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Educating Individuals With Disabilities

IDEIA 2004 and Beyond

Elena L. Grigorenko, PhD
Editor

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Introduction

At the beginning of the 21st century two pieces of educational legislation are coming together as the high water mark of standards-based reform in the United States: The No Child Left Behind (NCLB) Act of 2001 and the Individuals With Disabilities Educational Improvement Act (IDEIA) of 2004. The goal of NCLB is “to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and State academic assessments” (U.S. Code 6302 § 1001). This right to educational excellence was first articulated in 1983 in the National Commission on Excellence in Education’s report, A Nation at Risk. In the past 25 years, states have launched standards-based educational reforms which have coupled the right to educational excellence with the original intent of the Elementary and Secondary Education Act (ESEA) of 1965 to ensure that all students, regardless of ethnicity or income, have access to education. These rights to educational access and excellence for children living in poverty ensured by modifications to ESEA during the past 42 years are reinforced by modifications to the right-to-education movement for individuals with disabilities in the past 37 years. The right-to-education movement represented most currently by IDEIA is important to any discussion of the poverty gap because poor students are disproportionately represented within the special education population. In addition, research conducted in the past 40 years to prevent

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learning disabilities and to intervene early with students at risk of learning disabilities can help promote learning for all disadvantaged students (Foorman, Kalinowski, & Sexton, 2007).

**COMPLEMENTARY PROVISIONS OF NCLB AND IDEIA**

In general, the provisions of NCLB and IDEIA work in concert to ensure high quality instruction that closes the achievement gap. Both emphasize prevention and early intervention and rely on whole-school approaches and multitiered instruction that incorporate scientifically based academic programs and positive behavioral interventions and supports. Both require highly qualified teachers, as defined by federal law as having at least a bachelor’s degree and certification in the subject area they teach. Both require alignment of performance goals with states’ definitions of adequate yearly progress. Both require data collection, evaluation, and progress monitoring to inform instruction. Both mandate high expectations for students with disabilities by including them in district and state accountability systems, counting the numbers participating in each assessment condition, and reporting results to the public with the same frequency as is done for nondisabled students. To help accomplish the integration of these two acts, funding may be shared, in particular the provision that up to 15% of special education funding may be used for prevention and early intervention.

**CHALLENGES OF IMPLEMENTING IDEIA**

NCLB and IDEIA share a common goal: a single, well-integrated system that connects general, remedial, and special education and considers the learning needs of all students. The chapters in this book point out the potential and the challenges of reaching this goal. A major challenge mentioned by Kaufman in chapter 2 is that any discussion of teacher quality is quickly overshadowed by the reality of the shortage of special education teachers. Weishaar in chapter 3 and Detrich in chapter 4 point out the lack of training in evidence-based practices in teacher preparation programs. Spear-Swerling in chapter 11 cites the National Council on Teacher Quality review of syllabi from 72 randomly selected education schools across the United States to explain the lack of teachers’ pedagogical content knowledge (NCTQ, 2006).

Another major challenge to fully implementing IDEIA is that adult educators need to change—change what they do in some cases, such as school psychologists giving fewer IQ tests and more curriculum-based
assessments or behavioral interventions—but, in all cases, change what they think about student learning. We are not going to wait for students to fail before providing supplemental services; we are going to provide additional instruction in kindergarten and in Grade 1 to prevent learning difficulties and to intervene with students at risk of learning disabilities. Under IDEIA, students’ response to intervention (RTI) becomes part of the criteria for identification of a specific learning disability. Importantly, as pointed out by L. Fuchs, D. Fuchs, and Zumeta in chapter 5, RTI allows educators to distinguish between two explanations for low achievement: inadequate instruction versus disability. Another advantage of RTI, as pointed out by McCardle, Keller-Allen, and Shuy in chapter 6 and by the Bakers in chapter 10, is that it can help reduce the disproportionate representation of English language learners (ELLs) and other groups by using assessment data to inform instruction. Those who fail to respond to quality classroom and small-group interventions will be given brief evaluations to distinguish disabilities (e.g., learning disabilities versus mild mental retardation or language impairment) or to identify more serious cognitive, sensory, or behavioral/emotional impairments using the kinds of measures and procedures discussed by Naglieri and Kaufman in chapter 7, Lindstrom, Tuckwiller, and Hallahan in chapter 8, Moon, Brighton, Callahan, and Jarvis in chapter 12, and Goyette-Ewing and Stahl in chapter 18.

Fuchs et al. in chapter 5 emphasize that special education is not an outcome of the RTI process but rather an integral part of the multilayered system of interventions according to which students in the third tier of special education receive individualized instruction that enables them to return to the small-group supplemental Tier 2 or the classroom-level of Tier 1. Indeed, this goal of returning to Tiers 1 and 2 should be specified in the Individual Education Program, as mentioned by Gartin and Murdick in chapter 14, and in behavior intervention plans as discussed by Etscheidt and Clopton in chapter 15. Ideally, assessments and diagnostic tutoring provided in private practice settings would work in concert with these tiered interventions in school, as suggested by Arzubi in chapter 20. Furthermore, as Nabuzoka points out in the first chapter, school interventions should be consistent with the sociocultural context of the home and community.

MODELS OF RESPONSE TO INTERVENTION (RTI)

According to IDEIA, RTI means that a local education agency “may use a process that determines if the child responds to scientific, research-based intervention as a part of the evaluation procedures” (Pub. L. No. 108–446 § 614 [b][6][A]; § 614 [b] [2 & 3]). This legislated notion of RTI
as a diagnostic system implies but is conceptually distinct from the RTI multitiered instructional model. It is useful to keep the RTI diagnostic model and RTI instructional model conceptually distinct because the former is new and has challenging measurement implications, whereas the latter has been in existence in public health (see Detrich’s chapter 4) and in school reform models such as Success for All (Slavin & Madden, 2001) and direct instruction (Englemann & Bruner, 1995) for over 20 years with significant impacts (Borman, Hewes, Overman, & Brown, 2003; Denton, Foorman, & Mathes, 2003). The RTI instructional model is evident in many states’ implementations of the primary-grade reading component of NCLB—Reading First. In the first 3 years of Florida’s Reading First initiative (2003–2006), the implementation of an RTI instructional model in 318 elementary schools (where 72% of students qualify for free or reduced price lunch, 62% are minority, and 14% are ELLs), the percent of students identified as learning disabled at the end of kindergarten was reduced by 81% over the 3 years (Torgesen, 2007). The percent reductions for Grades 1, 2, and 3 were 67%, 53%, and 42%, respectively. The percent reductions in numbers of students reading below the 20th percentile on norm-referenced test at the end of first and second grades were significant but not as large (22.8% to 15.7% and 23.3% to 16.2%, respectively, over the 3 years), leading one to conclude that school administrators were confident that adequate interventions were in place to meet the instructional needs of seriously struggling readers. However, these administrators must subject their confidence in the interventions to empirical evaluation to make sure that gains in student achievement occur. Otherwise, the concern raised by Kaufman in chapter 2 that early interventions may delay special education services is warranted.

**THE PROMISE OF RESPONSE TO INTERVENTION (RTI) MODELS**

The promise of the RTI models is real: Substantial reductions in the number of students referred to special education because their academic performance catches up to grade-level expectations. Measurement issues for the RTI diagnostic model are discussed by Fuchs and colleagues in chapter 5, Chard, Ketterlin-Geller, and Jitendra in chapter 9, and Yeh in chapter 13. All agree that frequent assessment of student progress using curriculum-based, equated forms is essential. Adequacy of response may be evaluated by outcome on a criterion benchmark or norm-referenced test and/or by the rate of improvement (see Fuchs and colleagues’ discussion of these options in chapter 5). Tips on successful implementation of RTI instructional models are provided by Hawkins and Riley’s description...
of the IDEIA implementation in an affluent district outside Seattle in chapter 17 and by Hexom, Menoher, Plummer, and Stone’s description of working with 33 low-performing California elementary, middle, and high schools in chapter 16.

In another chapter from the front line of schools—chapter 19—Heidmann describes the RTI instructional model endorsed by the International Reading Association (IRA). The vast majority of K–12 reading teachers in the United States are members of the IRA and this model reflects what is possible within general education. According to this model, there are three tiers—a universal tier, a selective tier, and an intensive tier. The universal tier consists of 60 minutes of whole-group and small-group instruction with benchmark screening and assessment procedures used three times a year. The selective tier is time-limited to 4–6 weeks and includes 30 additional minutes of instruction (i.e., 30–45 hours). These first two tiers comprise the 90 minutes of reading instruction mandated by many states for Reading First (but see Fielding, Kerr, & Rosier, 2007, for an empirically derived rationale for at least 120 daily minutes of quality reading instruction).

