Special Education for Students with Disabilities: Analysis and Recommendations

Twenty years ago, the educational rights of students with disabilities were dramatically and firmly established in law and practice. Prior to that time, many students were refused enrollment or special educational services. As recently as 1973, at least one million students were denied enrollment in public schools solely on the basis of their disabilities, and at least two million others were not receiving an education appropriate to their needs. Although every state has provided some form of special education throughout this century, these services were largely at the discretion of local school districts. Only since a federal court case in 1972 and the passage of federal legislation in 1975 have all states been mandated to provide a free, appropriate public education to all students with disabilities.

Today, as Parrish and Chambers point out in this journal issue, special education for students with disabilities is the largest categorical program in public schools, costing an estimated $32 billion. Since the passage of Public Law 94–142 in 1975 (later retitled the Individuals with Disabilities Education Act, or the IDEA), the number of elementary and secondary students receiving special education has increased from 3.7 million to 4.6 million, increasing also from 8% to 11% of all students in public schools. According to Parrish and Chambers, the population of students eligible for special education is expected to continue to rise.

The IDEA governs the educational rights of individuals from birth to age 21, though only students in elementary and secondary school are addressed in this journal issue.

The IDEA allowed access to the public schools for many students who had previously been denied enrollment. The IDEA has also been given partial credit for decreasing the rate of institutionalization of individuals with disabilities. Before the IDEA, many parents had the sole responsibility of meeting all the needs of their severely disabled children 24 hours per day;
once schools began to provide extensive services to students with severe disabilities, more families were able to avoid institutionalization.

Under the IDEA, states and local districts were given a mandate to provide specialized educational programs to students with special needs, and students and parents were given a mechanism for enforcement of their rights. In a 1989 survey, 94% of parents of students with disabilities agreed that services for these students had improved since the implementation of the IDEA.5

Yet special education today is widely criticized as expensive, ineffective, inadequately coordinated with regular education, and/or culturally biased.6–8 The National Association of State Boards of Education has recommended radical reduction in the size of special education.9

Special education also has its champions, who argue that many students perform better academically10–12 and have better self-esteem13,14 when provided with special services, often in a separate setting.

This analysis addresses five questions concerning special education under the IDEA: (1) Why are so many students considered disabled? (2) What are the educational needs of students with disabilities? (3) How should appropriate, individualized services be funded? (4) Are the IDEA’s procedural protections necessary? (5) Can regular education meet the needs of more students?

**Why Are So Many Students Considered Disabled?**

Students are termed “disabled” because they have real, persistent, and substantial individual differences and educational needs that regular education has been unable to accommodate. These individual differences vary widely, from medical conditions such as cerebral palsy, to dyslexia, to pervasive and chronic maladaptive patterns of behavior. Many of these same students will not be considered disabled once they leave school. Nonetheless, their specialized learning needs are intense and legitimate. The public schools face major challenges in addressing those needs effectively.

Today, more than one in ten school-age children has been evaluated and found to have a disability. Although the types of disability vary widely, a single category, learning disabilities (LD), accounts for half of the disabled school population. The proportion of children identified with learning disabilities has been steadily growing since the inception of the IDEA, although the proportions identified with mental retardation or speech and language disorders have decreased during that same period. These trends are illustrated in this journal issue by Lyon in his Figure 1.

Although the existence of learning disabilities is beyond dispute, the process of identifying students with these disabilities is fraught with complications. Definitions of the disorder are vague and broad, and manifestations of the disorder vary greatly. Even though the student with severe learning disabilities is relatively easy to identify, and it is unlikely that the average student would be
misidentified as having a learning disability, there remains a substantial population of students with mild learning disabilities whose needs are difficult to identify and to meet. Even when identified, most students with learning disabilities do not receive expensive services. They may receive no more than an hour a week of small-group tutoring in a resource room, despite the lack of evidence that such minimal intervention is helpful.

Although identifying a student as “disabled” entitles him or her to special education services, a potentially large expense, school districts nationally have identified a larger proportion of their student body each year as having a disability. Many factors contribute to this increase.

First, funding incentives in most states encourage school districts to label students as disabled. Services delivered to students with a “disability” label are likely to be either partly or fully reimbursed by the state, whereas the same services given to students without a recognized disability are not.

Second, as Reschly observes in this journal issue, ongoing pressures for schools to raise their academic standards leave more and more children falling behind. When the teacher is unprepared to simultaneously raise classroom standards and help the slowest students maintain the classroom’s faster pace, the slower students are more likely to be referred to special education.

Third, parents and schools increasingly recognize the important long-term impacts of “less apparent” disabilities. Outcomes for students with less apparent disabilities, as a group, are poor. In this issue, Wagner and Blackorby note that 30% of all students with disabilities dropped out of high school, and an additional 8% dropped out before ever reaching high school. Only 30% of students with learning disabilities participated in post-secondary education, as compared with 68% of youth in the general population. The young women with disabilities were more likely than their nondisabled peers to become unmarried parents: among single women with disabilities, one in five had a child within three to five years after high school, compared with 12% of single women in the general population.15

It is also true that some mildly disabled students are able to make progress with interventions of sufficient intensity and duration. Some interventions do work well for some mildly disabled students, though none work well for all students.10

What Are the Educational Needs of Students with Disabilities?

Students with disabilities are an extremely heterogeneous group, varying by type and severity of disability, as well as by the many variables found in the population at large, such as income, family characteristics, temperament, and intelligence. This heterogeneity means that some students have highly specialized educational needs, such as sign language interpretation or occupational therapy. However, it is possible to make some generalizations about the most common characteristics and needs of students with disabilities as a group.

Most Common Characteristics

Instructional Characteristics

In general, students in special education require greater than normal consistency and intensity of instruction, greater individualization of both academic content and pacing, and greater emphasis on behavior management. Here, common characteristics of children with disabilities in various categories are described. Later, options for providing special educational services in the regular classroom are also discussed.

Demographic Characteristics

As a group, students with disabilities are more likely to be poor and to be African American than are students in the general school population.

Poverty and disability are often found together. Wagner found that 68% of high school students with disabilities in 1986 came from households with incomes of less than $25,000, compared with about 40% of the general school population.16

Congress has established separate programs to meet the educational needs of children with disabilities (the IDEA) and children in poverty (Title 1 of the Elementary and Secondary Education Act).
Congress’s intent was that the IDEA's strong entitlements be reserved for children with disabilities. Indeed, the IDEA definition of learning disability specifically excludes those students whose underperformance is primarily attributable to poverty. However, this distinction is often difficult or impossible to draw. For example, as Lyon points out in this issue, no empirical data exist to support this exclusionary practice as it relates to learning disabilities in basic reading skills, the most common disability diagnosis.

