The author discusses controversial issues in the field of learning disabilities (LD). Among topics addressed are conflicting definitions of LD and the impact of the operational definition accepted by the US Government; etiological questions concerning the separation of neurological, environmental, and emotional factors; approaches used in training teachers and clinicians; implications of mainstreaming for LD students; use of such special treatments as megavitamin therapy, special diets, and sensory integration; and the effects on children of social problems, including excessive noise levels, poor nutrition, and pollution.

(Author/CL)
CONTROVERSIAL ISSUES IN LEARNING DISABILITY

Presented at the Third Scientific Conference of the International Federation of Learning Disability

AUGUST 1975

Selma C. Sapir

Bank Street College of Education
We have made a great amount of progress in our field, "Learning Disability". It seems almost incredulous that just a few years ago, the work with learning disabled children was unknown. But as always, with progress and especially because of the speed with which this discipline has developed, we are confronted with a myriad of problems. Some of the problems seem to have persisted from its very inception and others evolve as we continue to expand and grow. I believe this is healthy.

To list just a few some of the controversial issues are as follows:

1. Definitions of Learning Disability
2. The Implication of the Operational Definition accepted by the US Government and HEW
3. Etiological Questions: Separation of neurological, emotional and Environmental factors
4. Training Models for Teachers and Clinicians: Should they be behavioral, developmental-interactional, psychoanalytic etc.
5. Educational Principles for the Children: should they be diagnostic-prescriptive, clinical teaching etc.
6. The implications of Mainstreaming These Children-- which children and under what organizational plans?
7. Controversy of special treatments
   Value of Drugs, Megavitamin Therapy, Special Nutritional Diets, elimination of Food Additives, Sensory Integration, Laterality Manipulation, Acceleration of Brain Function, etc.

I shall try to discuss each of these issues:
The concept of "brain damage" first began to make an impact on the educational scene with the work of Alfred Strauss, Laura Lehtinen and Newell Kephart with brain damaged children. The "brain damaged" era began slowly with the publishing of Strauss and Lehtinen's book in 1947 and did not emerge full blown until the early 1960's. In the late 50's and early 60's many research physicians became interested in a population in whom they could not distinguish "frank brain damage" symptoms, and research was begun on a large scale in this field. A few are as follows: Dr. Birch Development( ), Dr. John Money at John Hopkins became interested in "Dyslexia", Dr. Archie Silver at New York University Medical Center began his studies of children with perceptual and reading problems. In 1962 I first began my research (Sapir & Wilson, 1957) in a normal public school setting in Scarsdale, New York. Working as psychologists, we had become aware of increasing numbers of children with uneven and deviant cognitive, social and emotional growth patterns. Early identification screening (Sapir Development Scale, 1967) highlighted profiles of youngsters of normal to superior intelligence with gross imbalance of developmental milestones (Sapir & Wilson, Developmental Deficits, ). Boys seemed to have many more difficulties than girls (Sapir & Wilson, Sex Differences, 1966).

As this body of research developed, many disciplines began to coalesce in the emergence of a significant educational concept.

At the same time that this professional interest was emerging, parents began to exert their efforts to develop educational programs that would be suitable for children having severe problems in school. Confusion and controversy began to grip the field because many parents who had previously had children diagnosed as autistic, mentally retarded, brain damaged, dyslexic, et cetera, flocked to the newly formed "Association for Children with Learning Disabilities". To attend some of the early national meetings was both an exciting new adventure and an experience in con
fusion, as one met professionals from all disciplines and parents describing children along the continuum from those children who appeared normal in most ways and had some reading problems to those profoundly disabled. This seemed like a healthy beginning to a new era that might eliminate compartmentalization and fragmentation. Here was the first attempt to integrate the discipline of education, medical and behavioral science, but differentiation of purpose and goals for vastly different populations was absolutely necessary.

