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ABSTRACT

Position papers presented by the Association for Children with Learning Disabilities at the White House Conference on Children and Youth are contained in the collection. Beginning with an address by Dr. Samuel Kirk on his personal reflections and comments on learning disabilities, Dr. Sylvia Richardson offers the medical views on learning disabilities and Doris Johnson focuses on educational requirements and educational programing with learning disabilities. (CD)

LEARNING DISABILITIES IN THE DECADE OF THE '70's

A Statement of Position for the White House Conference on Children and Youth

The Association For Children With Learning Disabilities, Inc.
2200 Brownsville Road
Pittsburgh, Pa. 15210

WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH

Committee:

Robert W. Russell, Chairman

Katharine M. Tillotson, Co-Chairman

Hyman J. Gardsbane, President, ACLD

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Robert W. Russell

Hyman J. Gardsbane

F O R E W O R D

The Association for Children with Learning Disabilities (ACLD) is proud and pleased to participate in the 1970 White House Conference on Children and Youth. It is most appropriate that an organization representing parents of children who are educationally handicapped participate in the conference. At the time of the White House Conference on Children and Youth in 1960, the ACLD had not yet come into being. Today, a little over six years since its inception, ACLD has some 250 affiliates in thirty-seven states, the District of Columbia, and the Virgin Islands. This rapid growth reflects the growing concern of both parents and professionals.

ACLD's purpose is to advance the education and welfare of children with specific learning disabilities. As parents, we are acutely aware of the gap which exists between our goals and dreams for our children, and the help which our children actually receive. Because of this awareness, the members of ACLD have dedicated their lives to creating awareness and recognition of our children's problems among all who should be concerned. For, it is often said that the first step in solving a problem is recognizing that the problem exists. We are also aware that despite the efforts of dedicated teachers, large numbers of children are falling behind and too often staying behind in their scholastic achievement. The magnitude of the problem is beginning to receive widespread attention and the figures staggering.

The National Reading Council has advised that an estimated 24 million Americans, 18 years old and older, have already left school without learning to read, to write, or to do arithmetic well enough to function in today's technologically oriented job market. Moreover, there are probably another 25 million workers who will be denied advancement, because they are poor readers. The problem of reading, and this is just one area of learning disabilities, is of particular urgency to industry. Twenty-five years ago, 20% of available jobs were held by unskilled workers. Today, the figure is 15%. By 1975, with increased use of automation, only 5% jobs will fall into the unskilled category. According to the National Center for Health Statistics, 25% of American 11 year olds read at levels two or more years below grade level, 16% of 10 year olds read two years below grade level, and 12% of nine year olds read two years below grade level.

The challenge is before us. Education must be designed to meet children's unique individual potentialities. For some

children, because of the difficulties they have in learning, special opportunities must be provided. The Association for Children with Learning Disabilities pledges its resources and efforts to meet this challenge.

Hyman J. Gardsbane, President
Association for Children with
Learning Disabilities, Inc.

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INTRODUCTION

As we begin each decade, it is traditional that we take stock of our progress in various endeavors and express hopes and plans for the future.

The following address delivered by Dr. Samuel Kirk at The Advanced Institute for Leadership Personnel in Learning Disabilities in December 1969 so completely expresses our philosophy that we are including it as the introduction of our position statement for the White House Conference on Children and Youth.

REFLECTIONS AND COMMENTS ON LEARNING DISABILITIES

by:
Dr. Samuel A. Kirk
University of Arizona

Dr. Kass, distinguished guests, ladies and gentlemen. In requesting me to reflect and comment on my own contribution to the field of learning disabilities, the Committee is inadvertently asking me to confess my sins. I hope there is a priest in the audience who can give me absolution.

My first sin is accepting the reputed posture of an expert in mental retardation and learning disabilities. In this field, such a posture today is usually reserved for those who can show that they have taken a sequence of courses in a field and can obtain a certificate from agencies such as the State Department of Public Instruction. I must confess to you that the two areas of special education in which I have never had a college course are "mental retardation" and "learning disabilities." In these two areas, according to our present criteria for trained professional personnel, I must admit that I do not qualify. And I also have a sneaking suspicion, although I have not investigated too thoroughly, that my colleagues on this panel may be in a similar embarrassing predicament.