The intensive tier is the hallmark of the RTI instructional model and no longer utilizes the core reading program. In this tier, a brief norm-referenced test battery of reading and spelling achievement and, possibly, vocabulary is given and diagnostic tutoring is provided that targets the student’s literacy needs using evidence-based practices. Progress is monitored weekly using curriculum-based measurement. Students who remain in diagnostic tutoring after two cycles are considered learning disabled in reading and eligible for special education services. They are referred for further evaluation of mental retardation, attention-deficit/hyperactivity disorder, or communication disorders. In IRA’s model, students with reading problems are not “special education” or “regular education” students. All teachers—classroom teachers and specialists—work collaboratively in the three tiers. A reading coach (a) helps select evidence-based materials that teachers will use to ensure that 80% of students in the universal tier are meeting benchmarks, (b) models lessons for teachers, and (c) teaches small groups in the selective tier. Reading specialists and special education teachers are the diagnostic tutors at the intensive tier and conduct assessments at both the selective and intensive tiers.

CONCLUSION

In conclusion, IDEIA and NCLB bring together 40 years of segregated educational policies in the United States for students with disabilities and for students living in poverty into complementary legislation that
can serve all children without requiring a label to receive supplemental instruction. The chapters in this book point out the many hurdles to overcome to realize the potential of the RTI models supported by these historic pieces of legislation. Let us move forward together in a deliberate fashion to embrace the change.

Barbara R. Foorman, PhD

REFERENCES


PART I

Educating Individuals With Disabilities
The development of educational services for individuals with disabilities has been characterized by various concerns at particular points in time as well as in different countries of various parts of the world. While priorities have differed accordingly, these concerns have largely focused on efforts aimed at understanding the characteristics of individuals with disabilities that have implications for their education, including the social and cognitive processes involved; the efficacy of various methods of teaching; and the contexts that promote the optimal functioning of such individuals. The services provided to reflect such concerns have generally come under the general term of special education. The individuals requiring such education have been referred to as having special educational needs (SEN). While some significant strides have been made in understanding the needs of individuals with disabilities and in the provision of special education, various issues have arisen and attained prominence in various contexts and at particular times in the history of special education. This chapter traces some of the developments that have characterized special education in selected countries as indicators of world trends. The chapter draws on material mostly from the United Kingdom and United States, reflecting experiences in the industrialized world, and also some third world countries to illustrate similarities and differences in concerns and priorities. The specific focus and issues discussed are necessarily
selective, but it is hoped that this approach will provide some flavor of general concerns in the field while also being of interest to professionals in different parts of the world.

There has long been recognition that the needs of those with disabilities may differ not only amongst individuals involved but also between the various types of disabilities. Such a distinction has been reflected in the types of special education services provided in various parts of the world. However, a concern with specific difficulties in academic and learning tasks has been one of the major areas of special education in many countries. This chapter therefore mostly focuses on issues related to the education of children with learning disabilities (LD) to illustrate some of the main issues related to special education especially in the industrialized world. Though the emphasis is on provision for individuals with LD, developments related to provision for other types of disabilities are also discussed, especially as related to examples from third world countries where issues of concern may relate to most if not all types of disabilities.

One development in understanding the nature of difficulties faced by children with disabilities has been a recognition that although a term such as learning disabilities may suggest difficulties primarily in the academic domain, problems faced by children with such a label are not confined to that area alone. There is evidence that such people may encounter problems in their social relationships as well and that the factors that first set children with this label apart from their classmates, setting in motion the referral and diagnostic process, tend to be problems in social adjustment rather than just academic difficulties or underachievement (Nabuzoka, 2000). Such problems may also have a direct bearing on the academic functioning of the individuals concerned (Walker & Nabuzoka, 2007). This chapter therefore also mostly focuses on the psychosocial functioning and adjustment of children with LD and discusses issues related to this in the provision of special education services.

In discussing some of the developments and issues in special education, the chapter begins with the terminology used to describe and classify those children who may require special education provision. The nature of the presenting difficulties are then discussed focusing on the structure and functioning of cognitive processes on the one hand and levels of psychosocial adjustment on the other, as factors associated with educational outcomes of children with LD. This is followed by a discussion on the assessment and identification of children deemed to have special needs. This relates to both academic and general functioning of the affected children and is also associated with the definition and classification of the presenting difficulties. The contribution of the context in which education is provided to the academic functioning of children with LD is then
discussed focusing on social ecological factors. This has mostly focused on the school setting as an environment in which children spend most of their educational time. However, in parts of the world where special education provision is not widely accessible through schools, provision in the community has been an alternative and even supplementary approach to school efforts, and this is discussed at some length.

Another issue discussed relates to some of the intervention strategies that have been applied to address difficulties faced by those children identified with LD. Some strategies aimed at enhancing the functioning of the children from the community settings of some countries in the third world to school settings in these and industrialized countries are discussed and evaluated. The chapter concludes by discussing some of the issues related to applied and evaluative research in special education.

**TERMINOLOGY AND CLASSIFICATION**

The term *learning disabilities* has acquired slightly different meanings in different parts of the world, notably as used in North America compared with Britain. It is of relatively recent origin as a category of special education. In the United States, the term can be traced back to Samuel Kirk, who proposed it at a meeting of parents in New York City in 1963. It had been used for the first time a year earlier in the first edition of his textbook *Educating Exceptional Children* (Kirk, 1962). Kirk (1963) proposed that the term should be used to denote the difficulties some children have in school-related basic skill areas (e.g., speech and language, reading, spelling, writing, math). He emphasized the need to forgo speculation about the causes of learning failure and rather to focus on identifying and treating the learning problems themselves. There then followed a number of alternative definitions of LD to reflect an increasing awareness of the plight of so-called disabled learners and of the need to identify and treat their problems (Hallahan & Kauffman, 1976). However, the tendency within the education profession has been to retain a broader definition of learning disabilities, this being consistent with the proposal by Hallahan and Kauffman (1977) that a child with a learning disability is simply one who is not achieving his or her full potential. Such a child may have any intelligence level, may have a learning problem for any number of reasons (some perceptual and some not), and may or may not have emotional problems.

One of the key components in the definitions in subsequent use was a discrepancy between a child’s aptitude and his or her achievement, with underachievement being the main basis of classification to LD status by educational or school committees in most cases (MacMillan,
Gresham, & Bocian, 1998). This was largely reflected in the Individuals With Disabilities Education Act (IDEA). The more recent Individuals With Disabilities Education Improvement Act (IDEIA, 2004) provided revised parameters concerning LD diagnosis. One of the main changes to IDEIA legislation was to eliminate reliance on the Intelligence (IQ) Achievement discrepancy model as the basis for LD diagnostic decision making, while focusing on “relevant functional, developmental, and academic information.” The federal regulations are considered to be fairly open-ended, thus allowing state departments of education some flexibility in establishing LD diagnostic parameters (Dombrowski et al., 2006).

In Britain, people with learning disabilities refers to the broader category of people with intellectual disabilities, including those who in the United States and elsewhere are referred to as “mentally retarded.” The latter term is not generally in common usage in Britain except in the context of some clinical discourse and journals. The current British definition and classification of children experiencing difficulties in the academic domain was influenced by the Warnock Report of 1978. Until then, such children were classified into various separate categories that included physical, emotional, and intellectual difficulties (Pritchard, 1963). The Warnock Report recommended that the term children with learning difficulties be used for all children requiring special educational provision and that such learning difficulties might be described as mild, moderate, or severe. Children with particular difficulties only, such as with reading, may be described as having a “specific learning difficulty.” This classification represented a move away from using several categorical labels toward statements of educational needs based on a detailed profile following an individual assessment.

These, then, are functional classifications based essentially on curricular requirements. They place more emphasis on what the child may require and less on the presenting limitations of the child. However, as pointed out by Dockrell and McShane (1993), identification of an appropriate curriculum for the child requires an understanding of the nature of the child’s problems. For example, an understanding of the child’s cognitive abilities is necessary when considering learning difficulties. Categorization solely on the basis of educational needs, as suggested by the Warnock Report, also tends to be too inclusive of children whose difficulties might be sensory, physical, emotional, or due to what has been referred to as “intellectual disability” or “mental handicap” (retardation). These difficulties also represent different social experiences for the children affected and such differences may not be reflected in a classification of special educational needs.