Out of this vastly diverse field came the necessity to define and make some arbitrary differentiation between the children, all of whom were now called "Learning disability", "minimal brain dysfunction", and about fifty other arbitrary labels. Kass (1969) tells us: "The responsibility for the definition of a word lies with the labeler. I believe it is safe to say that in no other area of special education has so much effort and controversy gone into the refinement of a definition which would characterize those children within the responsibility of special education and require special methods and techniques..." She (Kass) continues to list five such definitions in the chronological order in which they appeared. In 1967, Kirk stated that: "Learning disability referred to a retardation, disorder or delayed development in one or more of the processes of speech, language, reading, spelling, writing or arithmetic resulting from a possible cerebral dysfunction and/or emotional or behavioral disturbance and not from mental retardation, sensory deprivation or cultural or instructional factors." In 1966, a task force on terminology and identification of the child with "Minimal brain dysfunction" was co-sponsored by the National Society for Crippled Children and Adults, Inc., and the National Institute of Neurological Diseases and Blindness of the National Institutes of Health and defined it as follows:
"The term "minimal brain dysfunction syndrome" refers to children of near average, average or above average general intelligence with certain learning or behavioral disabilities ranging from mild to severe which are associated with deviations of function of the central nervous system. These deviations may manifest themselves by various combinations of impairment in perception, conceptualization, language, memory and control of attention, impulse or motor function. Similar symptoms may or may not complicate the problems of children with cerebral palsy, epilepsy, mental retardation, blindness or deafness".

In 1967, the national parent organization of the Association for Children with Learning Disabilities adopted the following definition: "A child with learning disability is one with adequate mental ability, sensory processes and emotional stability, who has a limited number of specific deficits in perceptual, integrative or expressive processes which severely impair learning efficiency. This includes children who have central nervous system dysfunction which is expressed primarily in impaired learning efficiency."

In 1967, there was offered a further clarification for the educator by the Institute for Advanced Study at a meeting held at Northwestern University planned collaboratively by The Institute for Language Development of Northwestern University and the Learning Disabilities Division of Training Program Bureau for Handicapped, US Office of Education as follows:

"A learning disability refers to one or more significant deficits in essential learning processes requiring special educational techniques for its remediation."

"Children with learning disability generally demonstrate a discrepancy between expected and actual achievement in one or more areas spoken, reading or written language, arithmetic and spatial orientation."

"The learning disability referred to is not primarily the result of sensory, motor, intellectual or emotional handicap or lack of opportunity to learn."

"Deficits are to be defined in terms of accepted diagnostic procedures in education and psychology."

"Essential learning processes are those currently referred to in behavioral science as perception, integration and expression, either verbal or non-verbal."

"Special education techniques for remediation require educational planning based on the diagnostic procedures and findings."

"In 1968, the National Advisory Committee to the Bureau of Education for the Handicapped, Office of Education, provided the following definition and this is the current operative definition:"
"Children with specific learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, et cetera. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance or to environmental deprivations."

The discussion continued to no avail, and in January 1975, at the International Federation of Learning Disability Conference in Brussels, an advisory committee was formed to establish a definition that would help formulate goals for the field.

As definitions were so ill defined so were the descriptions of children with this problem. No learning disabled child is like another. Symptoms occur in clusters and they vary from child to child. Carter & Gold (1973) describe the clinical syndrome as variable and ones that change with age. They consider deviant behavior, learning disabilities, speech disorders and poor coordination the most common presenting complaints, along with the all pervasive disability in one or many of the cognitive functions.

Major clusters are described by Brutten, Richardson, and Mangel, (Something's Wrong with My Child?, 1973, Harcourt, Brace, Jovanovitch) as high activity levels, short attention span, hyperactivity, motor discoordination, perceptual disorder, problems in language and thought development, emotionally destroyed with low frustration tolerance and difficulties in relationships. Gardner (MED. Jason Aronsson Publ. 1973) lists primary signs as a lag in developmental milestones such as walking, talking, bowel training, counting, naming, et cetera, MARKED AND CONTINUOUS HYPERACTIVITY of an aimless quality, distractability with poor attention span, a coordination problem, perceptual problems, poor memory, impulsivity, poor or repetitive speech and difficulty forming concepts or abstractions and the child cannot appreciate age appropriate jokes.
The U.S. Department of Health, Education and Welfare in their "Terminology and Identification" in *Minimal Brain Dysfunction in Children* list ten characteristics most often cited. They are as follows: hyperactivity, perceptual-motor impairments, emotional lability, general coordination deficits, disorders of attention (short attention span, distractibility, perseveration), impulsivity, disorder of memory and thinking, specific learning disabilities in reading, arithmetic, writing and spelling, disorder of speech and hearing, neurological signs and electroencephalographic irregularities.