I have, however, had some experience. My first encounter with the problem of learning disabilities came about by accident in the early 1930's. As a graduate student at the University of Chicago I accepted a job as "resident instructor" in a residential school for delinquent retarded boys in Cook County near Chicago. Fortunately for me, in those days they did not require a special teacher's certificate.

At this school I taught in the afternoon and served as a recreational worker after school and then in the evening helped the nurses put the boys to bed and watch and see that they stayed in bed.

In reading one of the clinical folders from the then famous Institute for Juvenile Research that diagnosed these children. I noticed that one of the boys was labeled. "word blind," a term I had never heard before in my psychology courses. He was 10 years old, a non-reader, and had a recorded IQ of 82. This clinical folder was referred to Marion Monroe's monograph on reading disabilities. Hinshelwood's book on Congenital Word Blindness, and Fernald's kinesthetic method. After reading these references, I arranged to tutor this boy at 10 o'clock in the evening after the boys were asleep. This boy, who was eager to learn, sneaked out of bed at the appropriate time each night and met me in a small space between the two dormitory rooms and actually, in the

doorway of a boys' toilet. By making this arrangement we both knew we were violating a regulation (which is my other sin) since the head nurse had directed me not to allow the boys out of bed after 9 p.m.

After I had been tutoring the boy for two weeks, the nurse caught me teaching this boy at 10 p.m. She, consequently gave me a dressing down with the statement that this was against regulations and that I should find time to teach him during the day.

But since this was impossible, and since he was making such rapid progress, we just continued the remedial lessons in spite of the rules and regulations. When we heard the nurse's footsteps coming down the stairs, (she lived on the third floor and we were on the second) the boy quietly sneaked into the boys' toilet. I mention this incident in some detail because I want you to know that my first experience in remediating learning disabilities was conducted not in a school, not in a clinic, not in an experimental laboratory, but in a boys' lavatory!

In seven months' time, this boy was reading. I sent him to the Institute for Juvenile Research twenty miles away and learned through a social worker that he was reported now to be reading at the third grade level and on this basis they had obtained a parole for him from the judge of the juvenile court. I was also invited to go to the Institute for Juvenile Research in Chicago and confer with Dr. Marion Monroe on the method I used to teach him in such a short period of time. After this conference she agreed to tutor me in diagnosis and remediation of severe cases of reading disabilities.

At this time, in the early 1930's, the Wayne County Training School in Michigan was looking for a psychologist with a master's degree who was an expert in reading disabilities with the mentally retarded. With my very extensive experience of teaching two children and writing a master's thesis on the Fernald method, I was selected for the job. I mention this fact to indicate to you how few people at that time worked in this particular area.

At this institution, I found that children had many disabilities: reading disabilities, language disabilities, perceptual disabilities, and behavior disabilities. I was fortunate to have the opportunity to teach and conduct research on children with a variety of disabilities and a variety of problems.

At this time, in the early 1930's there was great emphasis on brain theory and disabilities. This was even before Strauss.

Mirror reading, mixed eyedness and handedness, strephosymbolia, pathological brain dysfunctions were proposed to explain all of these aberrations. It became obvious to me that to understand all of those language, perceptual and reading disability problems, I had to understand the workings of the brain. So, at the University of Michigan, I concentrated on courses in physiological and experimental psychology, and on neurology. I even did my doctor's thesis by testing the handedness of rats and training them to discriminate between an "F" and a mirrored "F." After surgically producing brain lesions, and retesting the rats after post-operative recovery, I made autopsies to determine the effects of brain lesions on perception and handedness and to determine whether I could change dominance and create a strephosymbolia in rats. I then proceeded to publish monographs and articles with esoteric titles such as, "Hemispheric Cerebral Dominance and Hemispheric Potentiality," or "Extra-Striate Functions in the Discrimination of Complex Visual Patterns in the Rat."

