & Ines, 2004).

To review a sample parent report, see www.agsnet.com/Group.asp?nGroupInfoID=a30000.

Brown ADD Scales for Children and Adolescents

This scale, commonly referred to as the Brown ADD Scales for Children, was published by the Harcourt Assessment Division of the Psychological Corporation in 2001 (Brown, 2001). The Brown ADD Scales for Children includes a teacher questionnaire, parent questionnaire, and a semi-structured clinical interview. To administer to questionnaire it is necessary to have been trained at a B level.⁶

The scale exhibits a high degree of concurrent validity with other measures of attention deficit and good test-retest reliability. It was normed for use with a population between the ages of 3 and 12 years, and it provides comparative and diagnostic tables up to age 18. Unfortunately, the sampling process used by Brown opened the measure to criticism as having a potentially biased normative base (Jennings, 2003).

The Brown ADD Scales for Children requires about 20 minutes for the classroom teacher or the child's parent to complete. The instrument presents multidimensional data along six subscales that are aligned with the

diagnostic criteria used in the *DSM-IV*. The test manual presents a wealth of information that can be used in developing an IEP. There are three questionnaires that make up the instrument, one each for the teacher, parents, and the child to complete.

Conners' Rating Scales-Revised (CRS-R)

The Conners' Rating Scales were designed and normed to be used with a population of children between the ages of 3 and 17 years by Multi-Health Systems Inc. of Canada (Conners, 1997/2000). They are distributed in the United States by Pearson Education. The CRS-R provides a global index score as well as scores that align with the *DSM-IV* AD/HD classification. The scoring and interpretation of the CRS-R is limited to those educators who have a B level of training in measurement.

There are seven other subscale scores that are a part of the CRS-R, including Oppositional, Cognitive Inattention and Problems, Hyperactivity, Anxious-Shy, Perfectionism, Social Problems, and Psychosomatic. The CRS-R has versions (forms) that are both long and short. These two lengths of forms are available for both the parent and teacher editions of the measure. Starting at age 12 there is also a self-report adolescent scale. This additional questionnaire adds subscales of problems with Anger Control, Conduct, Emotions, and Family Relations.

Minor gender differences are built into the instrument. The CRS-R was standardized on a large sample of students from Canada and the United States that was weighted to provide a good representation to the 1990 U.S. census. The Conners' Rating Scales-Revised exhibit impressive levels of internal consistency and test-retest reliability. Unfortunately, reliability studies of the subscales found that the three that are aligned with the diagnosis of AD/HD (Hyperactivity, Cognitive Problems, and Anxiety-Shy) have alpha levels below 0.50 (Hess, 2001).

Early Childhood ADD Evaluation Scale (ECADDES)

The Early Childhood Attention-Deficit Disorder Evaluation Scale is appropriate for children between the ages of 2 and 6 years. ECADDES was designed by Stephen McCarney and Nancy Johnson (1995) to align with the diagnostic characteristics listed in the *Diagnostic and Statistical Manual, 4th ed.* The ECADDES is published by Hawthorne Educational Services. Two observational checklists make up this instrument, one for use in the school

and the other for use in the child's home. Data from the observations in the two settings are used to derive scores on two subscales, Inattentive and Hyperactive-Impulsive. The observational checklists take less than half an hour to be completed by the preschool teacher and the parent.

The ECADDES was standardized on a sample of almost 2,900 children. The sample was not nationally representative, with an underrepresentation of children from ethnic minority groups and an overrepresentation of children from rural settings in the upper Midwest (Cohen, 2001; Keller, 2001). The upper age limit of the ECADDES is 78 months, which is 6 months younger than the *DSM-IV* specifies as the lowest age (7 years) a diagnosis of AD/HD can be made (APA, 1994). The questionnaires can be completed by preschool caregivers and parents, but a B level of training is needed to interpret those scores. To learn more about the ECADDES and see a copy of the instrument, see www.hes-inc.com/hes.cgi/02250.html.

The school checklist exhibits good test-retest reliability ($r > 0.90$) and the home instrument more modest levels of demonstrated reliability ($r > 0.70$). A problem area is validity. The authors make a case for the instrument having "face validity" as judged by a panel of experts. Also they point out that the instrument can confirm that children who have been diagnosed as exhibiting behaviors similar to AD/HD score in the appropriate levels for AD/HD.

As the ECADDES has sampling problems and poorly defined validity, and because it is designed to be used prior to a child being ready for a special education intervention, it is to be viewed only as a preliminary screening device.

Scales for Diagnosing AD/HD

Gail Ryser and Kathleen McConnell (2002) developed an instrument that can identify children and adolescents (ages 5 through 18 years) who exhibit AD/HD behaviors. This instrument, published by Pro-Ed, has two forms: school and home. The questionnaires are completed with teachers and parents and are scored by a B-level test administrator. The 39 Likert-scale questions on the two forms yield three subscale scores that align with *DSM-IV* criteria (viz., inattentiveness, hyperactivity, and impulsivity).

The normative group included a representative sample of 3,448 children between 5 and 19 years of age. The two Likert scales (school and home) have very substantial internal consistency ($\alpha > 0.90$) and the test-retest reliability is even greater. Also, there is good interterm reliability ($r > 0.90$). The validity of the measurement of the three subscale scores was well established by factor analysis (Law, 2001).

This measure is a good way to screen for AD/HD, and it is also an appropriate device to use to monitor students who have an IEP for attention-deficit/hyperactivity disorder.

Diagnosis vs. Disability

Once a child has been diagnosed with an attention-deficit/hyperactivity disorder, he or she is not automatically eligible for special education. To qualify for special education services a child must meet the guidelines of the Individuals With Disabilities Educational Improvement Act (IDEIA; 2004) Section 301, parts a and b. This requires that the child persists in exhibiting a significant gap between achievement and his or her ability after a period of scientifically appropriate instructional interventions have been attempted. In other words, the old **discrepancy** idea (described in Chapter 11) is alive and well and living in the rules laid out in the IDEIA passed into law in July of 2005.