In this chapter, the term learning disability is used broadly to include a sense similar to that adopted in the United States (i.e., difficulties in
the academic domain). This group of children includes those with Full Scale IQ (intelligence quotient) scores within one standard deviation below or above 100. These children are in most cases characterized by a discrepancy between aptitude and achievement but may be without any other apparent physical, sensory, or emotional problems. Also included are children who, in the British sense, may be described as having learning difficulties arising from intellectual deficits and associated difficulties (said to have “mental retardation” in the United States). These children have IQ scores significantly below 100 (the cut-off point being an IQ of 75) and may also have accompanying physical, sensory, or emotional problems. The wide spectrum of problems represented by these terms has often been referred to as “intellectual disability.” Thus, in this chapter, the terms learning disability and intellectual disability are used interchangeably: the former to reflect difficulties in the academic domain and the latter to refer to the wider spectrum of problems. Those whose difficulties may apply to any type of disability are simply referred to as children or individuals with disabilities, or that they have special educational needs.

EXPLAINING THE NATURE OF PRESENTING DIFFICULTIES

Structure and Functioning of Cognitive Processes

A concern of many researchers and practitioners is to determine the nature of problems faced by individual children. The nature of these difficulties can be illustrated in the case of generalized intellectual disability. Intellectual disability, especially when severe, is a condition that tends to interfere with the normal course of human development in various domains. Thus, difficulties in a single area of functioning such as academic tasks in school may be related to problems in both the cognitive and social domains. This often leads to serious and chronic difficulties of adaptation for the developing child and also for his immediate family. Explaining these problems requires a conceptual framework. Clements (1987), for example, identified two major psychological theories that have been proposed to explain intellectual disability and which are seen as relevant to specific problems in the academic domain. One of these, the deviancy theory, considers those with intellectual disability to have one or more mental processes that are different from those in the normal population, and thus underlie low performance in various tasks. It emphasizes differences rather than commonalities between those affected and other members of society. The other theory is the developmental delay theory, which proposes that people with intellectual disability have the same mental
processes as other people and go through the same stages of development as others—but at a slower rate.

These theoretical frameworks have guided service delivery policies in different ways. Deviancy theory is in support of the sociological model that encouraged enforced segregation (to be distinguished from the human rights model), and in support of the medical model. The medical model assumes a perspective of causation and remediation in terms of a condition within the child that needs appropriate treatment. Developmental delay theory, on the other hand, seems to be in tune with a sociological human rights model and, in so far as knowledge of developmental processes is regarded as relevant to education, with the education models. The latter models have their origins in developmental psychological theory.

Thus, a central question of concern has been whether children with LD are delayed in their development or whether they have a different developmental pattern. Dockrell and McShane (1993) suggest that because children with general LD display a slower rate of learning and reach a lower ceiling, this indicates some limits on the extent of cognitive development, and that upper limits on performance exist. They posed the question as to whether the learning process of children with LD was best explained by a model which invokes the same principles and mechanisms of development that apply to other children, or whether it was necessary to invoke specific differences over and above the slower rate and lower ceiling.

Two main foci of studies have been identified addressing the question of developmental difference versus delay:

- establishing the extent to which children with general LD follow a similar sequence of development to typically developing children;
- establishing the extent to which performance differences on cognitive tasks can be explained by underlying processing differences (Dockrell & McShane, 1993).

Studies investigating the similar-sequence hypothesis consider children’s progress through stages, such as the Piagetian stages of cognitive development. Research support for the similar-sequence hypothesis both across large stages and within the substages is considered important. In the social domain for example, research on typically developing children has indicated some sequential order of developmental levels in interpersonal understanding (Gurucharri & Selman, 1982; Selman, 1980). Similar research on social perception of children with LD has sought to identify some developmental progression similar to that of non-LD children (Jackson, Enright, & Murdock, 1987; Nabuzoka & Smith, 1995). The concern of such research is predominantly with what stages the child has mastered and in what order.
The other perspective is to consider how the child’s cognitive system processes information. A suggestion is that children with LD process information in a manner different from that of typically developing children and that this accounts for difficulties they may experience across a wide range of tasks. According to this perspective, learning disabilities are seen in terms of cognitive processes and structures that may be absent or inefficient, thereby leading to poor performance across tasks. However, Dockrell and McShane (1993) argued that processing difficulties should not necessarily imply cognitive differences. They suggested that it might be more useful to consider how the cognitive system of children with LD might function differently to account for slower rates of development.

In all, debates have focused on whether children with LD are essentially developing differently in attaining developmental milestones in various domains, or simply developing more slowly. One alternative argument is to regard these perspectives as not necessarily mutually exclusive but to consider how developmental delays may reflect the different ways in which children with LD function (Dockrell & McShane, 1993). According to maturation theory, there is a sequential progression in the maturation of cognitive skills, and a child’s ability in a specific cognitive area will depend on his or her maturational status (Piaget, 1970). Children with LD have been described as having a maturation lag reflecting slowness in certain aspects of neurological development, so they are seen as not being qualitatively different from normally developing peers, but rather just developing more slowly (Koppitz, 1973). This has implications for the design of intervention programs. It suggests that the child continues to develop in the area of relative weakness and may eventually reach an adequate level of competence. As such, a more passive approach to intervention is implied in that if children develop at different rates, it would be easier to simply wait until a child has achieved readiness for the task at hand.

Psychosocial Adjustment

Although the term learning disabilities may suggest difficulties primarily in the academic domain, problems are not confined to that area alone. Evidence suggests that people with LD encounter problems in their social relationships as well (Bender & Smith, 1990; Kavale & Forness, 1996). It has long been recognized that the factors that first set children with this label apart from their classmates tend to be problems in social adjustment rather than just academic underachievement. It is often such factors that set in motion the referral and diagnostic process (Nabuzoka, 2000). However, although descriptions of individuals with LD have often included some social characteristics, it is only relatively recently that
attention has been paid during assessment and intervention to social behaviors, especially peer-related interactions. Then, the major concern was merely on academic difficulties and how to address them. A child’s general perceptual and cognitive development was the main factor related to academic success or failure. In the last few decades, however, efforts have been made to relate perceptual and cognitive development of children also to social functioning (Longman, Inglis, & Lawson, 1991; Spafford & Grosser, 1993).

There has been consistent evidence that many children with LD experience negative social relationships with significant people in their lives and even with strangers. A review of the literature by Nabuzoka (2000) indicated that these children are less well regarded by parents, teachers, other adult observers or strangers, and by peers. They also report more dissatisfaction and anxiety about their peer relations than other children. As children with LD are more likely to be regarded negatively by others and thus have negative experiences, the quality of their social relations can be said to be relatively poor. According to the social skills model of adjustment, children with LD may experience relatively more social adjustment problems as a consequence of social skills limitations or deficits, and others’ responses to them (Spafford & Grosser, 1993). Such a relationship between social functioning and adjustment has also been used to explain academic achievement of such children (Walker & Nabuzoka, 2007). The social skills model of adjustment has been useful, leading to considerable progress in identifying abilities associated with socially competent performance and in developing intervention programs for fostering them (Chalmers & Townsend, 1990; Spence, 1991). Thus, for children with LD, identifying the skills that might need fostering has been considered to be an ongoing and integral part of the intervention process.

ASSESSMENT AND IDENTIFICATION OF CHILDREN WITH SPECIAL NEEDS

Professional intervention on behalf of children with developmental or learning disabilities requires an assessment of the child’s level of functioning, and of the resources required to address the difficulties faced. This includes his or her emotional, social, moral, and intellectual skills, dispositions, and needs. Intervention can then include the design of an environment to respond to those needs. In the case of children experiencing difficulties in school, the assessment of the child’s functional level and the nature of the educational needs is one of the key issues in special education. In this section, two types of assessments linked to the context of the child’s functioning are discussed: assessment of academic and of
general functioning. The first is related to learning in the context of the school while the other relates to learning in the general sense of the term as would relate to functioning in the community.

Assessment of Academic Functioning

Until recently relatively, assessment of levels of functioning of all children experiencing difficulties in school in the United Kingdom occurred in the context of “statementing” (Fisher, 2000). This is a process through which an educational psychologist, a medical doctor, and other professionals make an assessment of the functioning and special needs of a child. On the basis of this, a profile of the strengths and needs of the child is drawn up together with a recommendation as to the best form of educational placement for the child. This may be a mainstream school with resources to cater for the special needs (inclusive setting), or a separate school with more specialized resources (special school).

The statement thus provides an educational and social profile of a child with great emphasis on what he or she may require. The recommendation for and eventual placement would be in an educational environment deemed to best meet those needs identified in the assessment. In one case, for example, accessibility to a speech therapist and a range of mainstream peers may be seen as some of the key factors for recommending an inclusive mainstream school with a resource facility. The choice of a particular school to host the child would depend on the availability of the resources and support systems to meet the stated needs. In addition, links between the school and home setting may be seen as important for some children.