The point I wish to make after this digression into the recesses of the brain is to confess here that studying physiological psychology and neurology and my own research on the brains of rats, have had no relationship to what I did then, or have done since, or what I do now for children with learning disabilities. And it is for this reason that I am not concerned with terms of brain dysfunction or brain damage, or even with terms such as "strephosymbolia," "word blindness," "alexia," or "dyslexia" behavioral terms that the child has not learned to read.

After four years at the Wayne County Training School and the University of Michigan, I acquired a union card, which in academic circles is called a Ph.D. With this handle, I was offered a job as Director of a Division of Exceptional Children at the Milwaukee State Teachers College in 1935. Similar to the practice today at colleges and universities, that particular college had to have Ph.D.'s for accreditation whether the personnel could train teachers or not.

To learn about education and teaching, I enrolled in a practical university. At this university, my professors who taught me about education and special education, in particular, did not have Ph.D.'s. They were classroom teachers who allowed me to sit in their classes day in and day out to study and evaluate their methods and to ask naive questions. I continued in this post-doctoral college for three years in between teaching my college courses. I roamed from class to class trying to learn what different teachers were doing, and after three years of this post doctoral training by classroom teachers I gave myself a diploma since the teachers of this Practical University were not authorized to give credits or certificates.

Another of my sins harks back to about 1949 when I established the first experimental nursery school for so-called "mentally retarded children." Working with3-5 year olds diagnosed as mentally retarded in an institution, and also in the community, we found that environmental intervention at an early age accelerated intellectual and social functioning of these children. We also found many examples of learning disabilities which, of course, were not labeled as such.

In trying to teach these young children, we were forced to look into their behavior and guess at what might have been wrong with their development, what deficits existed on each child, and to decide on what to do about these particular deficits.

The label "mentally retarded" did not help us very much. One child with marked nystaqmus as a result of rubella was diagnosed as legally blind and severely mentally retarded. This child could see, but it took her a long time to recognize objects and pictures visually. She needed training in speed of perception. We had no tests at that time because Frostig was a little slow and had not yet published her perceptual tests. A program for this girl in her area of disability was highly successful since with intensive training on a tachistoscope to increase her speed of perception, the girl progresses rapidly in speed of perception and also in performance on intelligence tests. She was later placed in regular grades rather than in a class for the mentally retarded since her IQ had risen from approximately 50 at age four to about 85 at age six, and at the age of 10 she was doing adequate third grade work in a regular class in spite of all the problems that she had had earlier.

Another child with the same label "mentally retarded" and with a recorded IQ on the Binet (which was invalid) of 37, was unable to talk at the age of five. She was given intensive training in auditorization and speech. The remedial training for this girl was not visual perception, but auditory perception and verbal expression.

As we analyzed and worked with many of these children mostly on a trial and error basis, we found that each child had some peculiar block or inhibition to development. I'm sure we wasted a lot of time trying to pinpoint basic disabilities in these children and in organizing a general pre-school program which included an individualized remedial program for each child's unique obstacles to development.

To be able to analyze the communication problems of younger children at the outset or before remediation, it became

necessary for us to develop tests to isolate some of these abilities and disabilities. And, I guess, this is where my other major sin took palce. After fifteen years of work by a large staff, we developed the Illinois Test of Psycholinquistic Abilities. This diagnostic test was designed to isolate abilities or disabilities found in young children. The experimental edition published in 1961, that Dr. McCarthy and I turned out became a real godsend to a lot of doctoral candidates since approximately twenty doctoral theses have been written on the ITPA. So if the test has not done anything else, it has at least earned twenty doctorate degrees for twenty people.

Unfortunately, this test has also spawned many illusions and false hopes. Some people have taken the ITPA as the instrument for the cure for all ills and the diagnosis of all problems. In spite of our numerous warnings, it is used for junior high school students even though it is for young children. Many also use it for problems for which the ITPA does not apply. Furthermore, many people want to use it without taking the time to learn how to give it. And, many people give the ITPA routinely and use it very mechanically. My sin here is to impose an instrument on the public that is very beneficial for the diagnosis of disabilities of some children within a restricted age range which some desire to use without the necessary preparation or clinical judgment. This is our common fault in all areas of learning disability because I'm sure that Dr. Kephart and Dr. Frostig and others will agree that their methods are also used with children to which their procedures do not apply.