**Ethnicity and Disability**

It has long been noted that African Americans are disproportionately represented in special education. At the same time, Hispanics are nominally underrepresented in most categories of special education. (See the article by Reschly in this journal issue.) While it is common for special educators to be accused of overidentification of minority children, attributing some identifications to cultural bias, Wagner found higher incidence among minorities of deafness, blindness, and other disabilities measured by accepted, objective criteria. In her statistical analysis of a large sample, poverty played a major role in this overrepresentation. The majority of the disproportionate representation of African-American students in special education is within the category of mild mental retardation. Disproportionate representation is discussed by Reschly in connection with mental retardation.

**Eligibility and Entitlement Processes**

Students who may have a disability are identified and referred for evaluation by their classroom teachers or, more rarely, by their parents or pediatricians. Once referred, students are entitled to a multidisciplinary evaluation provided by specialists competent in each area of suspected disability. If a student is found to have a disability and to need special services, then he or she is entitled to services under the IDEA. Once eligibility is determined, the school develops an individualized education program (IEP) laying out goals for the student, proposed placement, and services to be provided by the school district. Parental consent is required before a student can be evaluated, services provided, or the student’s placement changed.

**Disability Categories Under the IDEA**

Under the IDEA, students are categorized for statistical purposes by their primary disability, although students must receive services based on their individual needs, not on their disability category. Within each category, there is a wide range of severity of disability.

Fifty-one percent of students served under the IDEA in grades K-12 in 1992–93 had learning disabilities as their primary disability. Another 22% had speech or language impairments; 11% had mental retardation; 9% had serious emotional disturbance; and 7% had hearing or visual impairments, orthopedic impairments, autism, traumatic brain injury, or multiple disabilities.

The category of learning disabilities (LD) is examined in greater detail here because of the increase in the number of students identified as having learning disabilities and the controversies about the criteria used for this identification. A description of students with attention-deficit hyperactivity disorder (ADHD) is also included because of extensive interest in this diagnosis, although ADHD is not listed as a separate disability category under the IDEA.

**Learning Disabilities (LD)**

Fifty-one percent of students served under the IDEA, amounting to 5% of all students in public schools, have learning disabilities. The proportion of students identified with learning disabilities has grown steadily since 1975. This growth is caused by multiple factors including increased awareness of the existence and impact of learning disabilities, ambiguous definitions of learning disabilities, the inability of regular education to provide individual accommodations in an era of increased academic expectations and diminishing resources, and the attraction of a less stigmatizing label.

Is this growth in identification of children with learning disabilities legitimate? Research literature is not able to answer this question because of continuing debate over both theoretical and operational definitions of LD. What is clear is that the group of students identified with learning disabilities has particular, persistent educational needs that are not being met in the regular classroom.
Despite their prevalence, learning disabilities are poorly defined or understood. Learning disabilities are identified by professionals in many fields, including pediatrics, psychology, neurology, and audiology. Although a coalition of professional and parent organizations has agreed upon a broad and complex definition of LD, there are no universally accepted, validated tests or diagnostic criteria to determine the presence or absence of learning disabilities. Some observers argue that the IDEA’s requirement of multidisciplinary evaluations increases the likelihood of an LD diagnosis because a student may meet the criteria established by one professional discipline but not another.

Learning disabilities are most commonly diagnosed on the basis of a notable discrepancy between the student’s academic achievement and ability to learn. In other words, the student has reasonable intelligence and adequate opportunity to learn but performs poorly for unknown reasons. Ability to learn is usually measured by intelligence quotient (IQ), and the discrepancy between ability and achievement must be substantial. Specific standards are set by individual states, but the American Psychiatric Association suggests a discrepancy of either two standard deviations or one standard deviation plus other factors such as motor, sensory, or language differences, which are believed to have artificially depressed the student’s IQ.

Further complicating diagnostic efforts, learning disability is not a single condition, but a collection of often co-occurring but distinct conditions that may involve difficulties with listening, speaking, reading, writing, reasoning, or mathematical abilities. Other characteristics commonly found in students with learning disabilities include pervasive weakness in general organizational skills and exceptionally poor social skills. This wide variation in symptoms leads to confusion because individual students with learning disabilities may look very different from one another. One student may have problems with basic reading skills, while another has problems with listening, comprehension, and social perception. Learning disorders are also frequently found in association with medical conditions such as lead poisoning, fetal alcohol syndrome, or fragile X syndrome.

As with most disabilities, there is a range of severity with learning disabilities, and the student with severe learning disabilities is relatively easily recognized by his specific academic inabilities combined with general intelligence and competence. These unusual cases of severe learning disability have been recognized for more than a century, as with this 1896 observation of a 14-year-old boy: “I then asked him to read me a sentence out of an easy child’s book without spelling the words. The result was curious. He did not read a single word correctly, with the exception of ‘and,’ ‘the,’ ‘of,’ ‘that,’ etc.; the other words seemed to be quite unknown to him, and he could not even make an attempt to pronounce them.

“I next tried his ability to read figures, and found he could do so easily. . . . He multiplied 749 by 876 quickly and easily. He says that he is fond of arithmetic and has no difficulty with it, but that printed or written words ‘have no meaning for him,’ and my examination of him quite convinces me that he is correct in that opinion. . . . I may add that the boy is bright and of average intelligence in conversation. . . . The school master who has taught him for some years says that he would be the smartest lad in the school if the instruction were entirely oral.”

Though the severe learning disabilities might be easily recognized, the majority of students with learning disabilities have a milder form, and there is no clear line of demarcation between students who have mild learning disabilities and those who do not have learning disabilities. As Reschly points out in this issue, the current system imposes dichotomous decisions (students are either disabled or not disabled) rather than reflecting the reality that, in learning disabilities, as in many other aspects, individuals vary by fine gradations along broad continua. The lack of agreed-upon diagnostic criteria means that states and localities create their own diagnostic criteria, leading to considerable variations from state to state in the identification rate for learning disabilities, as discussed in this journal issue by Lyon and by Lewit and Baker.