Statementing also implies that an assessment is made, in some way, of the suitability of a given setting to cater for the child’s needs. Assessment in this sense involves several aspects aimed at informing professional interventions in response to the presenting disability. The need for multidimensional assessment is consistent with the ecological perspective on human development (Bronfenbrenner, 1979). This does not focus on a static categorization of the child’s current level of functioning, nor on a predictive estimate of his or her potential to benefit from a fixed type of service. Rather an appraisal is required of the child’s behavioral skills in relation to the developmental potential of various systems in which he or she operates.

A profile of the child’s skills, dispositions, and needs must therefore be tied in to a continuum of support representing the various contexts within which he or she functions. In one given case, for example, it may therefore not be enough to identify a need for home-school liaison: It would be more appropriate to also analyze the home-care unit as an
integrated microsystem that includes the child and his or her immediate caregivers. For example, addressing the presence of language problems may not be helped by a situation where the language used at school (English for example) is not frequently used in the home.

**Assessment of General Functioning**

In many parts of the developing world assessment of a disability would be linked to efforts aimed at enhancing the general development of the affected individual. In the case of learning disabilities, an underlying cause may be generalized intellectual disabilities. Studies of intellectual disability have often been concerned with identifying and documenting causes for the disability; the special needs created by the disability for the individual child and for his or her family; and the implications for intervention. An initial practical concern is with the assessment methods employed to identify the target children and their specific needs. However, objectivity in assessment procedures used can be difficult to demonstrate. This is particularly the case in determining general intellectual functioning, as opposed to assessment with a specific focus on the academic domain or sensory and motor functions, which tends to be relatively straightforward. From a global perspective, an issue that has implications for assessment is the extent to which intellectual disability may be amenable to universal definition, and also as a specific condition identifiable in various contexts or cultures. There are some indications that such agreement is possible at a general level. This has been demonstrated in the use of the term *mental retardation* to refer to the condition also known as intellectual disability.

The first indication has been in identification. This has mostly been from epidemiological studies. In medicine, such studies are concerned with the incidence and distribution of diseases and other factors related to health. It has been generally accepted that so-called mental retardation represents intellectual functioning that is significantly below average. One’s score on an intelligence test often establishes such functioning. Epidemiological studies on siblings of children with IQs below 75, and also of various social class backgrounds, have been conducted to document the distribution patterns of intelligence test scores. Such studies appear to suggest that the most severe impairments of intellectual functioning reflect a distinct pattern of causation that is probably of an organic nature (WHO, 1985). In addition, Piagetian research that has a bearing on the universality of intellectual functioning has shown developmental patterns of the sensory-motor stage to be more closely followed in various cultures than patterns of later stages. Serpell (1988), for example, observed that at the earlier stages of development (i.e., the sensory-motor stage), major environmental demands on a child’s cognitive functioning show a higher level of generalizability across cultures than the more subtle demands
that feature at later stages. This probably has a lot to do with the earlier functions having more of a biological basis than the later functions that may have greater influences of social experience and learning.

The second general agreement has been in definitions put forward by international bodies such as the World Health Organization (WHO), the International Association for the Scientific Study of Mental Deficiency (IASSMD), and the International League of Societies for Persons with Mental Handicap (ILSMH, now Inclusion International). Such definitions include “marked impairment in the ability of the individual to adapt to the daily demands of the social environment” (WHO, 1985, p. 8; see also WHO, 1993). This inclusion places the criterion of intellectual disability within the social context, especially the cultural context of the child’s society. Thus, it allows for variation reflecting the values and expectations of the child’s local culture. At the same time, adaptability-in-context is a key element in a definition of intellectual disability applicable to most cultures.

Serpell (1988) concluded, on the basis of the above observations, that a child designated as having severe intellectual disability “may turn out to have certain common features irrespective of the definition of intelligence prevailing in his or her home’s culture: organic impairment, significantly delayed attainment of certain transculturally early milestones of child development and a locally recognised failure to adapt to the local norms of social behaviour” (p. 120). The question then is as to what emphasis is put by assessors on the largely common features of functioning relative to more culturally variable criteria. Serpell and his colleagues addressed this question in a study of the criteria used by professional review teams to determine severe intellectual disability in nine third world countries. Their findings indicated some general consensus on five domains of functioning (Serpell, 1988). These domains included the following: (1) Social habits and skills; (2) Self-help/self-maintenance habits and skills; (3) Rate of learning/understanding new tasks; (4) Communication habits and skills; and (5) Physical coordination.

These domains represent aspects of functioning that have also been areas of focus in western assessment procedures (Luckasson, Coulter, Polloway, Reiss, Schalock et al., 1992). Because they represent features of every society, they were deemed to constitute “cross-culturally universal domains for the psychological assessment of severe intellectual handicap” (Serpell, 1983):

1. **Social habits and skills**—Every society has certain forms of interaction which a child of a particular age is expected to follow. It is therefore possible to specify objectively which behaviors are socially deviant and displayed by children with severe intellectual disability.
2. **Self-help/self-maintenance habits and skills**—Every society expects children of a given age-range to perform a number of routine functions for themselves in respect of such things as hygiene, feeding, and dressing. Inability to perform such functions may thus signal some difficulty.

3. **Rate of learning/understanding new tasks**—It is also common for societies to expect children to begin to learn some more specialized skills that may ultimately be linked to economic activities. This therefore is another function that may signal the presence or absence of intellectual difficulty.

4. **Communication habits and skills**—These are psychological functions that play an important role in determining a child’s adaptation to the demands of social interaction and learning new tasks. Assessment of this domain generally focuses on the extent to which a child has mastered language, in speech or comprehension.

5. **Physical coordination**—a rather broad psychological and physiological function especially often impaired in children with severe intellectual disability.

While there might be some consensus on each of these domains, the particular form and specific behaviors involved differ from one culture to another. Because the manifestation of intellectual disability within a domain may differ from one context to another, this has implications for assessment and the planning and execution of activities aimed at reducing the impact of disability.

Thus, education in many parts of the world is best considered in the widest sense of the term, for which assessment needs to focus on a range of domains of psychological functioning. The need to accurately identify the target children has led to concerns with assessment methods, and especially with the extent to which the disabling condition may be amenable to universal definition. Areas of general consensus across contexts and cultures include functioning significantly below average and patterns that may have a biological basis. There is also a general consensus in placing the criterion of disability within the sociocultural context of the developing child. Intervention efforts as related to special education are therefore best seen as aimed at enhancing a child’s functioning in each of these domains. A significant aspect of such efforts is the context in which intervention occurs.

### THE CONTEXT FOR EDUCATION

The links between social ecological factors and learning difficulties have been recognized for some time (Empson & Nabuzoka, 2004).
Such recognition led to a series of major government-led projects in the 1970s, in particular Project Headstart in the United States (Weisberg, 1992) and the Educational Priority Areas projects in the United Kingdom. Strong links have specifically been shown to exist between social disadvantage and various types of learning and behavioral difficulties in school. For example, Maxwell (1994) found strong correlation between social disadvantage and disabilities in the intellectual/cognitive, physical, and sensory domains for pupils in various secondary schools of a British city. Studies such as this suggest the need to examine individual, familial, and community factors in the assessment of needs for children with LD (Lynn, Hampson, & Magee, 1983; Rutter, 1989). Intervention strategies that are designed would then be informed of the strengths and risk factors at various levels of a given child’s environmental systems.

In recent decades with the increased attention to the contribution of social factors to the development of children with LD, the role of the context in which education is provided has come into focus. As the environment in which children spend most time, the school setting has been the focus of most studies, and within the school setting, the type of placement for individual children has also been examined (Hocutt, 1996). Here debate has focused on whether the needs of children with disabilities are best served in inclusive mainstream schools or specialized schools. While there has been a similar debate in parts of the world where special education provision is not widely accessible through schools, in such countries provision in the community has been seen as an alternative and even supplementary approach to school efforts. In this section, issues related to the debate surrounding the merits of inclusive versus specialized schools are first discussed. The theoretical basis and rationale for promoting each setting are first discussed followed by a brief overview of the evidence for their efficacy. Then related issues pertaining to community involvement are discussed at some length. This is focused on the special education efforts in the context of some developing countries, identifying parallels and similarities of concerns with those in industrialized countries.

**Education in the School Context**

There is a general acceptance that the extent to which the school setting may stimulate the social cognitive development of children with LD is largely mediated by its social ecology. In most cases the design of the social environment in schools is a policy issue. In Great Britain, for example, Education Acts in 1981 made provision for integration of children with special needs (including LD) into mainstream schools in England
and Wales, and also in Scotland (Morris, Watt, & Wheatley, 1995). Various models of provision have since been implemented. These range from partial integration, whereby a special unit is set up in a mainstream school, to full integration under which children with LD attend the same classes as their non-LD peers. From a social learning theory perspective, such contexts offer different levels of opportunities for children with LD to acquire so-called appropriate social skills through observation of others. At the level of policy formulation and its implementation, provision for children with LD can be said to reflect society’s conceptualization of presenting problems (Acton, 1982).