ASSESSMENTS OF READING PROBLEMS

Reading is a core skill needed by every child. The third grade, with its high-stakes reading test, can be a nightmare for those who have fallen behind in the development of this skill. For that reason it is critical that primary-grade teachers monitor the burgeoning reading skills exhibited by their students. More referrals are made for reading problems than for any other area of the curriculum (Lyon, 1998). Only 5% of children learn to read without any formal instruction, and another 35% have little difficulty learning to read in school. Another 40% of our children learn to read with considerable effort, and 20% find learning to read the most difficult task they have ever faced. Severe cases of reading disability occur in about 4% of all children and can even involve mirror-image reading (APA, 1994).⁷

Learning to Read

The task of learning to read involves having the child learn to recognize the 26 letters of the alphabet and the 40 sounds that they can represent. Next, the child must learn that the spoken language is made up of these same sounds (phonemes) and that the printed letters are representations of those sounds. Once this is obtained, the child must learn to connect phonemes into words, recognize those words, and attach meaning to them. Taken

together, these steps make up the decoding process of reading. It takes the average child somewhere between 4 and 14 separate exposures to a written word before being able to quickly and easily decode it into what it represents (Lyon, 1998). Disabled readers may require 20 or more experiences with the word before being able to decode it. The amount of experience the child has had with the word in the environment relates to the numbers of exposures needed. Children who had a broader range of experiences and who had many opportunities to see and hear words read to them (parental reading) can be expected to learn to read with less difficulty.

Phonemic Awareness

It is evident that the first step in the difficult task of becoming a reader of the English language is connecting sounds with the letters of the alphabet. This process is known as **phonemic awareness**. The foundation for phonemic awareness is set long before the child enters school. A simple screening test of the child's phonemic awareness given early in kindergarten can identify those children who are at risk for having a problem learning to read. Once identified, those children need to be given direct and efficient instruction in this vital prereading skill.

Comprehension

The need for this decoding process to increase in speed is the child's next task. Comprehension is built on the rapid decoding and processing of written words. Slow decoding makes it impossible for the developing reader to understand and derive meaning from what has been read. By fourth grade some children who have had reading test scores that indicate a level of proficiency through the third grade can begin to have reading problems as comprehension becomes the new task (Leach, Scarborough, & Rescorla, 2003).

Environmental Factors

The fact that a child experiences difficulty in learning to read does not mean that there is a neurological or psychological problem. Most children who are at risk for having difficulty in learning to read are those who have had little exposure to reading materials and few literacy experiences prior to kindergarten. Children who were surrounded with numerous children's

books, and who had caregivers that played rhyming games, read out loud, talked, and worked to expand the child's vocabulary, are the ones who are most likely to learn to read without difficulty. The National Reading Panel (Armbruster, Lehr, & Osborn, 2003) published a list of those parental linguistic interactions that facilitate a child's learning to read. These include talking and listening, reading children's books out loud, learning and talking about books, learning to recognize the letters of the alphabet, and demonstrating the letter-sound link.

Diagnostic Tests

The IDEIA provided a new requirement that children with disabilities be identified early. For that reason, kindergarten and first-grade children are often the focus of identification efforts. One method being employed in this effort for early identification is known as Response to Intervention (RTI) (James, 2004).

Diagnostic tests are made up of items that measure a specific skill needed to successfully learn. Students without a reading disability score relatively high on these tests. However, the full range of children is used in the normative group. This results in a distribution of scores characterized by a significant negative skewness. The skew in the data makes it possible to identify and see differences between students who are struggling to learn to read. Their scores are spread out on the long tail of the skewed data. The skew makes it possible for the instrument to be more sensitive to small differences among low-scoring children.

Data from a diagnostic test can be used to inform the IEP writing process. Reassessment with the same instrument can also be used to track improvement over the baseline established during the initial diagnostic testing.

EARLY READING TESTS

There are a number of reading tests that are a part of larger batteries of achievement tests. An example of such a test is the third edition of the Woodcock-Johnson Tests of Achievement.

Woodcock-Johnson

While much more than just a reading test, the third edition of the Woodcock-Johnson battery does provide an excellent measure of reading.

The person using and interpreting this test is required to be highly qualified at the C level and have specific training in the use of this test.⁸ The Diagnostic Reading Battery (WJ III, DRB) is part of a separate achievement test—the Woodcock–Johnson III Tests of Achievement (WJ III, ACH). These measures are appropriate for all children and adolescents over the age of 2 years (Woodcock, McGrew, & Mather, 2001). The reading related subtests include (a) Letter–Word Identification, (b) Reading Fluency, (c) Passage Comprehension, (d) Story Recall, (e) Story Recall Delayed, (f) Oral Language, (g) Reading Vocabulary, (h) Oral Comprehension, (i) Sound Awareness, (j) Reading Comprehension, (k) Oral Expression, (l) Phoneme–Grapheme Knowledge, and (m) Verbal Comprehension.

The total set of all achievement tests requires almost 2 hours for administering. Each of the various subtests requires a minimum of about 5 minutes to complete, making it possible to obtain just a reading score in a little over an hour (Cizek, 2003). Computerized scoring and profiling is available from the publisher, Riverside Publishers. It is well standardized, highly reliable, and has been shown to be a valid measure of learning problems in reading (Semrud-Clickeman, 2003).