Despite difficulties in identification, the impacts of having a learning disability are real and persistent. As Wagner discusses in this issue, students with learning disabilities
as a group show poor academic performance, high dropout rates, and poor employment and postsecondary education records. Hocutt in this issue concludes that students with learning disabilities who are taught in regular education without extensive support are rarely able to achieve the level of academic competence of even low-achieving, nondisabled students.

Improving outcomes for students with learning disabilities has proven to be a challenging task, generally requiring intensive interventions for even modestly improved outcomes. No model program has proven to be effective for all students with learning disabilities.

**Speech and Language Disorders**

Twenty-two percent of students eligible for services under the IDEA have speech or language disorders. Approximately half of these students have a speech disorder, usually involving difficulties with articulation. Disorders of articulation can generally be improved or resolved with speech therapy, though doing so may take months or years.

Language impairments, on the other hand, often result in substantial learning problems. Students with language impairments will have difficulty with language comprehension, expression, word-finding, and/or speech discrimination. Language impairments are often first noticed because of the student’s significantly delayed speech (for example, not using two-word sentences until age four). Delayed speech may be associated with early hearing loss, which also correlates strongly with delayed or inadequate vocabulary development, reading, and general academic development. The major causes of language impairments are mental retardation, hearing impairment, central nervous system dysfunctions (generally in the form of learning disabilities), and environmental factors such as lack of stimulation. Determining causes with precision in individual cases is often not possible. Indeed, classifications based on causation have not proven useful for remediation, and so professionals are generally advised to base interventions on an assessment of the individual student’s language abilities.

Treatment by a language therapist generally leads to improvement in functional communication skills, although the treatment cannot usually be expected to eradicate the problem.

**Mental Retardation (MR)**

Eleven percent of IDEA-eligible students have mental retardation (MR). The severity of mental retardation is classified as mild (generally defined by an IQ test score of between 50–55 and 70, accompanied by deficits in adaptive behavior), moderate (IQ of 35–40 to 50–55), severe (IQ of 20–25 to 35–40), or profound (IQ below 20–25). Roughly 75% to 85% of those with mental retardation fall in the category of mild mental retardation (MMR). In this journal issue, the other three categories are referred to collectively as severe mental retardation.

From an epidemiological viewpoint, using a cutoff of 50 IQ points to divide students into different classifications is arbitrary, because students may show either mild or severe mental retardation as a result of the same diagnosis, such as Down’s syndrome. As a group, however, students with severe mental retardation are more likely to also show signs of serious conditions with neurological complications, such as Down’s syndrome, cerebral palsy, epilepsy, hearing impairment, visual impairment, and other structural, chromosomal, or metabolic birth defects affecting the central nervous system. In a study of 458 students with mental retardation in Atlanta, two-thirds of the students with severe MR, but less than 20% of the students with MMR, were known to have another neurological condition. Moreover, the students with severe mental retardation were more likely to have multiple neurological conditions.

Nationally, African-American students are more than twice as likely as whites to be diagnosed as having MMR. (See the article by Reschly in this journal issue.) Researchers have some understanding, though far from complete, of the reasons for this disproportionate representation. Causes most commonly proposed are poverty and cultural bias. Recent important research concludes that poverty is a major cause of disproportionate African-American representation within the MMR category, but that poverty does not explain the differences at the mildest levels of mental...
retardation. A study in Atlanta of 330 children identified as having MMR and 563 randomly selected controls found that African-American children were 2.5 times as likely as whites to receive a diagnosis of MMR and that approximately one-half of this difference could be eliminated by controlling for economic status. Low birth weight (defined in this study as under 2,500 grams) was found to be only a minor contributing factor to MMR, though other researchers have found that the incidence of mental retardation escalates with very low birth weight (that is, less than 750 grams).

In the Atlanta study, ethnicity was closely related to the student’s age at time of initial diagnosis. After adjusting for economic status, the researchers found no significant difference in the occurrence of MMR between African-American and white children diagnosed before age 6. However, among children first diagnosed between the ages of 8 and 10, even after controlling for economic status, African-American students were 2.5 times as likely as whites to be identified as having MMR. The median IQ among children diagnosed before age 6 (54.5 for whites, 56.5 for African Americans) was significantly lower than that for children diagnosed between the ages of 8 and 10 (68 for whites, 67 for African Americans). Thus, children with the mildest level of mental retardation, who are identified at a later age, appear to be most disproportionately African American, and the difference is strong even after controlling for poverty. The cause of this disproportionate identification, however, is unclear.

Students with MMR can usually be expected, by their late teens, to develop academic skills to approximately the sixth-grade level. During their adult years, they are often able to hold jobs and live on their own with some supportive supervision or in group homes. Students with severe MR can be expected to need more extensive supervision.

**Serious Emotional Disturbance (SED)**

Students with serious emotional disturbance (SED) account for 9% of students served under the IDEA. These students may have an inability to build or maintain relationships, inappropriate behaviors or feelings under normal circumstances, a pervasive mood of unhappiness or depression, or a tendency to develop physical symptoms or fears associated with personal or school problems. These problems are “severe, pervasive and chronic, not minor, situational, or transitory.”

Most students with serious emotional disturbance have been removed from the regular classroom because of their consistently disruptive behavior. As Hocutt notes in this journal issue, research consistently finds that general education teachers will not tolerate disruptive, aggressive, defiant, or dangerous behaviors. Elementary and secondary teachers are concerned that students follow classroom rules, listen to and comply with teacher directives—in short, behave in an orderly fashion. By definition, students with serious emotional disturbance have significant difficulty in these areas. They are more likely than students with any other disability to first experience disability-related problems in adolescence, although their parents report that the majority of these students began to display their emotional problems in their grade school years.

An article describing the characteristics and outcomes of students with serious emotional disturbance appeared in a recent issue of this journal. The author concluded that placement decisions for these students must be made on an individual basis. The higher-functioning students with SED, when returned to regular classrooms, benefitted socially and held constant in academic achievement. However, lower-functioning students (those with more course failures and less social integration) were more likely to drop out of school altogether if moved to regular classrooms.

Hocutt in this issue notes that programs designed to return students with serious emotional disturbance to the regular classroom require extensive time on the part of both special education and regular education teachers, as much as several hours per week for several weeks to enable one or two students to make the transition. Such staff-intensive programming requires appropriate budgeting.