MBD is a mystifying handicap in many ways. It obviously encompasses a wide variety of problems. Just as there are children who fit into such characteristic patterns as have been described above, there are others who do not. Some are passive and withdrawn, some well coordinated, some who appear to have excellent emotional strengths and health in spite of their serious handicaps in language and/or reading, and those who are well motivated, struggling to succeed.

Probably the only acceptable description of the characteristics of the MBD child might be one that is specific unto that child; one that considers the child's temperamental and cognitive style, and his particular set of cluster syndromes. It is the number, degree of and deviation from the norm that is currently used as the determinant for the MBD label.

How many children are we talking about? No one quite knows and this also depends on the particular definition you use to define the problem. One thing most people agree about is that it seems to be the most common and pervasive problem prevalent in children at this time.

The bill for the Education of the Handicapped that has been passed by the Congress of the United States accepts the before mentioned"Clements" definition, the one adopted in 1968 after its recommendation by the National Advisory Committee to the Bureau of Education for the Handicapped. To repeat, it begins:

"Children with Specific Learning Disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language."

Although the definition may be workable, the problem emerges when we note that the
Congress of the United States placed a limitation in the bill that monies cannot be spent to accommodate more than 7% of the handicapped population to come within this "Learning Disability" designation. New York State's Education Department suggests a further limitation urging that monies not exceed 2 or 3% until such time as their can be further refinement of the definition and clarity of diagnosis. This then poses many important questions? Are we to eliminate the children with mild problems, even those with subtle problems, ones that still become crippling for them in this society? What is the relationship of the severity of the problem to the services that will be available? On the continuum of problem at which point are we able to clearly state (and do we want to do this?) this one will be called Learning Disability, this one Brain Damaged and this child Emotionally Disturbed?

Our second problem flows directly out of the problem of definition and diagnosis: the problem of determining etiology.

In the field of learning problems, different theories have enjoyed periods of popularity. The concept of learning disabilities originally developed around the notion of deficit brain functions. Lesions were thought to cause localized disorders and training could be offered for that deficit. Next historically, the concept of IQ and the measurement of intellect became prominent. It was thought that those children whose IQ's were below normal had trouble learning. Segregated classes for special education were then begun and still continue. Research has failed to show that the children fare any better in such classes and so the concept of mainstreaming emerges. The children who were not learning and yet had IQ's in the normal range or better were unconsidered "unmotivated" or thought to have "learning blocks." Now that the idea of a changing IQ rather than a static one has evolved, schools are emphasizing "specific learning disabilities," "perceptual deficits" and "minimal neurological dysfunction." The meaning of these terms has never been clarified. Further, the relationship between organic and personality disorders has been given little con.
Consideration in our changing schools.

There has been a growing trend in the past 10 years toward the identification and treatment of learning problems at a very early age - in the crib, nursery schools and kindergartens. Many say that there are more learning problems of a physiological and neurological nature than was previously thought. A task force of the U.S. Department of Health, Education and Welfare writing on *Minimal Brain Dysfunction in Children* suggests that this is, in part, due to advances in medical technology. As doctors prevent miscarriages, develop advanced methods of delivering babies, improve incubator design and use drugs to save lives, babies who may not have survived are saved, but new sets of problems are formed. These new problems may be compounded if proper medical care and nutrition are not available, as Joaquin Cravioto, Elsa R. DeLicardie and Herbert Birch have written in their ecological study on *Nutrition, Growth and Neurointegrative Development*.