Wechsler Individual Achievement Test

Another individually administered achievement battery that can be used to measure early reading is the Wechsler Individual Achievement Test, 2nd ed. (WIAT-II). Once again, this battery provides an example of what an individualized reading test can measure; however, it is not a “one-trick pony.” This test provides measures for four areas of reading, two of mathematics, a test of listening comprehension, one of oral expression, and a test of written expression. This achievement battery is appropriate for the assessment of children as young as 4 years of age. It is also a test that requires the examiner be trained in its use and have a level-C background. The test for younger children requires less than an hour to administer. The early reading tests are designed to assess phonological awareness and involve items measuring the ability to name the letters of the alphabet, identify and generate rhyming words, identify the beginning and ending sounds of words, and the matching of sounds with letters and letter blends (Psychological Corporation, 2001).

The WIAT-II is constructed to align with the recommendations of the National Reading Panel (2000) and was standardized using a stratified random sample that was balanced for ethnicity, SES, gender, and geography. It has good reliability and a solid validation (Doll, 2003).

Dynamic Indicators

There are also more than a dozen tests of early reading that can be used with preschool, kindergarten, and elementary school populations. One of these is the **Dynamic Indicators of Basic Literacy Skills**, 6th ed. (DIBELS). This measure is designed for use with children between kindergarten and third grade (Good et al., 2002/2003). It is an inexpensive, individually administered brief screening and monitoring test of children's developing reading skills. The measure should be administered by a person with a B level of training and requires about 20 minutes per child. Scoring is complex, but an online option is available.

The University of Oregon provides a Web page where it is possible to learn much more about this test: <http://dibels.uoregon.edu/>.

The DIBELS subtests measure Initial Sound Fluency, Letter Naming Fluency, Phoneme Segmentation Fluency, Nonsense Word Fluency, Oral Reading Fluency, and Word Use Fluency. In addition, comprehension is assessed through a measure of Oral Retelling Fluency. One of the remarkable findings in the literature about this test is the high levels of reliability exhibited by the parts of the battery. High reliability scores on a test for young children are not easy to achieve. Most of the reliabilities for this measure are in the 0.90 range (Brunsman, 2005; Shanahan, 2005).

The DIBELS is a good match for monitoring children as they approach the high-stakes reading test in third grade, and it provides a method for checking the mastery of the critical early reading skills. This test is also widely employed by primary-grade teachers as a method to track children who are in the process of developing their reading skills.

However, a lack of specificity about the norming sample data makes this instrument one that should not be used for the specific identification of disabled readers. It is best employed as a classroom measure that monitors the progress early readers are making (Brunsman, 2005; Shanahan, 2005).

Test of Early Reading

The Test of Early Reading Ability, 3rd Edition (TERA-3), is an easy to administer early reading test designed for children between the ages of 3½ and third grade. It was published by Pro-Ed in 2001 (Reid, Hersko, & Hamill, 1981/2001). This is another individually administered test requiring a half-hour of testing time per child. While the test may be given to the child by a teacher's aid, the examiner who scores and interprets the test data should have a B level of educational background.

This measure provides four scores: a measure of the child's understanding of the alphabet, the understanding of the conventions of print, and the ability to derive meaning from the printed word. The fourth and final score is a total reading quotient (deFur, 2003). The test does not provide a measure of phonemic awareness and is not well aligned with the most recent recommendations of the National Reading Panel (Armbruster, Lehr, & Osborn, 2003). The norming sample was small but representative of the diversity of the early school population. TERA-3 is a reliable and valid instrument with a quarter-century history.

STAR Early Literacy

A new direction in testing is represented by the STAR Early Literacy test. This is a criterion referenced, computer-adaptive measure written and published by Renaissance Learning in 2001. Once the software license has been purchased, children as young as 3 years of age, and as old as 9, can be given regular reading literacy assessments. These assessments can require as little as 10 minutes to administer. The score areas from the STAR Early Literacy tests include Graphophonemic Knowledge, General Readiness, Phonemic Awareness, **Phonics**, Comprehension, Structural Analysis, and Vocabulary. A major advantage to this testing system is that groups of children can take the assessment at the same time. The license agreement is sold in units of 40. The system also makes it easier for the classroom teacher to track and monitor the developing level of reading skills in a classroom of children.

To see a sample of the STAR Early Literacy test, visit www.renlearn.com/starearlyliteracy/screens.htm.

The STAR software includes 2,400 items from which only 25 are required to test an individual child. This measurement is a good example of computer-adapted testing. The system remembers each child and creates a test at the child's last reading level. All items have been well standardized and balanced for difficulty through an application of item response theory (Graham, 2003). The testing system uses a large and representative sample of subjects to balance and equate items.

The STAR Early Literacy tests have demonstrated good reliability and superior validity. The test may provide a positive advantage to those students who have had more extensive computer experiences at home. Yet, it does provide each child with a baseline at the start of the school year and through regular retesting can track individual progress toward the learning goals of the grade level.

Elementary School Reading Tests

There are more than 80 different reading tests published in English available for use in the elementary grades. Among these are several group-administered diagnostic reading tests that dominate the school market. One of these is the Stanford Diagnostic Reading Test, 4th ed. (SDRT-4). This measure is published by Harcourt Assessments. Another is the California Diagnostic Reading Test (CDRT), published by CTB, McGraw-Hill. A group-administered reading test commonly used in the schools is the Grey Oral Reading Test, 4th ed. (GORT-4).

The first Gates–MacGinitie reading test was published in 1928 and the fourth edition in 2003 by Riverside Publishing. The new Gates–MacGinitie offers an optional computerized scoring system, the Lexile Framework, which presents a customized list of 15 books selected to match the reading level of the child.

ASSESSMENTS OF LANGUAGE AND SPEECH PROBLEMS

Central to being able to communicate is the ability to decode and understand the meaning of the sounds of speech. This is referred to as the receptive task of language. Aligned with this ability are the two parts of verbal speech: articulation and expression. The last area of expressive language to develop is that of writing. Developmental problems in the child's ability to communicate can occur singly with one of these dimensions or in combination. There is also a high degree of comorbidity for expressive and **receptive language** problems with other disabling conditions, including AD/HD.