**Physical or Sensory Disabilities**

Seven percent of IDEA-eligible students have multiple disabilities, hearing or visual impair-
ments, orthopedic impairments, autism, or traumatic brain injury. These students are likely to require both special educational services and related services. Related services include transportation and such developmental, corrective, and other supportive services as are required to assist a student to benefit from special education. Related services may also include physical therapy, occupational therapy, speech therapy, psychological services, school health services, social work services, and parent counseling and training. Schools are also the provider of last resort for specialized equipment needed by students.

Because social integration is a major goal for many students with severe disabilities, social-skills training and recreation programs can be an important component of services. Students with disabilities who have strong recreational interests that can be shared with others are more likely to be integrated in a meaningful way in social settings.

**Attention-Deficit Hyperactivity Disorder (ADHD)**

Students with attention-deficit hyperactivity disorder are exceptionally inattentive, impulsive, and/or hyperactive. Although ADHD is theorized to be a neurological condition, its cause has not been firmly established, and it is not listed as a separate disability category under the IDEA.

The number of students diagnosed and treated for attention-deficit hyperactivity disorder (ADHD) has increased dramatically, by some estimates doubling between 1990 and 1995. Between 1990 and 1993 alone, the annual number of outpatient pediatric visits for ADHD increased from 1.7 million to 4.2 million. It has been estimated that as many as 2.4 million youngsters nationally are affected by ADHD and that 85% to 90% of them are taking stimulant medication (for example, Ritalin), to control their behavior. Production of methylphenidate (Ritalin) has more than quadrupled in the past four years.

There is considerable controversy over whether the increase in diagnosis of ADHD is valid. Some attribute the increase largely to heightened awareness of the disorder. Others worry that many children are diagnosed without undergoing the hours of observation and interviews required for a comprehensive evaluation. There is no simple test for ADHD; rather, diagnosis depends upon habitual and long-standing behavior patterns, beginning before the age of seven, which are maladaptive and inconsistent with the student’s developmental level.

These maladaptive or developmentally inappropriate behavior patterns may have a significant negative impact on the student’s academic performance and may also cause continual disruption in the classroom. In the majority of cases, these problems can be temporarily addressed with prescriptive medication. Methylphenidate (Ritalin) and some other medications have been shown to lead to substantial short-term improvement in the behavior of most children with ADHD. For many children this medication, combined with appropriate behavior modification and support from parents and teachers, is sufficient. However, not all students respond well to stimulant medications.

As Lyon notes in this journal issue, children with ADHD are twice as likely as others to also have a diagnosis of LD and, therefore, to be eligible for special education. The school may also determine that a student with ADHD is eligible for services under Section 504 of the Rehabilitation Act. There is no way to know how many of the 4.6 million IDEA-eligible schoolchildren have a diagnosis of ADHD or how many of the 2.4 million students diagnosed with ADHD are receiving special education. It is clear that students with ADHD have a recognizable, medically treatable condition which affects their schooling and that, even if they are taking prescription medication, they require additional attention and support from their teachers.

**Appropriate, Individualized Services**

What do students with disabilities need? First, they need access to education. Before passage of the IDEA, many students were denied the opportunity for a free, appropriate public education. Bringing about that access has been a major success of the IDEA.
Second, students with disabilities need an education that is appropriate to their needs. It is not enough to include students with disabilities in the regular classroom if their disabilities prevent them from obtaining an education.

Third, appropriateness must be individually determined. Differences in disabilities, severity, comorbidities, and individual strengths mean that the federal government and states cannot legislate specific services for students by category.

However, some general statements can be made about the types of instruction required by the majority of students with disabilities. As a group, they respond best to instruction which is more intense, consistent, and individualized than that required by nondisabled students. Compensating for any disability, from hearing loss to dyslexia, can be a tiring process, and students with disabilities are more prone than their nondisabled peers to fatigue and frustration. Thus, they are likely to require different pacing than other students. They may need additional time to cover the same amount of material or a modified curriculum which allows them to keep pace with the class. Fatigue and frustration, even in small amounts, increase the likelihood of behavior problems. Therefore, students with disabilities may need additional assistance with behavior management, oriented to helping the child develop positive self-management skills.

Predictions about which students will do better academically or socially in which setting are highly fallible. No interventions in either regular or special education are uniformly successful for students with special needs; students with the same disability, in roughly the same degree of severity, may vary tremendously in personality, motivation, social and family support systems, and compensating strengths. A strength of the IDEA is its requirement that placements and services be determined individually and that parents be offered the opportunity to contribute their knowledge and insight about their child as the student’s individualized education program (IEP) is developed. For these reasons, some advocacy organizations and the major national teachers’ unions have taken the position that schools should preserve a range of options in placements and services.45–47

**RECOMMENDATION**

- Schools must continue to recognize the special needs of students who, because of individual differences, do not respond to regular education. The IDEA’s guarantees of individually determined, appropriate education should be maintained.

**How Should Appropriate, Individualized Services Be Funded?**

Funding special education is a shared responsibility of the federal government, states, and local school districts. However, most budgeting for the needs of special education students occurs at the local level. Current funding structures create fiscal incentives for certain diagnoses or placements, which may not be in the best interests of the individual child. The majority of states are now in the process of examining their mechanisms for funding special education, with many states expressing interest in removing funding restrictions, maximizing local flexibility in the design of special services, and maintaining existing accountability mechanisms. This trend is based on limited practical experience.

**Funding Sources**

Nationally, the federal government pays for about 8% of the cost of special education. The division between states and local school districts varies widely. On average, the states pay 56% of the cost, though the range of state contributions is from 95% to 11%. The remainder comes from local school districts. In this journal issue, Parrish and Chambers list the most recent available data (see their Table 1).

The federal government and about half the states require categorical funding. That is, special education funding from those sources must be used solely to benefit special education students.
Existing Incentives

Special education could be described as a local responsibility, shaped by state funding structures and federal due process requirements. Accountability within the federal system is based on requirements of due process. State systems, on the other hand, most frequently require accountability for fiscal management. Neither encourages schools to be accountable for educational outcomes. Considerations at each level, but especially at the state level, affect decisions about what services to provide for each individual child.

Parrish and Chambers, in their article for this journal issue, report that 15 states have reformed their special education funding in the past five years, and 32 states are currently considering major changes. What would motivate such widespread interest in reform? When surveyed, state education officials cited a common theme of fiscal stress: as governmental and school budgets tighten, concerns about the expense of special education have grown. At the same time that special education’s cost is under scrutiny, complaints were expressed about the perceived inadequacy of current special education services and about the restrictions placed on funding. There is a common perception that local school districts could provide better services if given more flexibility in the use of funds. (This idea, though of great political currency, has not been tested by research.) One of the most common complaints was that current funding structures often created fiscal incentives for more restrictive placements.