According to Clements (1987), the most common response to individuals with disabilities has been to regard them as a homogeneous population, encouraging the formation of general social models to “mediate the interpretation of presenting phenomena and provide some kind of philosophical framework to guide and rationalise society’s response” (p. 2). These models have included sociological, medical, and educational types, each of which has been predominant at various times in history. For example, one vein of the sociological model that grew up in the 1960s regarded people with intellectual disability as a deprived minority group for whom service provision and resource allocation were a human right to which they needed a fair share. Medical models regard intellectual disability as another illness needing professional treatment in a health context. Educational models, on the other hand, view intellectual disability from the functional perspective of learning and emphasize the need for services to be provided within an educational context, rather than a health one.

Over the years a characteristic shift in dominant models involved the medical model being replaced by an educational model linked to a human rights and sociological approach. This shift resulted in some rapid moves toward increased care and integration, and increased control of services by education and social welfare agencies rather than health agencies (Clements, 1987). The predominant social model has, to some extent, influenced the psychology of disability—exemplified in the shifting of educational policy in the United Kingdom, the United States and other parts of the world toward more inclusive placements of children with disabilities in the ordinary classroom (or at least the ordinary school). Such placements gained momentum in the late 1980s going into the 1990s. The terminology widely used then was integration in the United Kingdom and Europe or mainstreaming in the United States and other parts of the world.

Arguments in favor of inclusive education were put forward based on apparent benefits in social functioning and adjustment. In the social
domain, these have focused on opportunities that inclusive settings offer children with LD including the following (Nabuzoka, 2000):

- more appropriate interactions and increased self initiations in social situations;
- the development of more complex language and communication skills; and
- decreased inappropriate play.

Thus, children with LD in an inclusive setting can acquire social skills and age-appropriate behaviors through observational learning from normally developing peers, and such contexts offer opportunities for generalization of those skills. These benefits have also been cited by parents of children with disabilities who consider inclusive programs to be more stimulating (Guralnick, 1990) and offering more positive social outcomes than segregated ones. It has also been argued that inclusive schools reduce the stigma of a segregated setting and increases the level of acceptance of children with LD by their non-LD peers. Non-LD children may not only help identify age-appropriate valid activities but also develop increased understanding of, sensitivity to, and tolerance for individual differences. In this way, non-LD children would develop and display favorable attitudes toward peers with LD, as a result of direct contact with these children.

Analysts such as Stobart (1986), pointed out that though the outcomes of such policies were couched in psychological terminology, the justification for integration was based on appeals for social justice rather than on specific psychological or even educational grounds. According to Stobart, “psychological theories have been conscripted to handle the psychological implications of this policy, which are usually construed as social, rather than academic benefits” (p. 1).

Alternative views for segregation include the argument that some children with LD may need protection from the pressures of social demands that obtain in inclusive settings. The strains of these pressures might inhibit the development or display of social skills the inclusive setting is purported to promote. One particular argument was that children with LD (and indeed other types of disabilities as well) could suffer as they could be rejected by mainstream peers. Such rejection, it was argued, is likely to arise from exposure of non-LD children to so-called negative behavioral characteristics of children with LD, thus increasing the social isolation of the latter (Gottlieb, 1981). Children with LD in mainstream settings would in this way have their self-confidence eroded and be subjected to greater anxiety.

Whatever the arguments, post-1980s saw rapid developments toward inclusive education. Evaluations of the benefits of inclusive compared to
specialized schools have been rather mixed depending on the focus (Nabuzoka, 2000). Research has generally shown inclusive settings to be more beneficial than segregated settings for children with LD in terms of social and behavioral outcomes, and gains in social cognitive functioning. Such benefits may, however, not be of sufficient magnitude for the development of positive social relations for these children.

Social outcomes in terms of patterns of interaction, social networks, and acceptance appear to be only somewhat more positive for children with severe disabilities and not for those with mild to moderate disabilities. The differential effects of inclusion appear to be more marked in older than younger children, while gender may also be a factor. In addition, the degree of exposure or contact between children with LD and non-LD children seems to be significant in the social acceptance of children with LD. One outcome of lack of peer acceptance and the resultant social isolation is the increased risk of being bullied and victimized by peers. Children with LD appear particularly vulnerable in this regard. These and other difficulties related to peer acceptance constitute adjustment problems generally faced by these children in mainstream settings. The problems may be manifested in loneliness, unhappiness, and negative school attitudes, perceptions, and feelings. Functional limitations and problems in social relations, which may be highlighted in inclusive settings, may also undermine self-esteem as well as the emotional adjustment of children with LD. It has been argued that such adjustment problems need to be weighed against the benefits of inclusion.

Education in the Community

Resource and material allocations have influenced what context should be provided for education of children with disabilities. For example, the special school commands more highly specialized resources of a material and human nature than an inclusive mainstream setting. It could therefore be argued that inclusive education seems to offer a cheaper option for policy makers. In most developing countries, notably on the African continent, the issue of resource availability has had a more direct influence on the nature of special education provision available. Most countries on the African continent have significantly underdeveloped material and human resource capacities for provision of quality education for their citizens. This has resulted in the learning needs of many children being either unrecognized or unmet. Those with disabilities have been seen to have experienced the most significant levels of neglect, marginalization (Avoke, 2001; Eleweke, 1999), and disempowerment by national governments and the local schools (Mpofu, Peltzer, Shumba, Serpell, & Mogaji, 2005).
Special education provision in developing countries is best seen in the context of general service provision for individuals with disabilities. In this sense, and in recognition of the scarcity of such services, the World Health Organization (WHO) in the 1980s advocated a strategy, known as Community-Based Rehabilitation (CBR), which was seen to be more cost-effective in meeting the needs of individuals with disabilities (Helander, Mendis, & Nelson, 1984). The CBR approach advocated for measures to be taken at community level in addressing the needs of individuals with disabilities. The education of children with disabilities was seen, within this approach, as involving collaborative efforts between the local school and the community (Nabuzoka, 1991). Education was defined in a broad sense to include the acquisition of skills in various domains of functioning (Serpell, 1988), with lay people (e.g., family members, volunteers, school teachers, and community leaders, etc.) being agents of such education.

CBR was presented as an alternative or complementary approach to efforts of specialized institutions, such as special schools. In developing countries, such institutions were nonexistent or considered to be inadequate. The debate then was as to whether the needs of children with disabilities were best met in these communities (including local schools) rather than specialized centers such as special schools. Experiences with CBR, and the evaluations and research studies carried out on various projects (Finkenflügel, 1993), generally support a complementary approach (Miles, 1985; Serpell, 1986). The majority of efforts at the implementation of the CBR approach have been from the Sub-Saharan African region, followed by the South Asia and East Asia regions and only a few reports from South American countries (Finkenflügel, 2004).

The overall concept and effectiveness of CBR has been questioned over the period of nearly three decades since being introduced (Miles, 2004). In particular, problems have been identified in soliciting the participation of lay people in various communities to be agents for the education of children with disabilities (Nabuzoka, 1993). However, in terms of the overall provision of some services for such children, the approach has been positively regarded as offering hope and possibilities for children with disabilities and their families where there might have been little chance of any service at all (Finkenflügel, 2004; Nabuzoka, 1991).

INTERVENTION STRATEGIES

While there has been some debate about the most optimal context for provision of education services to children with disabilities, other concerns have focused on what skills or capabilities need to be developed in these children and the ways in which this can be achieved. Intervention strategies
have therefore been developed in response to such concerns. In the social domain, for example, efforts would be directed at equipping children with skills that enhance their social adjustment. Thus, if problems faced by children with LD are associated with inappropriate behavioral dispositions, intervention could appropriately be focused on changing the children’s behaviors. Where the children are characterized by low levels of interaction patterns, efforts can be made to increase their ability to initiate interactions and to promote social responsiveness. Similarly, training in social perceptual and cognitive skills can enhance understanding of children with LD, leading to more appropriate behavioral responses and, subsequently, more positive social and academic outcomes. The issues to be discussed in this section relate to such approaches and the problems associated with demonstrating the efficacy of these and a number of similar intervention efforts.