Measures for the Identification of Language Problems

The first step in determining if a child has a developmental problem in the acquisition of those receptive and expressive language skills appropriate for his or her age involves a pediatric evaluation along with an audiologist's assessment. Hearing is primary among these potential physiological problems. Possible medical problems can include neurological disorders and nutritional questions. Once these physical issues have been accounted for, language testing to establish a baseline and writing of an IEP can proceed. Ongoing testing can be used to support the special education intervention by monitoring progress toward the goals of the IEP.

Communication Abilities Diagnostic Test

One of these measures of language, published in 1990 by Riverside Publishing, is appropriate for use with children between the ages of 3 and 10. This test, the Communication Abilities Diagnostic Test (CoADT), is administered to the child in a one-to-one format by the assessor. The testing process requires 45 minutes to administer, and an equal amount of time is needed for the setup prior to testing and the scoring afterward (Johnson & Johnson, 1990). This measure represents an innovative approach to language sampling. It is not a test per se, but a structured method of sampling the child's language. It uses a storytelling technique and also an engaging board game that the examiner plays with the child. A verbatim transcript of what the child says must be kept and analyzed after testing. The complexity of this evaluation makes it essential that the examiner be educated at the B level.

From an analysis of the transcript of the child's language it is possible to measure a Total Language Score and also subtest scores of Structure, Grammar, Meaning, Pragmatics, and Comprehension. Composite scores for Semantics, Syntax, and Language Expression are also available to the examiner. The test provides a norm-based scoring system that makes it possible to determine a point of comparison. It also provides criterion scoring, which facilitates goal setting when an IEP is written (Haynes & Shapiro, 1995).

The CoADT was developed with a statistically balanced sample that is a good representation of the general population. The test is reliable and demonstrates a reasonable level of predictive validity. It does have a problem with inter-rater reliability, especially with the Grammar scale.

OWLS

A battery of language tests has been written by Elizabeth Carrow-Woolfolk, including the Oral and Written Language Scales Listening Comprehension and Oral Expression (OWLS-L; 1995) and the Oral and Written Scales Written Expression (OWLS-W; 1996). These measures require that the administrator has been educated to the B level. Both the OWLS-L and the OWLS-W are published by American Guidance Services.

The OWLS-L and its companion test, the OWLS-W, were standardized as one instrument but later separated as two different tests. The OWLS-L provides an Oral Composite score along with two subscales: Listening Comprehension and Oral Expression. The Listening Comprehension subscale presents the child with an array of line drawings and requires the child identify objects and activities on the pictures in response to the examiner's

questions (Graham & Malcolm, 2001). The oral expression test uses line drawings as stimuli and asks the child to discuss aspects of what is depicted in the drawing. The scoring of the OWLS-L provides an item analysis that facilitates the study of the pattern of errors that the child made. The test is reliable and is built upon a solid theoretical foundation. It can be used as part of an evaluation and to write an IEP.

The writing test, OWLS-W, is easily administered and can be given to small groups of students. The difficult task is scoring the measure (Carpenter & Malcolm, 2001). Each writing task has its own set of directions and scoring rubrics. The measure involves having the child write sentences dictated by the examiner. The OWLS-W also has children write several short story endings and complete an expository writing task. The measure provides scores of Writing Conventions, Linguistics, and Content. The OWLS-W is reasonably reliable and exhibits both good content validity and predictive validity. The two measures, OWLS-L and OWLS-W, would be best used together in a language assessment.

Test of Early Language

The third edition of the Test of Early Language Development (TELD-3), which is published by Pro-Ed, requires only a C level of formal training (Hresko, Reid, & Hammill, 1999). This qualification level may reflect the simplified manual that accompanies the TELD-3. This publication provides excellent background and directions for the use of this instrument. The instrument requires about 40 minutes to administer and a similar timeframe to score. This individually administered instrument can be used to determine a Spoken Language Quotient and also provides subscale scores for Receptive and Expressive Language.

The TELD-3 is a highly reliable measure that has good concurrent and predictive validity (Morreale & Suen, 2001). It can be used in the process of identification of a language disability and add critical data to the child's IEP. The baseline data obtained during the use of the instrument for diagnosis can become the starting point for ongoing tracking of the child's communication development.

MEASURES FOR THE IDENTIFICATION OF PROBLEMS LEARNING MATHEMATICS

Children of all ability levels can have difficulty in learning mathematics. Being unable to understand a concept that others have mastered is frustrating for

any child. Early grade difficulty with arithmetic, and the associated feelings of frustration and loss of a sense of self-efficacy, are the reasons many otherwise bright and motivated children avoid mathematics.

Occurrence

For the most part, mathematics learning problems occur in association with other learning problems. Usually, mathematics disability is paired with a reading disability. The incidence of occurrence of mathematics learning disabilities in association with other learning disabilities is about 6% among the population of elementary children (Fuchs & Fuchs, 2002). The incidence of a mathematics learning disability occurring alone is much smaller, equaling about 1% of the school-age population (APA, 1994).

Nature of the Problem

Children enter school with wide disparities in their developmental readiness for learning mathematics. To learn the basic arithmetic operations, it is essential that the child conceptualize a number as an immutable entity. Most children have acquired this concept by first grade, but as many as a third of all children will require a year or two more before they recognize that the number 10 is made up of 10 distinct and unvarying single units (Piaget, 1930, 1952/1964). The presence of a high-stakes test in third grade makes it absolutely essential that all children acquire a true understanding of the base 10 system of numeration by the end of first grade. All arithmetical processes require this as a foundation.

There are a number of published tests that can quantify the development of mathematical knowledge in kindergarten and the primary grades. Scores on these measures can be used to write an IEP and also serve to establish a baseline for charting the child's growth in mathematical understanding. One of these measures is group administered and requires a C level of knowledge of testing. The other is the Key Math-Revised, an individually administered assessment that requires the user be qualified at the B level.