If the school staff is biased toward "emotional disturbance" in its diagnoses, psychologists and social workers are added to the staff to do psychological testing, play therapy and parental counseling. As the emphasis has shifted, learning disability specialists have joined the staff and the "neurologically impaired" diagnosticians have talked of children with dyslexia and perceptual problems. Some schools assemble multidisciplinary teams of psychologists, social workers, remedial specialists, speech therapists, learning disability consultants and school nurses. In an effort to achieve interdisciplinary understanding they diagnose and discuss the case with the child's teacher. The team, in turn, may decide whether to send the child on to neurologists, psychiatrists, optometrists, ophthalmologists, speech pathologists or educational consultants for further diagnosis. The problems posed by this approach are great. How can all of this information be integrated so that a picture of the whole child emerges? How does one sort out the factors so as to be able to develop a program that will help the child grow socially, emotionally and academically?

I am dedicated to the premise that there is a body of literature on
normal development that needs to be related to the children with learning disorders. Important concepts about cognitive, social and emotional growth need to be considered. At a conference on "The Roots of Excellence" sponsored by the Bank Street College of Education, Barbara Biber stated that there is a very fundamental relation between learning and personality development. The two interact in what we speak of as a "circular process." According to Dr. Biber, mastery of symbol systems (letters, words, numbers), reasoning, judging, problem-solving, acquiring and organizing information and all such intellectual functions are fed by and feed into varied aspects of the personality—feelings about oneself, identity, potential for relatedness, autonomy, creativity and integration. The school has a special area of influence for healthy personality because it can contribute to the development of ego strength. How a child is taught affects his image of himself, which in turn influences what he will dare and care to learn. The challenge is to provide opportunities that will make the most of this circular growth process toward greater learning powers and inner strength.

Children are developing organisms constantly changing. Current approaches fragment the understanding and treatment of the child. They do not allow for treatment on all levels simultaneously—cognitively, emotionally, experientially. The tendency is to do visual perceptual training in one place with one person, reading instruction with another, language training with a third and psychotherapy detached from the learning environment with a fourth. We do not believe it is possible to isolate learning problems from every other aspect of the growing child. The separation of diagnosis from treatment and the isolation of each area of remediation limit the possibility of helping the child. We suggest that what is needed are "child specialists" who understand therapeutic procedures within a framework of diagnostic teaching. The child specialist must understand the child's feelings as well as his thinking processes and also how to analyze a cognitive task, determine a child's learning style and relate it to the child's personality and temperament.

Large numbers of children are having difficulty in school and at home because of
neurological, psychosocial and environmental problems, all of which interfere with optimal learning. These problems are complex and have many origins. The growing, maturing child is especially responsive to the nature of the environment in which he lives. Where psychosocial and economic forces impair that environment, biological weaknesses are exaggerated.

Many modern social patterns of industrialization and family living are antithetical to optimal child growth and development. Young children need continuous opportunities to touch, explore and move in an environment which gives security, support and stimulation. Noise, lack of space and time, and family instability decrease opportunities for developmental experiences, and create tension and feelings of isolation for families on all socio-economic levels. Problems are compounded with poverty, ecological problems (air pollution, lead poisoning), minority-ethnic discrimination and migration patterns from rural communities to vast metropolitan regions. The relationship of poor nutrition to impaired development is well known. Birch said, "For poor children are not merely born into poverty, they are born of poverty, and are thus at risk of defective development even before their births."

Some children are born to this world with biological deficits which severely limit their functioning in life. The causes for biological deficits are complex and multidetermined. Constitutional genetic factors, insult to the central nervous system through trauma, encephalitis, anoxia, poor nutrition, and medical advances in saving high-risk babies, all contribute to the increase in number of children with learning difficulties. Where social and environmental forces prevent healthy interaction between the maturing child and his environment, biological weaknesses are maximized. Conversely, where social and environmental forces are supportive, they can permit the biological and emotional strengths to aid the learning of the child. The learning process is inextricably intertwined with personality development.

School is a child's life work. Unless the school and home support and create success, the child comes to perceive himself as a "retard" or "dummy" and thereby may give up or react with hostility and defiance. That is, failure to learn breeds a low self-
image which in turn inhibits the child from daring and caring to try again.

There is little doubt that children have differing constitutions, which are more or less sensitive to pain and stress. For the child who is more sensitive, the way the environment supports him may make the difference in his later cognitive as well as emotional development. The subsequent problems of children tend to be difficult to trace because of this chaining reaction in the nature of the developmentally changing organism and the changing attitudes in the child's relationship with the important mothering or nurturing persons make the tracing more difficult.