The last sin which I shall mention publicly--I'm sure there are many others--is the small part I had in advocating the use of the term, "Learning Disabilities." Like Pandora's box, it has forced upon us many ills in spite of its many benefits. This is how it had happened. Parent groups throughout the United States who were involved in organizing programs for their children were using different terms such as "classes for brain injured children," "classes for the perceptually handicapped," or "classes for the neurologically impaired." These groups met in Chicago in April of 1963 to form a national organization. They called the conference "Exploration into the Problems of the Perceptually Handicapped Child." They invited a number of consultants including, I believe, Dr. Kephart, Dr. Myklebust and myself. Just before the meeting the chairman warned me that they were going to ask us to give them a term and a name for the association which they were planning to organize.

At this meeting I stated that if the purpose of the association is research on etiology then they ought to use a neurological term. But if their aim was services to children

with disabilities, then the name should be related to education and training rather than to etiology. The focus of the name I suggested should be on behavioral assessment and special methods to ameliorate the learning disorder, the learning inhibition or the disability, whatever they wish to call it. I suggested that the term "Learning Disability" might focus attention on the learning problems and on instruction whereas the term "brain injury" would have etiological meaning but would have little or no relation to how the child is to be taught.

I did not attend their business meetings, but I understand the three common labels, "brain injury," "perceptually handicapped," and "brain injured" were discussed. They voted to call the organization the Association for Children with Learning Disabilities, which since then has grown to great proportions. Since then, the term "Learning Disabilities" has become very widely used and is included as the term in a recent congressional bill which is entitled, "The Learning Disabilities Act of 1969." Dr. Kephart and Dr. Myklebust were at that meeting and tended to agree with this term even though it may not be the best term.

But the simple solution of a name has not really been so simple. I now know that the term "Learning Disabilities" has created many problems. We have had a bandwagon effect. To some, every child has a learning disability. The prevalence figures given by different groups on congressional testimonies have ranged from 10-30%. It appeared for a while that a third of the school population could classify in this category. It has even been suggested that "mentally retarded children" be labeled "general learning disabilities" and that we can call the others "specific learning disabilities." Parents have brought their children to learning disability centers for diagnosis because their children were not obtaining straight "A's" in school. And if they were not obtaining straight "A's" and they were their children, they must have a learning disability.

This is the bandwagon effect of a new and popular concept. It is for this reason that the National Advisory Committee for Handicapped Children, of which I have had the privilege of serving as chairman, has stated that specific learning disabilities in federal legislation constitute the hard core group and consist of about 1-3% of the school population. And until research defines the other groups and their program, we might stick with that particular figure rather than to indicate that a third of the school population can be classified as "specific learning disabilities." I will need absolution for my part in committing the sin of not only helping the popularization of the term, but also delimiting its use in the field.

The title given me for this address is, "Reflections and Comments." So far I have reflected on my sins. As requested by the sponsors of this Institute, I shall make a few--shall I say--irrelevant comments.

1. Learning disabilities as a concept is not new in special education. Only the label is new. Sporadic clinical work in these areas has been done in medicine, speech pathology, reading clinics, corrective physical education, orthoptic training, communications, language disorders and other fields. Today the learning disability specialists have synthesized these fields into workable programs for school children in schools. This has required an educational model rather than a medical model in which a child is assessed from a behavioral point of view rather than from an etiological point of view. Consequently, the treatment of disabilities becomes focused on education and training.

2. The concept of learning disabilityinvolves what I have called intra-individual differences. This means that we have, in a sense, redefined individual differences to emphasize the comparison of Johnny's abilities and disabilities instead of just comparing Johnny with Billy for classification purposes. The general tests of intelligence are necessary but not sufficient for identifying the disability and organizing remediation to ameliorate the disabilities. As a result of this emphasis, the problems of children with learning disabilities have forced us to reject the testing instruments that do not lead to a hypothesis for remediation. To give a test such as a general intelligence test and classify a child in a particular category is not enough to help a teacher teach the child. We have, consequently, begun to invent tests that would show us discrepancies in growth--what abilities and disabilities a child has rather than just a global test score. The tests of Kephart and Frostig, Myklebust, Cruickshank and the ITPA are not just classification tests, but tests to define for us what kind of remediation a child needs.