Key Math-Revised

American Guidance Services published the Key Math-Revised: A Diagnostic Inventory of Essential Mathematics in 1998 (Connolly, 1998). The test provides a total score based on the combination of three subscales: Basic

Concepts, Operations, and Applications. Each of the subscales is made up of several test areas.⁹ Depending on the age and ability of the child, the Key Math–Revised may require up to an hour to complete. It is an appropriate diagnostic measure that can be used with children from kindergarten through middle school.

The content of the test has been criticized as being dated with an overemphasis on computational skill (Kingsbury & Wollack, 2001). The measure is easy to administer and the scoring system is not difficult to follow. It does provide valid and reliable diagnostic data that can be used in the development of IEPs.

American Guidance Service was acquired by Pearson Assessments in 2006, and in 2007, a new online edition of the Key Math Test was published. This version provides a very wide measurement range, preschool through age 21. As with the Key Math–Revised, the third edition (KMT III) presents subscale scores for Basic Concepts, Operations, and Applications. The test requires 45 minutes with young children and over an hour for adolescents and youths.

Diagnostic Math Test

The group-administered test of arithmetic skills is the Stanford Diagnostic Mathematics Test, 4th ed. (SDMT-4; Harcourt Brace Educational Measurement, 1996). This test has six versions and covers all the grade levels from first through high school graduation (grade 13). The SDMT-4 provides a total score and two subtest scores: Computation, and Concepts and Applications. There are up to 17 skill areas measured by the upper grade-level test. It takes over an hour to administer the SDMT-4 in the lower grades and over an hour and a half in the upper grades.

The SDMT-4 was normed on a large sample of the population ($N = 27,000$), and the various scales are reported to have very high reliabilities. The test reports are both norm based and criterion based, providing a useful set of scores. The publisher provides excellent software that assists in report writing (Lehmann, Nagy, & Poteat, 1998).

The content of the SDMT-4 was based on the standards published by the National Council of Teachers of Mathematics. As those standards were revised after the SDMT-4 was published, the validity of the test is suspect. A number of the items seem to be a bit dated. For example, a money question uses a drawing of coins that includes a 50-cent piece. Except for coin collectors, that coin has just about vanished and would not be familiar to children today.

INDIVIDUALIZED EDUCATIONAL PLAN (IEP)

The requirement for each child with a special need to have an Individualized Educational Plan is prescribed in federal legislation known as the Individuals With Disabilities Educational Improvement Act of 2004 (IDEIA; P.L. 108-446, 2004). This is the successor to the original Education for all Handicapped Children Act (P.L. 94-142, 1975) and its later versions, including IDEA (1997). One change in the focus of educational policy that was brought about by the NCLB legislation is in the way children who need special education are viewed. Heretofore, the focus of federal law and policy has been to provide access for special needs children to all aspects of the educational programs. Since the NCLB law, the focus became the learning outcomes. This changes the goal for providing assistance from providing access to working to ensure that all special education children achieve a level of academic proficiency.

NCLB Special Education Conflict

This law was written in an attempt to align special education with the provisions of the No Child Left Behind Act (U.S. Department of Education, 2005). The crux of the problem between IDEIA and NCLB is with the provisions of the NCLB Act that required that 99% of all students take the same state-mandated assessment test. In other words, the children who received special education services were required to be tested with the state's mandated NCLB test using a test form appropriate for a child of his or her age (not developmental level). Beginning in 2006, a modification made it possible for a larger group to avoid the grade-appropriate NCLB test. Yet, even with this concession, only 3% of the children can now be tested with an instrument that is developmentally more appropriate.

It has been argued that the NCLB Act is antithetical to the whole concept of special education. If all children who are currently classified as being in need of special educational services are required to be proficient by 2014, special education as we know it will disappear. This is a logical consequence of the fact that a proficient child is not one who can be classified as needing special services (Wasta, 2006). Likewise, we expect that all children, even those that we identify through our diagnostic systems and evaluation methods as having special learning needs, will somehow magically be on-grade-level (Hehir, 2007). The fact that this is a statistical impossibility was noted in Chapter 3.

There is evidence that the NCLB law has had a positive impact for some students with disabilities. Specifically students who are deaf or hard of hearing have found that public schools have increased the resources that are used on

their behalf. It also appears that the amount of effort and attention that students with “low incidence disabilities” are receiving is being increased as schools work to meet the proficiency mandates of the NCLB Act (Cawthon, 2007).

High school graduation based on a required test score in 21 of the 22 states with that requirement poses a related problem for special education students. Passing a high-stakes test in high school may not be something children with cognitive deficiencies can be reasonably expected to be able to do. In 2006, California required all students to pass a graduation test to get their high school diploma. The result of this mandate for testing was an increase in the high school dropout rate, which went from 24% to 36% that year. The dropout rate is one reason why the state put off requiring students with disabilities from meeting the testing requirement until the spring of 2008 (Williams, 2007).

Massachusetts is one state that provides an alternative route for special education students to achieve a high school diploma. In 2004, 2,000 high school students attempted to earn their diploma using the Massachusetts portfolio assessment system. Of that number, only 47 (2.35%) of the special education students passed and were awarded their diploma (Schworm, 2004).

This leaves little opportunity to provide alternative assessments for students with disabilities. For those children functioning well below grade level, this provision leads to frustration and parent opposition. Likewise, the slow progress of students with disabilities toward reaching the tested level of “Proficient” is likely to introduce a negative skew to a school’s data. The result is that a handful of special education students may make a school unable to reach the annual yearly progress goals set by the state. Should this occur, the whole school receives a grade of “Needs Improvement.” When a school does not reach the mandated annual progress goal, the community only hears that the school “failed.” All too often this designation leads to the public sanctioning of the school and its educators (Phillips, 2005).