Pasamanick and Knobloch describe "reproductive casualty" as the chaining of such events as the mother's constitution, nutrition and adaptability; prenatal factors in health care and nutrition; and the important post-natal first year experience. Poor nutrition or health care may result in damage to the fetus or newborn infant, generally in the central nervous system. This chaining tends to occur more frequently in the lower socio-economic groups, producing children who are more susceptible to reproductive casualty. Pasamanick and Knobloch also emphasize that males are more likely than females to have problems: more are conceived and aborted; more have difficulty during birth; and more are damaged and lost in the first year of life. Pasamanick (1959) has suggested that the higher percentage of reading problems in the male as compared to the female (estimates range from 7 to 20% or more) may well be the result of this susceptibility. Genetic factors play an important role as evidenced by families in which all male members are affected with learning disorders. The relationship between minimal neurological instability and behavior variation is complicated. Although the terms "minimal brain dysfunction" and "specific learning disability" have been equated, there is little justification for the assumption that all learning disordered children demonstrate evidence of brain damage. There is, however, mounting evidence that signs of neurological instability are more common in children with learning disabilities than in a normal population and that minimal brain dysfunction does play a significant role as one factor contributing to the development of learn-
ing disability. Demonstrated examples are a significant increase in choreiform
3
3
3
3
3
twitches in children with specific learning disabilities (Wolff and Hurwitz) found that boys with learning disabilities were significantly retarded in sensory
motor tapping and automization tasks, both of which require competence in sequencing
repetitive actions.
Many well-documented studies have associated complications of pregnancy and birth
-especially premature- with later learning disabilities. Prenatal factors such as
hypoxia and anoxia are possible causes. Monkeys asphyxiated for 15 minutes after
birth reveal survival and normal functioning of behaviors (visual depth perception
visual placing, independent locomotion) but these functions were significantly de-
layed in their appearance. In contrast behaviors that were considered to be acquired
-memory, learning- remained severely impaired throughout life. Comparisons of be-
behavior of significance in children with minimal brain damage such as hyperactivity
incoordination, decreased attention span, impulsivity reveal striking similarities
to those observed in the asphyxiated monkeys.
Dr. Anne Marie Weil has stated that no matter at what age we see a child first, it
is helpful to try to reconstruct the interaction of forces that brought about the
clinical picture. In children with specific learning disabilities, we might speculate:
What was the original make up of the child? Where is the range of emotional endow-
ment, from very warm, outgoing, reachable to more withdrawn and introverted? What

4 Sechzer S.A., Forman D. & Windle W.F., "Studies for Monkeys Asphyxiated At Birth: Impli-
would this child have been without the organic dysfunction and/or if he had grown up in a different, better environment? And with such children there is a more specific question: How much have the inherent experiences of frustration and failure contributed and how much have environmental misunderstanding, pressure, disappointment, sometimes lack of structure contributed to the final clinical picture? Gardner makes a plea that we understand the brain-damaged child as a "battered hero of evolution" and regard with awe his continuing efforts to adapt in the face of staggering difficulties.

Robert L. Sutherland, Director of the Hogg Foundation for Mental Health, states:

"The baffling, subtle and amorphous quality of a learning disability in a child may prove frustrating to the youngster, aggravating to the teacher and guilt producing to the parent. Unrecognized it can enlarge into emotional disturbance in the young person. The child for whom there is no model of competence by which to measure himself may feel only that something is wrong...his teacher may be thrown off stride by his hyperactivity or failure to learn...the parents' gradual or sudden awareness of the difficulty may catch them off balance also."

A learning disability in a child has major significance because of the value our culture places on the acquisition of knowledge and skills and socialization with one's peer group. As there has been confusion in definition and description, so has there been in treatment and programming. It is only natural that as a new field emerges, much trial and error has to occur.

At first, programs for children with SLD adopted principles and prac-

---


tices used in work with the "brain damaged." For example, children were provided with special class placement and individual carrels for minimization of visual and auditory stimulation. Such special modifications proved ineffective because they did not help MBD children learn to organize their environment so that they could process stimulation comfortably. A movement in the field toward prescriptive or precision teaching brought with it a need for early identification procedures that could be translated into strengths and weaknesses in basic areas of functioning: motor and body, perception, language and thought.