Federal funding for special education is based on the number of special education students in the state. State funding structures may base special education funding on the number of students identified for special education; the category of disability (for example, a school district may receive more funding for a student with hearing loss than for a student with learning disabilities); a percentage of the costs of expenditures in certain categories (for example, the state may pay a share of the salary for each special education teacher); or the student’s placement (for example, the state may provide more funding for a student in a separate special education classroom than for a student receiving equivalent services in the regular classroom). Recently, six states have revised their laws to base funding on the total enrollment in the school district, regardless of disability.

All of these funding mechanisms are likely to affect program decisions. Funding based on the number of students identified for special education encourages states to identify children for special education rather than provide the same services to the student without first finding a disability. States may pay a larger share of the salary of a special educator who works in a separate setting than for one who works with the regular teacher in the regular classroom or who works with all students, regardless of IDEA eligibility. Such mechanisms can encourage local districts to focus special services outside the regular classroom and to rely on expensive evaluations for eligibility determination.

Most states have some mechanism to provide additional support for children with severe disabilities requiring extensive services. In a number of states, districts receive more assistance from the state when they assign students with intensive special needs to private special needs schools than they would if they were to establish a comparable program within the district.48

Removing existing incentives can create new, but not necessarily better, incentives. A student with autism may benefit from specialized programs available under contract from a qualified private school. However, if the state eliminates funding mechanisms to pay a large share of the cost of such placements, the student’s school district may be motivated to serve the student locally and provide fewer services—a less desirable outcome for the student.

Budgeting Challenges

The fiscal implications of special education, especially for students with ‘mild’ disabilities such as LD, are profound. The population of students with mild disabilities is large and impossible to clearly differentiate from the population as a whole. Yet, minimal interventions for students with mild disabilities have a dismal history, as discussed by both Hocutt and Lyon in this issue. Intensive interventions in some cases appear more promising, but they are expensive.
Budgeting is a particular challenge at the local level because of the school district’s legal obligation to provide services, even if unanticipated. As the federal court determined in a pivotal 1972 case, school districts are prohibited by the U.S. Constitution from budgeting for special services in advance and offering them on a “space available” basis because each student with disabilities is entitled to a free, appropriate public education, regardless of whether the school district had anticipated that student’s needs.

Can cost even be considered in determining what services a student with disabilities will receive? As discussed by Martin, Martin, and Terman in this issue, where a service is necessary for an individual student, cost considerations will not allow a school district to escape its obligations. However, in instances where more than one appropriate configuration of services is available to meet the student’s needs, the cost of different alternatives is an allowable consideration.

Ideally, program decisions should be based upon each student’s needs, and funding mechanisms should respond to and support those programmatic decisions. At the same time, real limitations on school budgets make it essential to control total costs. To some extent, this fact makes it inevitable that the needs of individual children will be weighed against one another and against the fiscal needs of the rest of the school.

Flexibility with Accountability

To what extent can funding mechanisms be made incentive-free? There is a growing interest in census-based funding as a nominally incentive-free funding mechanism. Under census-based funding, funding for special education programs is based on the total enrollment of the school, not on the number of children identified for special education. (At this same time, census-based funding could constitute a negative incentive. Where other funding systems assist districts in providing expensive services, census-based funding, in effect, rewards districts that provide fewer services, by allowing them to spend the money on other priorities.) Six states have recently implemented some form of census-based funding for special education. Arguments for and against census-based funding are discussed by Parrish and Chambers in this issue. These authors also provide a descriptive list of criteria for evaluating state special education funding formulas.

If categorical restrictions are removed, then schools have maximum flexibility to deliver special services without requiring that they be restricted to students with disabilities. In theory, this will make it easier for schools to implement programs that more thoroughly integrate special and regular education, for example, a program in which a special educator co-teaches a class with a regular teacher and can work with any student, with or without disabilities.

Advocates for students with disabilities fear that dropping categorical restrictions will result in fewer special education services. The best protection against this would be to maintain the current accountability mechanisms contained in the IDEA: students with disabilities must receive a free, appropriate public education in the least restrictive environment, with due process requirements concerning evaluation, individualized education programs (IEPs), parental participation, and right of appeal. These mechanisms provide an enforceable right to an appropriate education.

As schools increasingly experiment with inclusion and with changes in funding mechanisms, one challenge will be to create accountability mechanisms based on student outcomes. Each student with disabilities has an individualized education program (IEP) which provides a list of goals for that student. Goals vary widely, depending on the student’s needs, and may include items such as being able to name the countries of North America on a map, walking unassisted, contacting a dozen companies about a summer job, or being in the classroom for three consecutive days without disruptive behavior. In theory, the individual student’s improvement on specific outcomes could be measured as barometers of success.

Such a change should be approached carefully: the end result should not be to create artificially low goals for students to guarantee success. Perhaps states could design a two-tiered system of minimal and optimal goals. Schools could be responsible for outcomes for at least the minimal IEP goals (which should still be set at a sufficiently
challenging level) and would also be responsible for delivering services designed to help students attain their more challenging optimal goals.

**RECOMMENDATION**

- Funding structures, especially at the state level, must be designed to support schools in making decisions about placement and services based on students’ individual needs. States should also investigate ways of basing accountability on measurable student outcomes.

**Are the IDEA’s Procedural Protections Necessary?**

Students with disabilities have needs that have not been met in the typical classroom. Providing supplemental services is expensive and presents challenging budget issues to local school districts. Students with unusual, persistent educational problems often need advocates to ensure that schools provide them with appropriate services. The IDEA's procedural protections were designed to enable parents to be effective advocates for their children. Not only do parents have a unique concern for their child, but in most instances, they are the primary repository of information about the child’s medical condition, academic history, behavioral patterns, and responses to previous interventions.

While parents want the best for their individual child, school districts must deal with pressing budgetary constraints and must balance the needs of all students in the district. These different perspectives frequently conflict. The IDEA's procedural protections have been designed to encourage cooperation and the development of mutually agreeable plans for individual children. The IDEA requires that parents of students with disabilities be notified, informed, given full opportunity for involvement, and consent to all evaluations and change in services or placement. If the school district and parents are unable to agree, either may appeal to an impartial hearing officer or ultimately to the federal courts. These procedures are described by Martin, Martin, and Terman in this journal issue.