In addition to the pressure that this possibility places on special educators and children, in eight states special education students must also face another very high hurdle. In these states special education students are required to pass the mandated NCLB test to be promoted to the next grade. The NCLB Act requires that almost all children with disabilities test at a proficient level, the same requirement that non-disabled children must meet.

In 2005, increasing opposition to this lack of flexibility for students with disabilities led U.S. Secretary of Education Spellings to allow states to petition the Education Department for permission to provide alternative assessments to 3% of the student population (Aspey & Colby, 2005). During the 2004–2005 school year, Texas was in open revolt with the NCLB mandates and used alternative assessments for 9% of their students. In 2005–2006, Texas reduced this to 5% and was in compliance with the 3% rule in 2007.

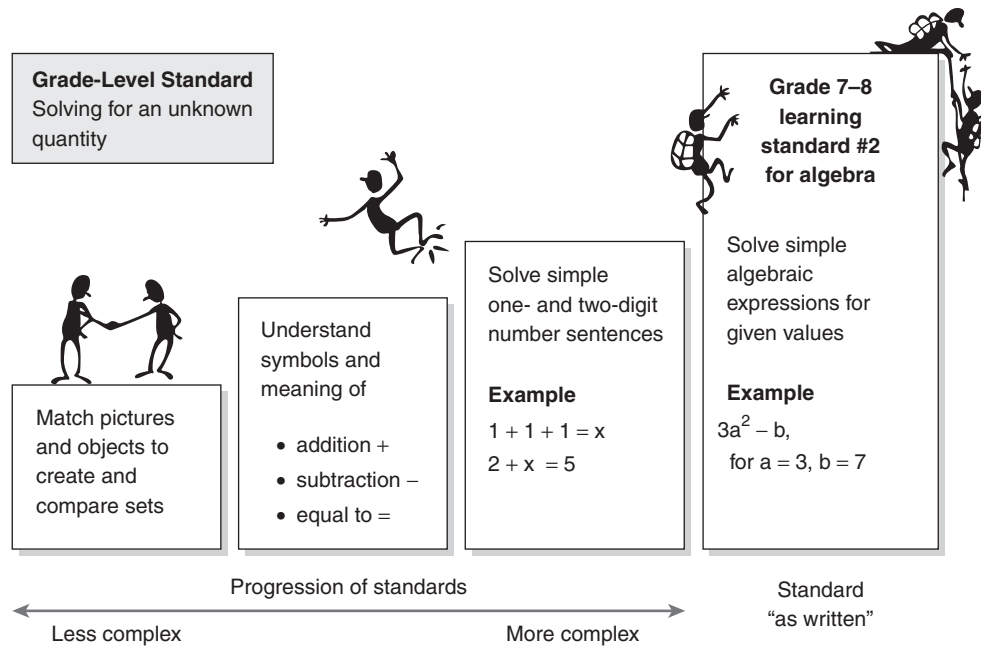


Figure 13.1 Sample From the Alternative Assessment Used in Massachusetts in Eighth-Grade Mathematics

SOURCE: Massachusetts Department of Education.

The pressure on schools can be great. Not only must a school have the average score of all children reach an annual benchmark for adequate yearly progress, but so must every one of the **disaggregated subgroups** within the school. Schools have become adept at exploiting privacy rules within the NCLB regulations. These regulations require the public reporting data from the seven subgroups of the student population only after the size of that subgroup exceeds 45 students. Many of the classifications overlap and a child can conceivably be simultaneously classified in as many as five groups. Those seven groups include English-language learners, those receiving a free or reduced-cost lunch, special needs, Hispanic, African American, Native American, and Anglo-White. By carefully managing the classification of every child, the likelihood of a school failing to achieve adequate yearly progress can be greatly reduced.¹⁰

Another strategy involves the manipulation of the child's Individual Educational Plan to provide a year of private special education outside of the public school. By spending school district funds, it then becomes possible for

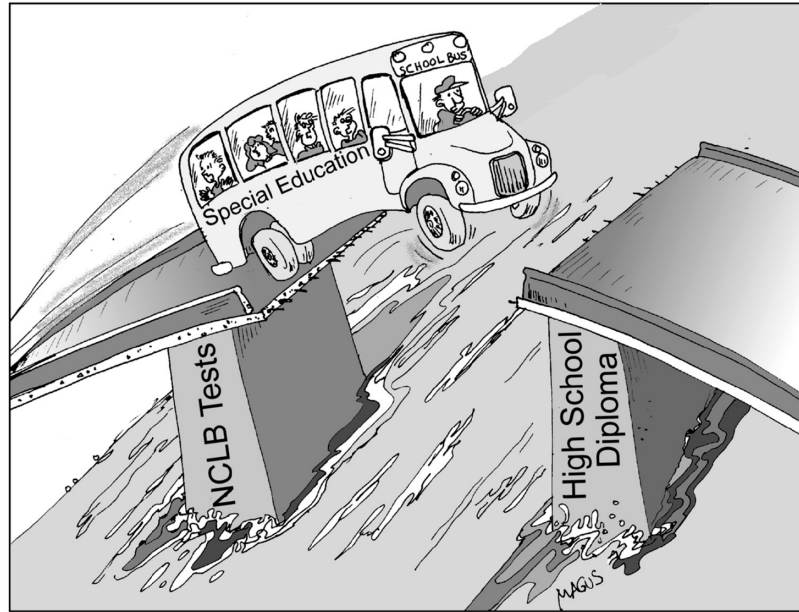


Figure 13.2 Left Hanging

SOURCE: Cartoon by Merv Magus.

the district to move a few students out of the database of the school during a high-stakes testing year. Another approach is to help the parents home-school their child.