As evidenced by this conference, we are now taking a new look at the child. We are beginning to understand that all the testing and prescriptions can only be as good as the interaction that occurs between two human beings - the clinician, parent, teacher and the child. This is not to say that we eliminate the skills of mediation (Dr. Gerald Getman), the knowledge of teaching strategies but more importantly it means we need first and above all to match the needs of the child to the needs of the adult. People relate to each other and are responsive and sensitive or are not. This is a fact of life and need not be considered a human failure.

Early screening and testing, another controversial issue, is not an answer. Testing is only as valuable as the observational tools are theoretical knowledge of the tester. One issue is the acceptance of and ability to pin point exactly where the child is developmentally and then prescribe adequately. The important notion is that there is a developing, maturing, branching system, constantly changing and in flux and responding differently in different situations and with different people.

A word needs to be said about methodology. Good practices are good for all children; it is just that they are even more important for some than for others. Speculative methods should be avoided. Fragmented methods which make
claims to enhance the child's academic function without any proof, should be avoided. Nutritional fads need to be researched before they can be accepted (Food Additives, High Protein diets, Megavitamins). Laterality manipulation as suggested by some that will change lateralization or dominance can be questioned. We know little enough about brain processes and we certainly have no proof that functions can be changed. Drugs continue to remain controversial. Physical education or motor training of a special kind may give some children better feelings of personal competence but will not help them learn to read. Multisensory education which proposes to help all children because it will touch on all bases may be very confusing for just the children who are not learning because it will bombard them with extraneous stimuli when they need a well structured and organized presentation of salient features cutting out all things irrelevant to that learning situation. Perceptual or visual training likewise may be helpful for some children with special needs but are inefficient and ineffective when used as a panacea.

I have stated many educational principles that I feel are important for all children. It is just that for the MBD child it becomes even more critical. We know that in general education, the classes in public schools give lip service to individualization and respect for the child. But we also observe that those children who do not fit into the lock step of the curriculum are labelled "a problem." There is a mechanistic approach that makes it mandatory that children enter school at a certain age, making assumptions that all children are ready and that if they are not, they can provide individual programs that will enable the child to succeed. But much of this is a myth. In general education we now hear terms like "Open Classrooms", "Team Teaching", "Non-grading", all of which in principle would be excellent for all children and in particular would provide a framework in which MBD children could find a niche of meaningful and individual activity that would encourage the development of skills in all areas. But again, in reality, the terms are misunderstood; children
are either left to flounder on their own or in some cases non-grading is seen as departmentalization which compartmentalizes the child and increases his sense of failure.

I am committed to a program that considers growth in social, cognitive and emotional terms. For LD children it must insist that the curriculum incorporates many avenues that allow for the expression of feelings and thoughts about a large variety of experiences. These need to be organized in such a way that it becomes possible for the child to learn how he learns - his own compensatory mechanisms that will function successfully in the work or play that has previously been too difficult. He needs to discover his strengths, he needs to feel free and able to tell his teachers and parents what they can do that will help him. He needs to learn the process by which he can manage and succeed and then make all others aware of it.

Bluma Weiner, in her article on educating the mentally retarded coins two important phrases. First "the principle of normalization" and second "the dimensions of a child's educability." Both are very pertinent for all children.

The goal for all education and more significantly for the LD child is a precise match between the cognitive style of the learner and the cognitive demands of the task. To do this, we suggest that it is the child himself who can become the best diagnostician. The child may know or need to learn that he needs slow pacing and repetition of directions. Then he has to be encouraged to tell other. A successful program is one in which children are able to tell each other their needs. They can say, "Oh, Mary, you forgot to use your hand to help guide you." or "Johnny, you know I need you to say it more slowly." The pleasure that comes from this kind of sharing, experiencing and succeeding is an essential component to all learning and growth. In another class the teacher of severely brain damaged youngsters told the children that they could write letters to anyone in their class telling them something that it was very hard to tell when they spoke to them. The excitement and motivation was unbelievable and the amount of work produced was beyond expectation.
In addition to all this it is essential for such children that some tutorial program be instituted. Of necessity and because each child's needs are different and they are at differing levels of performance, each child needs to have a contract for skill work appropriate to their level of development. They may need to have someone available to whom they can turn when they are required to do this work. It is often essential that these children work in a one to one relationship for particular aspects of their work, at least until they begin to feel competent. Later, they may work in a group of two or three. It has proven quite fruitful for children to teach children. Two important pieces of research have shown that children two or three years older than the ones being helped have been quite successful in their work with younger children. The teacher often makes more progress than the learner.