3. The learning disability concept has lead to the concept of clinical teaching to ameliorate disabilities in children. Although we have always given lipservice to individualization of instruction we have always continued mass education, reduced only in class size. We are finding that some children placed in classes for the mentally retarded, educationally retarded, or emotionally disturbed do not readily fit into any category, and that they profit more from a program of remediation of deficits than from group instruction in a class in which they do not belong.

4. The concept of learning disabilities is changing the organization, instruction, materials, and techniques of special education. I expect many children with remediable defects will, in the future, remain in the regular grades and receive itinerant, remedial instruction by a specialist. Itinerant specialists and resource rooms in elementary schools will tend to reduce the enrollment in self-contained, special classes for some groups such as the mentally retarded and the emotionally disturbed.

5. My experience in research on learning disabilities leads me to the conclusion that we should identify these children early and institute remedial measures at ages four and five. We have sufficient evidence to show that better results are obtained when we start at an earlier age than at an older age. We should not wait until the child has failed in school at the age of seven, eight, nine, or ten before we begin to remediate the disability.

6. We have used cliches that special education is not apart from, but a part of, general education. Many handicapped children in self-contained classes have been denied sufficient contact with other children. Learning disability programs that are becoming fairly popular in this country, I'm glad to say, may be our bridge between special education and regular education, especially if we keep children with specific learning problems in the regular grades and give the regular teachers itinerant help.

7. None of these suggestions can really be successful until we are able to train a new kind of special educator, which I currently like to call a Diagnostic Remedial Specialist. What we need is a core of such people who are interdisciplinarily trained and competent in both psychoeducational diagnosis and in remediation. In the past, we have had a team of pediatricians, psychologists, neurologists and social workers diagnose a child and then turn him over to a teacher without the diagnostic team outlining the remedial program for that teacher. Sometimes it looks as if everybody's business is nobody's business. What we need is a focal agent in the form of a diagnostic remedial specialist who is responsible for the treatment or remediation. This would be parallel to a family physician who diagnoses, obtains diagnosis from others, but who is the responsible agent for treatment. Similarly, in learning disabilities, the assessment by other disciplines can funnel through the Diagnostic Remedial Specialist who does the remediation or instructs and supervises others in remediation and helps the classroom teacher adapt instruction and materials to the disability of the child. Until we have a sufficient number of these Diagnostic Remedial Specialists who can do the job themselves, who can help the classroom teacher, and who can supervise others, the field of learning disabilities will be severely handicapped.

Dr. Cruickshank closed his remarks by stating that it took him three decades to learn and that he has two more decades to go to learn some more. I'd like to state, since I'm much older than Dr. Cruickshank, he being a very young man, that I have had four decades to learn and it's going to take me three more decades to unlearn. Thank you.

a n d

Dr. Sylvia O. Richardson, a participant of the White House Conference for Children and Youth, fulfills what we see of the medical views on learning disabilities in her paper ...

LEARNING DISABILITIES: AN INTRODUCTION

Sylvia O. Richardson, M.D.
Associate Clinical Professor of Pediatrics
University of Cincinnati College of Medicine

When we speak about Learning Disabilities it is important to define our terms. In this meeting we are not discussing children who have difficulty in learning in general ... we refer to children who have particular or specific difficulties in learning and/or those whose behavior is such that they cannot concentrate or attend when we try to teach them. The difficulties or disabilities in learning most commonly demonstrated by these youngsters are in the areas of language and/or mathematics.

Since the large majority of these children are not identified as having specific learning disabilities until they are placed in specific learning situations, they generally are not discovered or diagnosed until they have been in school for varying periods of time. Initially they may be described by their teachers as presenting behavior problems; they may be referred to by their kindergarten teachers as "immature" or "late bloomers"; they may be labelled as "emotionally disturbed."