Individual Educational Plan Format

While the law (IDEIA, 2004) requires an individualized education plan for all children with disabilities, it does not prescribe a particular format for the plan. Most local school systems have developed their own formats for writing IEPs. Additionally, purveyors of educational software have developed computerized techniques for writing these plans. One advantage of the computerized IEP is that it provides documents of a similar quality in all the schools and for all the special students of a school system (Margolis & Free, 2001). Examples of such software can be reviewed at the following Web sites:

www.tera-sys-inc.com/tsim.asp

www.iepware.com/IEPSD.html

The IEP must include the following items:

1. The child's current educational performance level across all areas of the curriculum and a description of how the disability affects the child's involvement and progress in school.
2. A list of annual goals that can reasonably be expected to be accomplished in the school year.
3. Description of how progress toward the annual goals will be measured and how the child's parents will be kept apprised of that progress.
4. Description of special education and related services that will be provided to the child, including any modifications and program supports the child will receive.
5. A description of the extent to which the child with a disability will participate in regular classroom activities with non-disabled peers.
6. A list of the modifications or accommodations needed for the child to take the mandated standardized tests.
7. A start date when the special education and related services will be provided to the child and the frequency and duration of these activities and support services.
8. Provision for the transition of the child into life after school. (This component must be in place before the child reaches the age of 14.)
9. Provision for counseling about the rights that the child will accrue upon reaching the age of 18. (This must be done at least one year prior to the child's 18th birthday.)

NOTE: For more information about the elements of an IEP, see www.ed.gov/parents/needs/speced/iepguide/index.html

ACCOMMODATIONS FOR CHILDREN WITH DISABILITIES

A bedrock foundation belief of the American people is that all people should be treated equally and fairly. Thus, we wrote this requirement for equal protection into the U.S. Constitution, Amendment 14, Section 1:

No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive

any person of life, liberty, or property, without due process of law; nor deny any person within its jurisdiction to the equal protection of the laws. Ratified July 9, 1868.

This “equal protection” provision has been used as the foundation for legal arguments to provide students with disabilities with the right to an appropriate education. Providing a public school education for all children with disabilities is a recent innovation. Before World War II public schools usually referred children with disabilities to outside agencies, state hospitals, and private training homes. When Congress passed, and President Ford signed, the Education for all Handicapped Children Act in 1975, a new era for the education of students with disabilities began.

The inclusion of children with disabilities in all aspects of public school life has been one result of this legislation. Special education students now participate in regular classroom testing as well as large-scale state assessments with their non-disabled peers. This is accomplished by providing the students with special needs a “level playing field.” This is done by providing certain accommodations for special education students. The goal of such accommodations is to assure that we are not evaluating what the child’s disabilities prevent him or her from doing but rather measuring what has been accomplished.

One fear of special educators is that the children with the most significant reading disabilities are being left behind by the testing provisions of the NCLB Act. The point can be made that for these children who struggle to extract meaning from the written page, one morpheme at a time, and who see each paragraph as an enemy to be subdued through one-on-one combat, there are no accommodations that will somehow put them on a par with their peers who are facile readers (Meek, 2006). The state-mandated tests are all dense with reading material and require that children are able to read for understanding and meaning, or risk being forever “Below Proficient.” This testing mandate can be viewed as being especially concerning for the parents of children with severe reading disabilities. Recent research has demonstrated that reading disabilities are brought about by disruptions in the normal neural processing of the posterior section (left occipitotemporal region) of the developing cortex of some children (Shaywitz et al., 2002; Shaywitz & Shaywitz, 2005, 2007). Severe reading disabilities are biological phenomena that are marginally tractable. Improvement of the neurological functions related to reading requires an organized effort by well-educated reading teachers, which begins with the child in his or her early years.

Each state has set out its own set of guidelines for providing testing accommodations during statewide assessments. A state-by-state listing of

these accommodations can be found at a Web page from the University of Minnesota: <http://education.umn.edu/NCEO/TopicAreas/Accommodations/AccomFAQ.htm>.

In a similar way, all school systems should have an approved set of policies in place for accommodating the needs of special education students on classroom tests and examinations. A backlash of opinion against these accommodations has been reported. Students who see their peers given extra time on classroom tests and even on the SAT II have spoken out against what is perceived as a lack in equitable treatment (Green, 2007).

One accommodation that must be addressed occurs in the schools of the states that require children to pass a high-stakes test to be promoted to the next grade. In these states, children with disabilities may be retained simply on the basis of having low test scores. Yet, low test scores provide one of the reasons the children were determined by the IST (Instructional Support Team) process to be entitled to special educational services to begin with. Once a child is measured on a high-stakes test as being proficient, he or she is no longer eligible for special services. It is clear that this issue needs further clarification, and the development of a transparent model for accountability with children that have special needs (Gaffney & Zaimi, 2003).

Testing Environment

When a child is unable to attend and concentrate on the testing task, it may be necessary to have that child tested alone using a study carrel. Naturally, someone will need to administer the test to the child. This could be done by a counselor, student teacher, or even a library aid. In addition to AD/HD diagnosed children, others who may need to be tested in a separate area are those with **pervasive developmental disabilities** (e.g., Asperger's disorder), those who may be disruptive for others (e.g., Tourette's disorder), and those who may need close supervision (e.g., Oppositional Defiant Disorder).

Time

Ten or more percent of the children in school may have a specific learning disability. By far the most common among these is in reading. These children may need to be accommodated by having extra time for reading passages and answering comprehension questions. A total of 37 of the 50 states permit children with learning disabilities to have unlimited time to complete statewide assessment tests. Other accommodations that may facilitate testing

for children with difficulty attending and focusing on tasks include having the child assessed in a low-distraction environment. This accommodation is an approved strategy in 41 of the 50 states (Thurlow & Bolt, 2001). When combined, these two accommodations would make it possible to provide a quiet location away from distractions and unlimited time constraints for children with attention-deficit/hyperactivity disorder.

Modality

Not all children can read or otherwise use the test material. One way this inability occurs is when children with visual impairments can't see to read the test material. Thirty-eight of the states provide a Braille version of the state's test, while 40 states offer a large-print edition for children with low vision.