**Intervention to Enhance Social Functioning in Schools**

There have been various intervention strategies, based on research involving typically developing children, used to promote social interaction of children with disabilities in inclusive settings (Odom & Brown, 1993). These have included so-called teacher-mediation involving direct teacher (or support worker) modeling and reinforcement of social play. In this approach the teacher or support worker interacts with children with LD in ways designed to increase positive behaviors with peers. However, there have been some indications that involvement of adults in this manner could impede child-to-child interactions (Lewis, 1995). Another approach is so-called peer-mediation, whereby normally developing (non-LD) children are trained to interact positively with children with LD. In studies where this approach has been used, levels of social interaction of children with LD have been observed to improve (Hundert & Houghton, 1992; Sainato, Goldstein, & Strain, 1992). In both these approaches, however, there have been some problems with maintenance over time and with generalization of the observed improvements across settings.

A more effective approach involving peer mediation places the focus mainly on the normally developing peers as agents of behavior change (Odom & Brown, 1993; Odom & Strain, 1984; Strain & Odom, 1986). These peers would usually be trained in some operant techniques such as prompting and reinforcement, and are themselves prompted and reinforced for their performance with the children with disabilities. Despite the initial effects of peer-mediated approaches, however, these approaches have often shown limited generalization and maintenance effects across situations and time (Odom & Strain, 1984; Odom, Hoyson, Jamieson, & Strain, 1985). A review by Mathur and Rutherford (1991) identified subtypes of peer-mediated treatment. They concluded that these approaches
demonstrate success in producing immediate, positive treatment effects, and that these effects may be generalizable. They pointed out, however, that systematic programming was required to produce lasting results.

There are a number of possible explanations for the lack of maintenance of intervention effects. One is that studies have tended to be carried out within periods of time that were too short for any lasting relationships to develop between children. Children with LD spend too little time with their non-LD peers—during playtime—and may demonstrate a newcomer pattern of shy, withdrawn behavior. Another problem has been that the differentiation between peer- and teacher-mediated interventions can at times be unclear. Mathur and Rutherford (1991) pointed out, for example, that despite labeling of interventions as peer-mediated, teachers or support workers would still be in control in most cases. A more distinctive feature would therefore be a situation where children with LD interacted with non-LD peers in the absence of adults.

Another reason for lack of maintenance of intervention effects could be the intensity of peer-mediated interventions. Most studies do not describe the intensity of the interventions, but one might assume that this is likely to be high bearing in mind the observed effects and relatively short times in which they are attained. It has also been suggested that there may be “fatigue effects” causing the lack of maintenance (Odom & Strain, 1984). It has also been pointed out that applying interventions of high intensity within clearly defined time intervals or situations could also lead to the participants learning to discriminate between situations where target behaviors are to be performed and those where they should not. This would be contrary to the goal of obtaining generalized and durable interaction. A more desirable approach would be to conduct intervention studies over much longer periods, with long baselines applied initially to allow familiarization among the children.

A study by Rønning and Nabuzoka (1993) demonstrates the differential effects of social skills training alone, social skills training with teacher prompts, and the use of non-LD peers as agents of social interactions (so-called special friends). In that study, each of these measures led to improved positive social interaction by children with LD, which in turn was associated with enhanced status among non-LD peers. Comparatively, teacher involvement in training and prompting of social interactions appeared to lead to greater increases in such behavior than did social skills training alone. There were also indications that the gain resulting from such measures could be generalized to other situations, although some doubts remained about the lasting effects of applying teacher prompts as a way of promoting social interaction. The peer-mediated special-friends approach, on the other hand, seemed effective in both increasing the social interaction of children with LD and non-LD peers.
and in the generalization and maintenance of such increases in interaction. In this approach, non-LD children acted as trainers for children with LD, enabling them to become more efficient partners in play. They took on the role of initiating and prompting general play behaviors of children with LD, but did not engage in the training of specific elements of social skills such as basic verbal and nonverbal skills. It would appear that some incidental learning of such skills occurs as a consequence of these efforts. This point, however, needs to be verified by more focused research.

The acquisition of specific components of social skills, as a direct result of teacher- or peer-mediated approaches, can be inferred through patterns of behavior that result from these interventions. Such skills may be demonstrated in the way children with LD become responsive to their social surroundings. One feature of increases in positive social interaction of children with LD, and resulting from peer-mediated approaches, has been that initiations for such interaction tend to be from non-LD peers. The gains for children with LD, from a functional point of view, are that they exhibit some increased capacity to respond appropriately and thereby sustain interaction with peers. This latter aspect not only suggests improved responsiveness but also reflects greater social understanding. As for taking the initiative, a number of studies have indicated that training children with disabilities to initiate interaction does not often lead to generalized or durable changes (e.g., James & Egel, 1986). As discussed earlier, behavioral skills developed solely through intensified efforts of teachers or support workers often have problems of maintenance. However, peer-mediated approaches can also suffer from a failure to encourage children with LD to initiate social interaction.

The issue of concern is really whether children with LD can benefit from such interventions unless they are proactive. What may appear to be a general lack of initiative by children with LD may in fact reflect a lack of opportunity to exhibit skills acquired for social interaction. There is some evidence that children with LD can repeat linguistic skills learned from non-LD peers in appropriate contexts on different occasions, even where interaction in the mainstream context may have been didactic (Lewis, 1995). Such evidence has, however, largely been anecdotal and there are also some suggestions that effects of this nature may strongly depend on the cognitive levels of the children with LD (Howlin, 1994). More controlled research designs are needed.

In all, a number of individualized intervention strategies have been tried with varying degrees of success. In the social domain, these include training specific social skills in the areas in which children with disabilities are perceived to have deficits. Others involve some training combined
with increased opportunities for social interaction, including teacher-mediated and peer-mediated approaches. Both of these approaches have been shown to produce initial positive effects, but results have been equivocal on generalization and maintenance over time. Some evidence indicates that peer-mediated approaches are more promising if conducted in the context of natural peer group activities and over longer periods than just a few weeks.

However, there have been some suggestions that highly variable outcomes of social skills training programs for children with special needs may result from poor matching of treatment to needs (Gresham, Sugai, & Horner, 2001). It has been argued that the problem may be that social skills training programs have been based primarily on research with mainstream populations. In contrast, a number of studies have suggested that the social skills important for positive social adjustment, such as peer acceptance, may be different for children with special educational needs such as LD (Frederickson & Furnham, 2004). Specifically, there are some indications that different behaviors might be associated with peer rejection in inclusive mainstream schools for children with LD than for mainstream pupils (Frederickson & Furnham, 2004; Nabuzoka & Smith, 1993; Roberts & Zubrick, 1992). For example, Frederickson and Furnham (2004) found that more rejected British children with LD could be classified as internalizing than externalizing in contrast to a high proportion of externalizing rejected children (with none internalizing) in the sample of mainstream children. Roberts and Zubrick (1992) found that, amongst Australian pupils, sociometric rejection was predicted by peer perceptions of both academic and disruptive behavior for mainstream children. However, for children with LD only peer perceptions of disruption were related to sociometric rejection. Nabuzoka and Smith (1993) similarly reported a number of differences between peer-assessed behaviors associated with sociometric status for British children with LD and their mainstream classmates.

Frederickson and Furnham (2004) suggested that a better understanding of processes underlying the relationships between peer perceptions of special needs status, pupil behavior, and social acceptance was important in designing more effective interventions to improve the social adjustment of children with LD. Their conclusion was that social acceptance and inclusion of children with LD depends as much on mainstream peer expectations and attitudes toward their behavior as on the nature of the manifest behavior. This indicates a need for a change of focus regarding both the content and delivery of intervention programs. In particular, such programs need to address both the behavior of children with LD and the attitudes and expectation of their peers.
Interventions in the Home Community

The potential of the school setting to stimulate a child’s cognitive development has in the past been contrasted with that of the home environment. The focus on the home setting led to consideration of parents as agents for such stimulation. Research evidence indicated the significant role that parents play in children’s development. For example, a study by Tizard and Hughes (1984) examined the relative impact of young children’s interactions with adults at home compared to that in the preschool setting. They compared children’s conversations with their mothers at home to that with teachers at school, and found that the former were richer and had more depth and variety than the latter. Similar findings were also reported in other studies (Clarke-Stewart & Fein, 1983). On the other hand, teachers have been found to differ from parents in using language that is more often complex, in asking questions, and in providing more direct teaching (Tizard, 1985). In all, studies suggest that the home setting may provide a much more realistic stimulation of the children’s language abilities.