Ideally, the parent and school will agree upon services to meet the child’s needs. In practice, the time allocated for discussing the child’s needs and developing an individualized education program (IEP) is often short, parties are sometimes not well informed, parental input may not be sought or considered, and parents or school officials sometimes have unreasonably high or low expectations for the child. There is no shortage of anecdotes about parents demanding extensive, possibly unnecessary, evaluations or services, or, at the other extreme, about school districts refusing to provide important services.

Despite the challenges of conflicting interests and shortages of time and money, most parents and schools do agree to individualized education programs. While some people may be accused of “taking advantage of the system,” the numbers appear to be small, relative to the 3 million to 5 million students helped each year by the IDEA.

The requirements of parental information, involvement, and consent are important and should be retained. At the same time, parents need a source of information about their rights and an impartial analysis of reasonable goals and services for their child. Currently, the IDEA provides information and consultations for parents through at least one parental resource center in every state. Such services are greatly needed.

**RECOMMENDATION**

- The IDEA’s procedural protections are critically necessary and should be retained. Additionally, parental resource centers should be maintained.

**Can Regular Education Meet the Needs of More Students?**

Students with disabilities as a group have significant potential to be educated and productive, but are not responsive to typical
regular education. Most of these students will respond to intensive, consistent, individualized instruction, though instruction cannot be expected to negate the full impact of a disability. States and school districts should consider in what setting students are most likely to receive the education they need. Some students will continue to require special education, but a larger proportion of students can be served in regular education if increased resources are provided, substantial changes are made in typical instructional practices, and local school districts are committed to greater inclusion.

Of students found to be eligible for special services under the IDEA, only a small percentage (about 5%) are now served in locations entirely separated from the regular school building, such as hospitals, day schools, residential programs, or home study. Of the remaining students served by the IDEA, about one-third spend most of their day in the regular classroom, one-third spend most of their day in the regular school building but in separate classrooms, and one-third spend roughly half the day in each setting. (See the article by Hocutt in this journal issue.)

As noted by both Hocutt and Reschly, classroom teachers are the primary source of referrals to special education, and the decision to refer may be largely shaped by factors such as class size, increasing pressure to raise classroom test scores, teacher tolerance for diversity in ability or learning styles, and teacher tolerance for impulsive or inattentive behavior. Still, the teacher’s decision to refer the student for assessment is critical because the majority of students referred by teachers are found to have a disability.18

Here, some characteristics of special education are discussed. Then the ways in which regular education might be changed to meet the needs of more students with disabilities are described.

**Special Education**

It is difficult to reach conclusions about the effectiveness of special education. The research is not strong, and it particularly lacks comparisons to comparable control groups. Even when control groups have similar diagnoses (such as learning disabilities), random assignment is rarely possible, and it is likely that unmeasured differences (such as behavior) influenced which children were assigned to which group. Most studies also look only at short-term interventions and short-term outcomes. It is also meaningless to compare outcomes for students in special education with nondisabled students because the groups are not comparable.

In this journal issue, Hocutt reviews the literature about students with disabilities and concludes that outcomes are affected more by the characteristics of the instruction provided than they are by the student’s placement in a regular or special education classroom. Students with specialized needs respond best when instruction is more intense, consistent, and individualized than that provided in the typical classroom. Because many students in special education spend the majority of their time in the regular classroom, their instructional needs may not be met by a few hours of special services provided each week. Therefore, some students have better academic outcomes in full-time special education, where instruction is more likely to be adapted to their specific needs.

The majority of students with disabilities will find school a continual challenge, even with good special education. Students who learn skills such as lipreading or reliance on pneumonic devices must make greater efforts than students without disabilities and are naturally subject to greater fatigue and frustration. The fatigue factor alone makes it difficult for many students to keep up with the pace of regular education. The exceptions are those students with relatively few, specific deficits, who are taught compensating skills and who have other strengths (for example, stable home environment, higher IQ, higher tolerance for frustration). Students with disabilities who also have a good constellation of strengths may do quite well.

Most students who are found eligible for special education will continue to receive services under the IDEA until they leave school. Data collected by the Department of Education from 16 states in 1993 indicate that only 1% to 12% of special education students over the age of 14 are declassified each year. Declassification data are not collected for younger children.
Regular Education

For fiscal, educational, and social reasons, there is increasing pressure to serve more students in regular classrooms, a movement known as inclusion. “Inclusion” as used by educators involves more changes to regular education than the earlier concept of “mainstreaming.” mainstreamed students spend part of the day in the regular classroom but are often “pulled out” to separate settings for special services. Under inclusion, regular education is expected to change in significant ways so that all or most of the individual student’s special needs are met in the context of the regular classroom.

Regular education, if appropriately modified, could assume more of the responsibility of providing education to students with disabilities. Many students with learning disabilities, mild mental retardation, or orthopedic impairments, for example, might be good candidates for inclusion. Still, decisions should be made on the basis of individual student needs, not on disability category. Good reasons to consider shifting more responsibility to regular education are to cut down on disruptive pull-out programs, to increase social interaction between regular education and special education students, and to provide benefits for the whole classroom, such as smaller class size. However, inclusion is not likely to cut overall educational costs. Most or all of the resources currently allocated to special education are likely to be needed to implement inclusion effectively.

It cannot be overstated that regular education has great difficulty accommodating students with special learning needs. The majority of students served under the IDEA were referred to special education because their regular classroom teachers were not able to deal with their chronic academic and/or behavioral problems. Typical instructional practice in regular classrooms is substantially different from practices which show the greatest success for students with disabilities. (See Box 1 in the article by Hocutt in this journal issue for a comparison of typical practices in special and regular education.)

Research does not make a compelling case either for or against inclusion. At best, several models of inclusive programs have shown modest positive effects and have required considerable resources in the form of training and assistance for teachers, planning time, access to additional supportive services, and administrative support.

Teachers and parents of students without disabilities often express concern about the impact on the classroom when students with disabilities are included. In this issue, Hocutt summarizes the small body of research on this topic, which indicates that students without disabilities did not suffer in terms of academic achievement or proportion of time engaged in academic instruction under inclusion programs. And they may benefit academically from increased resources in the regular classroom. In one study, where additional resources allowed the inclusive classroom to maintain a teacher-student ratio of 1 to 14, nondisabled students in the inclusive classroom showed greater academic gains than their peers in regular, noninclusive classes.