My bias is toward four principles of education for MBD children:

1. Clinical Diagnostic Teaching, which assumes the precise match between the cognitive style of the learner and the cognitive demand of the work. It also presumes that diagnosis can proceed from teaching rather than from tests.

2. Develop the process in which children discover their own strengths and help them discover their own successful compensatory mechanisms that enable them to succeed.

3. Develop a program that allows for the integration of all learning within the content areas (reading, writing, speaking, et cetera), between the content and perceptual and thinking processes (decoding, letters, discovering words and matching to each other), and in the integration the development of COMPETENCE.

4. Plan a support system that provides opportunity for the child to function in multiple ways and on many levels. These supports must be planned for the school, home and community.

Educational programs for the MBD child have to be evaluated in terms of the policies that have been set down by existing regulatory bodies and institutions. At the present time the focus is on "Mainstreaming" youngsters by placing them in regular classes and providing some special services within a school-learning resource centers and/or itinerant teachers. In principle, this would appear the
best policy for those minimally handicapped, but the success or failure of the program and work with the child will depend on the quality of what is being offered. Have we any basis for thinking that each school will have personnel so well trained and in such large numbers that each of the children so diagnosed will have an adequate "support system"? Without the necessary support system which needs to be predicated on individualization of program and availability of personnel needed by the child, it could become a failure. Reason for this notwithstanding, it will be up to the parents and professionals to monitor these programs and make the necessary demands for more qualified staff and more money to employ more services. In addition, for those more severely impaired, alternate models and services need to be provided.

The criteria for evaluating any program has to be assessed on how well it provides for the children under their care. Is the program honest and respectful of children?; does it provide for a reasonable amount of choices for the child?; does it account for the child's individual needs?; and does it provide for pleasure in work and play? Is the child provided with experiences in which there are "developmental pressures", but through which he can succeed and learn and grow in self-esteem and cognitive mastery? Does the program allow for a range of activity for all the children - in skills, social participation and creative arts? Do the children succeed and become competent human beings?

Some suggested elements may be fruitful in working out a program for LD children. It is possible to utilize to a large degree existing personnel and resources within the school, and to involve regular teachers, which in effect promotes the idea that they are capable and ready to provide services for the LD child within the regular classroom.

It is possible to establish a materials resource center where the regular classroom teacher can be supplied with specialized teaching materials and share ideas without going through the usual administrative delay. It is possible to create the role of psychoeducational consultant, who can provide the support
system for the teachers and children. She can translate new ideas and methods to the teachers, as well as provide additional service to the child. Such a psychoeducational consultant or child specialist, to be effective, can work maximally with fifteen teachers and be responsible for about 350 children, assuming that 10 to 20% of these youngsters will need much special help. After all, the primary success or failure of a program rests with the child. "We are concerned ultimately with the child's adaptation—his capacity to use to the fullest his internal and external resources in order to function optimally under any circumstances in which he is placed. Successful adaptation is possible only when some degree of homeostasis exists among the many variables considered. With this model, learning can be viewed as a complex adaptive phenomenon influenced by any or all of the factors presented. Because such a conceptual framework emphasizes the interaction of various factors as they affect learning, it permits a logical organization of our knowledge in this area in a way that related the various data within an overall perspective."

The challenges are many. But let us hope they will inspire us to create new and more effective models, to learn more about ourselves and the children with whom we are working, to keep an open mind to new ideas and to constantly explore, critique and stimulate and above all to share with others. Our thoughtfulness and concern for the child, our respect for what he has to tell us should be our first and most important priority.

Stanley Walzer M.D. & Julius Richmond M.D. in The Epidemiology of Learning Disorders.