Such findings have a number of implications for children with learning disabilities. For example, they suggest that assessments made solely in the context of the school may underestimate capabilities of children categorized as being at risk for developmental delays. It would appear that some skills possessed by children might be inhibited in that context but not in the home. In addition, these findings indicate that the home setting may be a much more effective context for intervention than it has been credited for. Related to this is the recognition of parents as agents for ameliorative programs. The role played by parents in the development and education of children has long been recognized. In the 1960s, empirical studies focused on developing effective strategies for parents to utilize in educating and managing their children. Notable in the United States was the Portage approach developed in 1969 in Portage, Wisconsin, as an education service for preschool children with disabilities and their families. The approach was introduced to the United Kingdom in 1976 (HM Inspectorate, 1990). The model is based on a home visiting system with emphasis on parents as teachers of their own children (Boyd & Bluma, 1977). The parents are in turn helped by professionals to develop their own teaching skills (Boyd, Stauber, & Bluma, 1977).

In all, Portage projects have been positively evaluated both in the U.S. and U.K. sites where they were implemented (Boyd et al., 1977; HM Inspectorate, 1990). Such positive outcomes emphasize the importance of intervention and functioning in-context for children at risk for developmental or learning disabilities. One reason may be that the home context provides meaningful situations for exercising and application of relevant skills for the children. However, for such programs to succeed,
assessment of both the children’s functional limitations and the resource requirements of the various settings are necessary. The need for such an assessment has been demonstrated in the context of community-based rehabilitation (CBR) in less industrialized countries. This approach, similar to the Portage project, has used a model of parents and/or other caregivers as teachers of the children with disabilities.

The CBR approach, while a response to the scarcity of resources in less industrialized settings, has been seen as providing opportunities for children with special needs to learn relevant skills in-context. In addition, the strategy has been to try to pass on from the professionals to the children’s families and community the skills required for addressing the needs of such children within their homes. Experiences of this approach have been characterized by both positive outcomes in terms of service delivery where there might have been little or none, and also challenges in promoting the participation of caregivers who may be family or community members. In rural communities of less developed countries, such people would often be impoverished and overworked such that one of the main tasks is to get the child to command sufficient attention in the context of the many demands for survival (Nabuzoka, 1991).

**ISSUES IN APPLIED AND EVALUATIVE RESEARCH**

Applied and evaluative research involves the testing and appraisal of intervention strategies and approaches. Such research on children with disabilities raises a number of methodological issues. These relate to problems inherent in evaluating the efficacy of various forms of intervention approaches and service provision such as inclusive education in mainstream schools. To demonstrate the success of programs, one needs to show that children with LD have acquired the necessary skills and/or changes in behavior and, in some cases, also in their general well-being. Service provision and intervention strategies can be evaluated in terms of educational outcomes as well as the psychosocial functioning and adjustment of the target children. There is, however, a difficulty in reaching firm conclusions about whether what is observed are effects of service provision and intervention.

In examining various methods and approaches to the education of individuals with disabilities, one major problem has been that various studies have at times come up with different findings when apparently carrying out similar investigations. Sometimes the findings directly contradict those from other studies. An example of this is the evaluation of the benefits of inclusive education in which studies have examined the amount of positive behavior by children with LD, compared with non-LD
peers, in inclusive mainstream schools. Some studies have found no differences between the two groups of children while others have found children with LD to be involved in more positive behavior (Nabuzoka, 2000). Another example of equivocal findings is the amount of time spent by children with LD interacting with teachers compared with non-LD peers. Some studies have reported children with LD to interact more with teachers (Roberts, Pratt, & Leach, 1991), while others have reported less interaction (Mcintosh, Vaughn, Schumm, Haager, & Lee, 1993). A number of methodological problems possibly contribute to equivocal findings. For example, one factor related to outcomes for individuals in evaluative research may be characteristics of individuals included in samples of children chosen for study. Other factors are related more to the design of studies aimed at evaluating the type of provision and its impact. These factors will be considered in turn.

Characteristics of Individuals in Study Samples

Some of the issues and methodological problems specifically related to applied research include evaluation of the efficacy of intervention approaches aimed at individual children. There has been variation across studies with regard to the nature and type of LD, age, gender, ethnicity and culture, and quality of social relations. This has at times confused and complicated the interpretation of research results, and precluded adequate cross-study comparisons. Various studies have sought to address the possible confounding effects of sample characteristics by controlling for them. For example, some studies have focused solely on boys or girls, a specific age group, or even type of LD. These studies do provide information, but unfortunately it has only limited generalizability. In addition, while children do generally interact in groups in terms of gender, age, and possibly ethnicity, intergroup interactions undoubtedly occur. The latter have implications for outcomes in functioning and adjustment of children with LD. For example, children with LD have been observed to interact more positively with younger but not same-age children (Bryan & Perlmutter, 1979).

The nature and type of disability is a significant factor in that some descriptions of characteristics associated with problems faced by children with LD have identified subtypes of disabilities. For example, Rourke (1989) suggested two primary types: the nonverbal LD syndrome and the verbal (phonological) LD syndrome. Those with nonverbal LD are said to have poor overall social adaptation (due to social problem-solving deficits and difficulties identifying nonverbal communications) whereas those with verbal LD may not. The implications are that a lack of differentiation on this dimension is likely to lead to equivocal findings on
measures of social adaptation. While some studies have sought to clarify the relative significance of verbal versus nonverbal LD on measures of social functioning, this distinction is not always made.

The age of the subjects is another important factor. For example, research has long indicated that, although children with LD may not function at similar levels as non-LD peers of the same chronological age, effects of age differences amongst similarly diagnosed LD children can be expected (e.g., Gerber & Zinkgraf, 1982). There are also some indications that the nature and severity of social problems may differ according to age. For example, it has been suggested that social emotional development of students with LD may be more impaired in adolescence and early adulthood than previously thought (Huntington & Bender, 1993). Research has also shown that deficits in social competence of students with LD are observable across the age range (Calhoun & Beattie, 1987; Sater & French, 1989). However, some of these deficits may become more acute during the preadolescent years (Mellard & Hazel, 1992), corresponding with the increasing significance of the peer group. While a number of studies have attempted to include a developmental dimension to their studies, there is still a need to incorporate this variable in many studies. In particular, there is a need for more longitudinal studies to document the developmental progression of functional and social emotional difficulties faced by individuals with LD. Such studies could follow individuals from the preschool age through middle childhood and into adolescence or even early adulthood.

Gender effects have been observed on several variables, sometimes even interacting with age. Studies on social perception have generally shown few gender differences. However, an interaction of age and gender has been observed, with younger females with LD displaying difficulty interpreting emotions while older males may be inaccurate though rapid interpreters (Holder & Kirkpatrick, 1991). Gender differences have also been observed on measures of social adjustment. Some studies on sociometric status, for example, have yielded findings indicating rejection to be particularly strong for girls with LD compared with boys with LD and non-LD girls (Kistner & Gatlin, 1989a, 1989b). There are also some suggestions that while children with LD tend to be victims of bullying significantly more than non-LD peers, girls with LD may particularly be at more risk than boys (Nabuzoka & Smith, 1993). With regard to attitudes toward peers with LD, research indicates that girls tend to have more positive attitudes than boys (Rothlisberg, Hill, & Damato, 1994; Townsend, Wilton, & Vakilirad, 1993). However, boys may develop more positive attitudes on exposure to peers with LD while attitudes of girls may remain essentially unchanged (Nabuzoka & Rønning, 1997).
These gender effects suggest that the social experiences of children with LD may vary between girls and boys. Gender differences in social functioning and adjustment have been recognized in many studies on children with LD. However, there appears to have been little effort in pursuing such differences as a specific line of inquiry. The tendency in most studies has been to focus solely on either boys or girls. Research is required, therefore, to focus more extensively on revealing the extent to which, and the manner in which, gender and LD status interact. Such research would more usefully inform the design of intervention strategies.

The ethnic characteristic of individuals studied is one variable that has received little attention in studies on the experiences of individuals with disabilities in educational settings. A number of studies have documented the disproportionate representation of ethnic minority children in LD classes, or as having conduct problems (Peagam, 1994). There are also some indications that race or ethnic minority status may be associated with the quality of interactions with others as reflected in some problems in peer relations (Gresham & Reschly, 1987; Kistner, Metzler, Gatlin, & Risi, 1993; Schwarzwald & Hoffman, 1993). For example, Gresham and Reschly (1987) examined sociometric differences between mainstreamed students with mild LD and non-LD Black and White students. They found differential patterns of acceptance between Black and White students with LD: White non-LD students had higher acceptance scores than Black non-LD students, but Black students with LD had higher acceptance scores than White students with LD. Gresham and Reschly suggested that the sample of White students with LD may have been more discrepant in terms of intellectual and academic performance than the Black sample related to same-race non-LD peers, and thus perceived more negatively. Another explanation was that there might be racial and cultural differences in how children react to mild LD in educational settings. What is clear from such findings, however, is that ethnic status may interact with LD in measures of psychosocial adjustment. Details of ethnic composition in samples as a specific variable to be examined are therefore important, especially for studies conducted in multiethnic contexts.