Advocates of inclusion, however, make their arguments on the basis of fiscal, educational, and social reasons only modestly supported by research. The cost of special education is apparently a strong motivating factor. As school budgets tighten, many school boards and administrators ask whether resources used for special education might be combined with regular education in ways that would have educational and social benefits for all students. Also, advocates for students with severe disabilities seek greater integration in the regular classroom for social reasons.

The expectations for inclusion are great: advocates hope it will be at least as effective as special education, allow schools to allocate more resources to regular classes, promote local flexibility, and be less stigmatizing to students with special needs.

It is possible to improve outcomes through inclusion programs, but successful programs must meet several stringent requirements. These requirements, each of which is challenging, include retaining the full range of services and placements, providing increased resources in special education, initiating major changes in instruction supported by intensive training of classroom teachers, and making a local commitment to inclusion.
Full Range of Services and Placements
As Hocutt discusses in this issue, some students thrive when returned to the more challenging atmosphere of regular education, but others are more likely to be socially isolated or to fail courses, strong risk factors for dropping out. It is critical that the option of receiving appropriate services in a separate setting be retained for those students who would benefit and that such determinations be made separately for each student. Students with serious emotional disorders, in particular, may not be able to adjust their behavior to expectations in regular classrooms and may need separate placements. Many students with learning disabilities also benefit from separate placement.

Increased Resources
Several types of inclusive classrooms have been tested in research settings using various combinations of resources. Typical resources include smaller class size, teachers’ aides or co-teachers, and frequent consultations with psychologists or other professionals to design interventions or adaptations for individual students. A combination of all these resources may be needed, especially when dealing with challenging student behavior.

Many students with disabilities present behavioral challenges. Low-severity central nervous system impairments, such as those associated with ADHD or learning disabilities, have been estimated to affect between 5% and 15% of schoolchildren and are commonly associated with behavioral difficulties and social adjustment problems. These behavioral difficulties include consistently speaking out of turn or impulsively jumping out of one’s seat, which is disruptive in the classroom, but not aggressive or dangerous. Most teachers respond to inappropriate classroom behavior primarily through disciplinary modes, for example, imposing sanctions such as staying in at recess, doing extra homework, or being expelled. Few are trained to implement structured behavior modification programs designed to help a student gain skills of self-control.

Effective management of misbehavior in the classroom requires systematic, consistent interventions; multiple opportunities for students to practice new behavior and social skills; treatment matched to the needs of individual students rather than generic programs; and treatment with multiple components, such as combinations of remedial, behavioral, psychopharmacologic, or family treatments. Even with these components, management of behavior is a challenging, long-term task. Learning effective behavior management skills requires a great deal of practice on the teacher’s part, and the process by which teachers learn how to teach self-management skills to children with disabilities should be monitored and supervised by a school psychologist or other professional in behavior management.

Changes in Instruction, Supported by Teacher Training
Research summarized by Hocutt in this issue shows that characteristics of classrooms that are more effective with special education students include intensive instruction; individualized instruction; close, frequent monitoring and feedback; multiple methods of behavior control; lengthy, often multiyear teacher training; curriculum modification; consultation and supportive services; and teacher willingness to work with students who have special needs.

To a large extent, this description may sound like “just good teaching.” What is the difference between good teaching and special services in the regular classroom? There is a significant overlap between the two. In fact, studies of “effective schools” show that effective teachers employ frequent individualized monitoring and feedback, along with intensive instruction, practices that have been shown to benefit special education students. In many instances, special education students may not need different interventions so much as they need good teaching with greater consistency and intensity than other students require.

The extensive literature on effective schools gives some reasons for optimism: practices common to the most effective teachers are practices that have been demonstrated to be effective with many special education students. Although this similarity of teaching techniques is encouraging, effective schools and special education differ significantly in terms of pacing. That is, effective teachers tend to cover a great deal
of material in a relatively short time, a pace that is difficult or impossible for many special education students to sustain. In addition, effective teachers tend to have less tolerance for students with unusual individual needs or challenging behaviors. Indeed, studies indicate that effective teachers are more likely than other teachers to resist having difficult students placed in their instruction groups.55

There are not sufficient research data to recommend specific ways to resolve this dilemma. One possibility is increased modification of the curriculum, where students with different abilities in the same class have different types of assignments on the same subject. This is a challenging way to teach, requiring additional planning time on a daily basis, as well as additional curricular resources. Another possibility is to group special education students in selected regular classrooms with more receptive teachers56 and with additional resources such as smaller class size or more teaching staff, rather than trying to distribute the students with special needs equally among all the district’s classrooms.

It appears that inadequate preparation of teachers by colleges of education and increasing expectations for classroom teachers are major causes of overreferral of students with special needs.9 Few undergraduate teaching programs routinely provide students with specific skills designed to meet the needs of students with learning disabilities, and few state certification programs require regular education teachers to have those skills.57 It is not sufficient for certification programs to require a single survey course on children with disabilities. Indeed, the National Association of State Boards of Education has called such courses “inherently superficial.”59 Schools of education should provide prospective teachers not only with information about various disabilities, but also with detailed strategies for working with students and opportunities to practice these strategies in realistic classroom situations.

Virtually all school districts provide some form of ongoing, in-service continuing education for teachers. Such programs typically consume two to four days of the school year. In contrast, the training provided to teachers in successful inclusion programs was much more extensive and consultative in nature. Typically, special educators, university faculty, and/or behavioral specialists were on site for most of the school day and for multiple years, observing, consulting, and coaching teachers who were learning new skills.

Deciding which inclusion model to implement should generally be a local decision. Different models call for different types of resources and use different teaching techniques, and the choice among them should take into consideration local resources and preferences.

Local Commitment
In this journal issue, Hocutt notes that teacher willingness to work with students who have special needs is an important factor in the success of inclusion programs. Such willingness cannot be taken for granted. As was discussed earlier, classroom teachers are the primary source of referrals to special education because of the teacher’s perception that the child’s needs cannot be met in the regular classroom. In a recent descriptive study of inclusion efforts at sites in Kansas, Minnesota, Pennsylvania, Virginia, and Washington, observers expressed multiple concerns about poor planning, inadequate services, and lack of commitment to improved outcomes.58 These concerns suggest the appropriateness of experimenting with inclusion gradually—for example, making changes in only a portion of the schools in a district, assessing the positive and negative impacts, and making revisions to programs based on experience—rather than implementing dramatic across-the-board inclusion programs in a short time frame.