Those with severe musculoskeletal spasticity or who have paresis (e.g., cerebral palsy) will need to have the test verbally administered and answered. Children with the inability to write or make small answer-sheet marks with a pencil are accommodated in 43 states by having an adult read the questions and mark the answers that the child gives. These proctors can also take dictation on performance (constructed response) questions.

Children with a hearing disability may need to have headphones to facilitate hearing test directions, while deaf children will require the test directions be signed to them. Signing is a labor-intensive activity. One sign language interpreter may not be enough for a long test.

Thirty-six states require that children who are English-language learners be provided with a qualified translator to assist in the administration and recording of the answers for the test (Thurlow & Bolt, 2001).

The decision to provide accommodations for the child with a disability during tests is something that is normally addressed during meetings of the instructional support team and addressed by the Individual Educational Plan. The goal of all accommodations is not to give the child an advantage but to make it possible for the special-needs child to fully participate and experience a level playing field.

Summary

Each decade the proportion of children diagnosed with a serious special learning need increases. Today, 1 American child in 12 has a serious disabling condition that makes learning difficult without specialized assistance. This

represents almost 6 million children. Beginning in the 1970s, the federal government has worked to provide a level playing field for students with disabilities. These efforts have become more complex since the passage of the No Child Left Behind Act of 2002. The central issue is the level of test children with special needs will be required to take. Before 2002, local schools used developmentally appropriate measures to assess and chart the educational growth and development of children with disabilities. Under the rules of the No Child Left Behind Act, only a tiny fraction of the special education population can be measured following that model. The Act requires that 99% of all students demonstrate proficiency on an age-appropriate measure, not a developmentally appropriate one.

One step in the process of helping a child who experiences learning problems in school involves a meeting of parents, teachers, and others with a role to play to identify ways to assist the child. These Instructional Support Teams can provide a framework for assistance that may be all the child requires to catch up with his or her peers. If there is a greater need, the decision can be made to initiate a full psychoeducational diagnostic assessment by a multidisciplinary team. This team, with the participation of the parents, can make an entitlement decision to provide the child with special education services. The first step in that process is the development of an Individual Educational Plan for the child.

Data that become part of this process may include informal and anecdotal observations by the homeroom teacher and others in the school community of the child. The data on the child may also involve the administration of highly specialized measures of achievement and learning. These can take the form of published instruments as well as by a school psychologist probing an individual child's specific areas of curriculum weakness and strength.

Discussion Questions

1. What are some likely reasons why the number of children having disabilities in school today is greater in both absolute and relative terms than has been true of the previous cohorts of students?
2. Starting with the first informal observation by the teacher of a student's possible learning problem, list all the personnel and the amount of time each is likely to spend working on the child's behalf before the IEP is written and instituted. Then use the figure of \$75¹¹ per hour as the cost of these faculty and specialists (including overhead) and estimate how

much it actually costs to reach an entitlement decision and start a program of special education assistance for one child. You may substitute the actual local average per hour cost if \$75 is not appropriate.

3. What are the applicable federal laws that define the educational services for children with disabilities? What legal conflict exists with regard to how children with disabilities are measured and educated?
4. This week purchase a newspaper or magazine written in a language you do not know. Spend a half hour “reading” it. Now, what accommodations will you need before you can take a test on the contents of that publication?
5. What is the role of the child’s parents on an IEP committee? If possible, ask a school counselor or administrator what the school’s policy is regarding a child’s IEP when the two parents disagree with each other about the best approach to follow with the education of their special needs child.

Student Study Site

Educational Assessment on the Web

Log on to the Web-based student study site at www.sagepub.com/wrightstudy for additional Web sources and study resources.

NOTES

1. These teams are known by many names: Student Assistance Teams, Learning Support Teams, Educational Resource Committees, etc.
2. Section 504 provides equal access to education (and all other activities) to children with disabilities. This legislation requires classroom accommodations to meet the needs created by any mental or physical disability. For example, if a child has a partial hearing loss, the accommodation may involve providing amplifiers for the teacher’s voice.
3. The spectrum of autism-related problems has been reported to be a new epidemic with numbers approaching 1 in 160 school-age children. These may prove to be exaggerated and an artifact of several other factors. The U.S. Department of Education did not classify autism as a special education entitlement classification until 1992. Also, today there are more sources for help and support for families with children with autism than ever before (Wallis, 2007).

4. The “executive function” is a cognitive construct describing a mental system that controls and manages other mental processes. The abilities to plan ahead and concentrate are directed by the executive function.
5. The user holds a master’s degree in psychology, education, social work, or similar field and has completed graduate-level coursework in testing and educational measurement.
6. For a review of the meaning of these qualification levels see Chapter 12.
7. Mirror image reading was formerly known as dyslexia or streptosymbola.
8. The Woodcock–Johnson III provides a test battery of cognitive abilities (see Chapter 12) that is constructed on the framework of the Cattell–Horn–Carroll theory of cognitive ability.
9. Basic concepts: numeration, rational numbers, geometry. Operations: addition, subtraction, division, mental computation. Applications: measurement, time and money, estimation, interpreting data, problem solving.
10. There is an urban legend about a school district that quietly purchased a new home for a family that had four children with profound neurologically based cognitive disabilities. The educational costs and specialized transportation needs for these children was in excess of \$45,000 per year for each child. The new home the original school district purchased was located in another school system. The biennial cost of specialized private education for these seriously impaired children was more than the cost of the new house.
11. This is based on an average annual salary of about \$72,000 per year for a team composed of school psychologists, school administrators, nurses, counselors, physical therapists, social workers, and reading specialists. Overhead is assumed to be about 50% of the base pay and includes health programs, Social Security, retirement, and local taxes and tariffs paid by the schools. Once a child has an IEP and is receiving services, the average cost of his or her education is approximately 1.5 times that of the student’s peers who are not disabled.