Another factor, related to gender and ethnicity, is the culture of the target children. Both gender and ethnicity can interact with culture to influence the psychosocial adjustment of individual children, as they both involve socialization. On the one hand, general cross-study comparisons regarding the functioning of children with disabilities from different cultures can provide useful information about the generalizability of the relationships between domains. For example, data from Zambia regarding effects of various intervention approaches on the social functioning
and adjustment of children with LD indicates the cross-cultural applicability of some intervention strategies (Rønning & Nabuzoka, 1993), and the effects of contact on attitudes toward children with LD (Favazza & Odom, 1997; Nabuzoka & Rønning, 1997). Such effects apparently apply to the various cultures studied. However, this may not necessarily mean that the specific modes of psychological adjustment are comparable across the different cultures.

An example of specific cultural variation is social perception. Studies have generally indicated that children from different cultures can differentiate basic expressions of emotions by the age of 3 years and that this ability increases with age (Borke, 1973; Markham & Wang, 1996). However, there have also been cultural differences in the degree to which children of similar age may understand emotions (Joshi & MacLean, 1994; Markham & Wang, 1996). These differences have been attributed to different socialization practices, so that children are likely to perform better on emotion recognition in cultures where emphasis is put on the development of such skills. Thus, it is likely that a child with LD and a certain level of social perceptual skills (e.g., recognition of emotions) may have greater problems functioning in one culture requiring a high level of such skills and not in another. Similarly, while a child’s apparently shy behavior may be associated with adjustment problems in Western culture, it may not necessarily be problematic in non-Western societies, especially with regard to interactions with adults (Harkness & Super, 1982). The point is that the definition of functional limitations in the social domain is likely to be culture-specific. In multicultural contexts and for children with LD, cultural variations may confound the social adjustment problems faced and also the subsequent impact on educational achievement. For researchers, failure to recognize cultural variability across samples can make comparisons of findings difficult.

While children with LD may generally experience difficulties in social relations more than non-LD children, not all children with LD have problematic social relationships. Some research has indicated, for example, that there is a subgroup of adolescents with LD who are not rejected socially, but are rated as very similar to students without disabilities (Sabornie, 1990). It is likely that the children with LD who do not have problems in social relations also interact more positively with peers. Inconsistencies across various studies as to the social conduct of children with LD in general could thus also be attributable to the varying status of LD children. This suggests that studies reporting on measures of psychosocial functioning of children with LD should indicate whether the samples included children who had problems in peer relations.
Evaluating the Type of Provision and Its Impact

One focus of applied research on service provision for children with disabilities has been on evaluating the effects of different types of educational provision on the functioning of such children. Some of the issues and methodological problems specifically related to applied research include evaluation of the impact of service design and provision. Inclusive educational provision is an example of a service design whose impact may not be easy to assess due to a number of methodological problems with research in this area. Farrell (1997) identified some of the main issues raised in the literature, and these have been further discussed by Nabuzoka (2000):

- a lack of control groups in designs;
- the range of difficulties faced by children with LD;
- the variety of provision and/or treatment; and
- the interests of researchers.

Control Groups

Research designs require control groups if so-called treatment effects are to be demonstrated. To demonstrate the effectiveness of inclusive education for children with LD, a matched group design should ideally be used. One group of children is placed in the mainstream regular school and another matched group is placed in a special school. A child in one group would be matched with another child in the other group on attributes likely to affect outcomes, such as age, gender, level of LD status, and so forth. Differences between the two groups can then be attributable to the type of provision experienced by the children.

However, such matched control group designs are virtually impossible, as there are ethical issues involved in allocating different provision to similar children solely for the purpose of research. In addition, it is difficult to match children with LD in such a way as to be certain that any two groups have the same relevant characteristics.

Range of Difficulties

Difficulties faced by children vary so much that generalizing from one study to another is difficult. If one is to compare studies, it is necessary to be absolutely sure that they were conducted on similar children. This problem is compounded by the fact that studies from different countries may use varying terminology to refer to similar groups. Lewis (1995) pointed out, for example, that children designated as having “severe learning difficulties” in the United Kingdom may be referred to as having “moderate
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intellectual disabilities” in Australia and New Zealand, or “moderate to severe mental retardation” in the United States. Even then, Lewis pointed out, it is not clear whether such categories represent similar groups.

Variety of Provision

It is not always easy to judge whether groups of children experienced similar or entirely different forms of service provision or intervention. In the United Kingdom, different levels of inclusive education exist both across and within education authorities. At the very minimum, a special unit may be placed in a mainstream school with children who have LD having opportunities to interact with non-LD children at playtime or at lunchtime. Another type of inclusive setting involves children with LD attending some classes with their non-LD peers but being withdrawn to a resource facility for other lessons. Sometimes terms such as functional integration or social integration have been used to distinguish situations where both groups of children take academic lessons together from situations where they come together only at playtime or lunchtime.

A third type of inclusive education involves children with disabilities taking part in all mainstream activities, both academic and social, and this has been referred to as full inclusion. In most cases this also requires a resource teacher or support worker being available to provide academic support to those with LD. This can have an effect on the success of inclusive education for children with LD. It has been suggested, for example, that staff can facilitate the development of friendships between children with disabilities and mainstream peers by setting up conditions that encourage interactions (Hegarty, 1987). On the other hand, and as observed by Lynas (1986), the amount of attention paid to children with LD by staff can be a source of resentment for non-LD peers. Therefore, research that evaluates and compares the efficacy of inclusive settings needs to consider the skills and sensitivity of the support staff, as well as that of regular teachers.

Objectivity of Evaluative Research

Evaluative research can suffer from a lack of objectivity especially when conducted and reported by those involved in the application of the service provision or intervention scheme. This is likely to be the case when the researchers have also been involved in the design of the scheme. It is then possible that the researchers might have a vested interest in showing that the scheme or type of service provision in question is effective. Thus, the only results that may be reported are those supportive of the preconceived views of the researchers. This problem is exacerbated by the
reluctance of a significant number of journals to report so-called negative results. Vested interests are difficult to verify. However, to eliminate suspicion of any such possibility, studies are now generally required to report not only more detailed accounts of data gathering procedures and measures but also any steps taken to avoid bias.

**SUMMARY AND CONCLUSIONS**

The provision of educational services for individuals with disabilities has been characterized by various concerns at particular points in time, and in different parts of the world. Priorities have differed accordingly, especially those of third world compared to industrialized settings. However, most of the concerns have largely focused on efforts aimed at understanding the characteristics of individuals with disabilities that have implications for their education, including the social and cognitive processes involved; the efficacy of various methods of teaching; and the contexts which promote the optimal functioning of such individuals. The term *special education* has been used to refer to services provided to reflect such concerns. While some significant strides have been made in understanding the needs of individuals with disabilities and in the provision of special education, various issues have arisen and attained prominence at particular times in the history of special education. The issues discussed in this chapter, drawn mostly from concerns in the United Kingdom and United States reflecting experiences in the industrialized world, and also from some third world countries, indicate some world trends while also illustrating similarities and differences in concerns and priorities that have preoccupied professionals in different parts of the world.

One issue related to understanding the needs of those with disabilities has been the recognition that these needs may differ not only amongst individuals involved but also between the various types of disabilities. This has been reflected in the types of special education services provided in various parts of the world. However, a general concern with difficulties in academic and learning tasks has been one of the major areas of special education in many countries. Another development has been in understanding the nature of difficulties faced by children with disabilities. This has been illustrated in the recognition that problems faced by children with disabilities are not confined to the academic domain alone; they may also encounter problems in their social relationships, which may further impact on their academic functioning. Thus, the nature of the presenting difficulties has been examined by looking at the structure and functioning of cognitive processes as well as levels of psychosocial adjustment as factors associated with educational outcomes of the affected children. Social factors contribute to the academic functioning of children with
disabilities through the context in which education is provided. This has mostly focused on the school setting as an environment in which children spend most of their educational time. However, in parts of the world where special education provision is not widely accessible through schools, provision in the community has been presented as supplementary, if not an alternative, to school efforts.

The assessment and identification of children with disabilities, focused on both academic and general functioning of the affected children, is also related to definition and classification of the presenting difficulties and has implications for intervention strategies applied to address difficulties faced by those children identified. The various forms of educational provision and intervention strategies aimed at enhancing the functioning of the children, from the home community to school settings in both industrialized and the third world countries, present different challenges for applied and evaluative research in special education. Some of these have been identified in this chapter but arguably a number of issues still remain to be discussed in other forums.

REFERENCES