RECOMMENDATION

Regular education can and should assume more of the responsibility of providing education to students with disabilities. Effective implementation of inclusion requires (1) retaining the full range of services and placements because not all students should be moved to the regular classroom; (2) increasing resources in regular education; (3) initiating major changes in instruction,
supported by intensive training of teachers; and (4) making a local commitment to improved student outcomes.

**Some Successful Interventions**

One of the more successful educational interventions for high school students with disabilities has been vocational education. Before the passage of the Carl D. Perkins Vocational Education Act in 1984, researchers found that special education students did not have adequate access to vocational education programs.\(^5\)\(^9\) The Perkins Act, however, made a dramatic difference in accessibility. By 1989, the National High School Transcript Study showed that students with disabilities earned more vocational education credits than did students without disabilities.\(^5\)\(^9\) Indeed, Wagner and Blackorby in this journal issue note that 99\% of all students with disabilities took at least one vocational course in high school and that students with learning disabilities were most likely to take a concentration (four or more related courses) in vocational education.

Vocational education courses, especially in concentrations, were closely associated with improved employment for students with disabilities in the National Longitudinal Transition Study of Special Education Students. Students with mild disabilities who took a concentration of vocational courses were 40 percentage points more likely than their peers who did not take concentrations to be competitively employed after high school and earned an average of $6,247 more per year.

These data do not confirm a cause-and-effect relationship. The students who chose to take concentrations were obviously self-selected and may not have been fully comparable to their peers who chose not to enroll in concentrations. Even so, it seems clear that access to vocational education had a substantial positive relationship to employment outcomes.

In this era of increasing fiscal pressures and increasing academic requirements for high school graduation, school boards are sometimes tempted to cut nonacademic courses such as vocational education, especially if enrollment is lower than in some other classes. It is important that school districts resist cuts to vocational education classes and offer courses in concentrations when possible.

**RECOMMENDATION**

1. Vocational education is strongly associated with positive employment outcomes for students with mild disabilities and should be reinvigorated.

Another area of successful intervention is early intervention for children with problems in basic reading skills. Recent research, summarized by Lyon in this issue, indicates that many more children with learning disabilities in basic reading skills could be identified and effectively helped in the early elementary grades through specialized instruction on phonological awareness.

Deficiency in basic reading skills is the most common form of learning disability, by one estimate affecting 17\% of all elementary students.\(^6\)\(^0\) Certainly, it is critically important that students learn to read with fluency, and new research indicates that specific, highly structured early intervention is effective at increasing most students’ ability to decode individual words rapidly and fluently. These interventions are promising, especially for students with less severe learning disabilities. Such intervention can be accomplished in the context of the regular classroom, but it requires teachers thoroughly trained in teaching phonological awareness and related skills. Few schools of education are currently preparing early elementary teachers to teach reading in this manner, apparently because of lack of demand for the instruction and lack of qualified university faculty. State teaching standards boards should encourage or require schools of education to offer training in reading instruction emphasizing phonological awareness, decoding, and word-recognition skills.

An increased emphasis on such teacher training is a necessary, though not sufficient, step to address the problems of students with learning disabilities. Research shows that well-trained teachers providing sus-
tained, intensive instruction can significantly improve the reading skills of students with learning disabilities. In fact, these are among the most successful interventions for any form of LD. However, it must be pointed out that most of these students will have other, additional manifestations of LD. Improved basic reading skills are important, but they will not, by themselves, solve the problem of additional manifestations of learning disabilities and related behavior problems.

Overall, the interventions for learning disability in basic reading skills recommended by Lyon in this issue are most successful when the student's level of disability is less severe; the instruction is provided at the kindergarten and first-grade level; the instruction focuses on phonological awareness, decoding, and word-recognition skills rather than primarily on context and reading comprehension; the instruction is of sufficient intensity and duration; and the teacher is well trained.

**Conclusion**

Special education is a large and expensive system currently serving one in ten students in public schools. Many students are placed in special education because of the inability of regular education to accommodate their needs. Research has shown that regular education, if properly modified, can meet the needs of many more students with disabilities, but doing so is challenging. Increased resources must be provided in the regular classroom, and major changes should be made in typical instructional practice, requiring extensive training of regular teachers. Local schools and teachers must be committed to inclusion to make it work. Each of these requirements is a potential stumbling block.

Inclusion cannot be expected to take the place of special education in the near future. As schools experiment with inclusion, the IDEA's guarantees of appropriate education based on the individual needs of students with disabilities should be maintained. Additionally, the IDEA's procedural protections and parent resource centers are necessary to protect the rights and interests of students with disabilities.

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19. Procedural safeguards under the IDEA are spelled out in the *U.S. Code of Federal Regulations,* Title 34, Subtitle B, Chapter III, Part 300.

20. "Multiple disabilities" is an IDEA category for students whose educational problems are so serious that they cannot be accommodated in special education programs solely for one impairment, for example, severe mental retardation combined with blindness. This is a relatively small category, accounting for 2% of IDEA-eligible students. Many other students have disabilities in more than one area, albeit less serious.

21. "Learning disabilities" is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be the result of central nervous system dysfunctions, and may occur across the life span. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences or insufficient or inappropriate instruction), they are not the result of these conditions or influences." National Joint Committee on Learning Disabilities. Letter to NJCLD member organizations, 1988.

22. Freedman, M. "Commentary: The elevator theory of special education: With diagnosticians as gatekeepers, are we overlabeling our children?" *Education Week.* February 15, 1995, p. 44.


30. Professionals and clients often prefer terms such as “developmentally delayed” or “developmentally disabled” rather than “mentally retarded” to refer to this population. The term
“persons with mental retardation” is used here because this is the term used in the IDEA’s statutes and regulations. Young children who are developmentally delayed should not be assumed to have mental retardation because many factors, such as temporary or permanent hearing loss, may be responsible for developmental delays. Among older elementary students, adolescents, and adults, the terms “developmentally disabled” and “mentally retarded” can generally be considered to be synonymous.


57. McCaul, Edward, Technical Assistance Coordinator for the Network Systems for Training Education Personnel (NSTEP) Project of the National Association of State Directors of Special Education. Telephone conversation, February 6, 1996.