When a child persists in a typical behavior and does not master the basic skills of the primary curriculum, or even attempt to do so, he may be called "a slow learner" (kindly), or "mentally retarded."

He is then submitted to a battery of psychological tests, the results of which do not add up to mental retardation; physical examinations and perhaps an EEG, both of which often are reported as within normal limits or "equivocal"; and his parents are questioned in depth with regard to all family interrelationships, which, of course, arouse suspicion and require further exploration. These procedures may continue for an extensive period of time. Meanwhile, the child may begin to feel like some kind of a freak, his parents undergo the tortures of guilt (now piled on top of the common guilt feelings that parents tend to have in relation to their child-rearing abilities), the teacher becomes increasingly frustrated as she prays that the "devil" in her class may soon be exorcised, and the physician may begin to think that he is dealing with a group neurosis, or he may simply feel that if everyone would just wait the child would "grow out of it."

Who is the child in the midst of the tumult? What do we know about him? We know that the child currently labelled

"specific learning disability" is not intellectually subnormal, yet he has not been able to master the basic skills in the primary grades. On the basis of clinical observations, he shows evidence of some emotional disorder, but, as Eisenberg has stated, "it should be clear that emotional disorder is almost inevitably a consequence of the repeated frustration entailed in trying, but being unable, to learn to read."

"Unable to learn to read." Here, then, is something else we know about this child. The probability is great that his "specific learning disability" is demonstrated in an inability to learn to read. In fact, most of the literature on "specific learning disabilities" actually discusses specific language disorders and/or specific behavior disorders. A language disorder is the inability of the child to use symbols for communication purposes and may be characterized by difficulties in speaking, reading and/or writing. Thus, we know that this child probably has a specific impairment of symbolic learning. If he demonstrates just a reading disability we call it dyslexia or "specific" dyslexia, although this rose has had a multitude of names, e.g.....Word Blindness (Kussmaul, 1877); Congenital Symbolamblyopia; Congenital Typholexia; Congenital Alexia; Congenital Dyslexia (1909); Amnesia Visualis Verbalis; Developmental Alexia; Strephosymbolia (Orton); Bradylexia; Analfabetica partialis; Constitutional Dyslexia; Specific Dyslexia (Hallgren); Specific Reading Disability; Children Who Cannot Read (Monroe, 1932).

Classroom teachers have provided much assistance in diagnosis through their descriptions of learning problems they have observed. Among the characteristics of the children with specific learning problems, teachers report the following:

1. Poor visual discrimination and memory for words.
2. Poor auditory memory for words or for individual sounds in words.
3. Persistent reversals of words, syllables or letters in reading, writing and speech. Rotation or inversion of letters; reversed sequence of letters and syllables; mirror-writing, or transposition of numbers.
4. Poor recall for reproduction of simple geometric forms.
5. Poor memory for auditory or visual sequence.
6. Weakly established handedness.
7. Clumsiness and poor hand control.
8. Immature articulation
9. Hyperactivity and distractibility.

Clinical psychologists have discussed discrepancy demonstrated by these youngsters between the verbal and performance scores on the Wechsler Intelligence Scale for Children (WISC), pointing out that there may be from 15 to 30 points difference in favor of the performance score. In fact, the findings on the WISC have been remarkably consistent, considering the different ways of defining these children. The most consistently reported low scores are on the Information and Arithmetic subtests The Information subtest involves memory of information or facts presented both visually and auditorily. This finding supports the teachers' observations that the children tend to have poor auditory and visual memory. The low scores on the Arithmetic subtest may seem to conflict with the fact that the same children may have scored high on arithmetic achievement tests. However, the problems on the WISC Arithmetic subtest are presented orally and require auditory decoding, memory, and abstract reasoning, all of which involve symbolic or language skills; the achievement tests involve computational problems presented visually.

Psychologists have reported visuo-motor and perceptual-motor problems in these children. Although it may be variously described, for the sake of simplicity, perceptual-motor impairment is the lack of normal function of either the perceptual processes (visual, auditory or tactile), the motor processes (speaking, writing, manipulating, walking), or both. If the child's major difficulty is in correctly interpreting what he sees, the problem may be described as visuo-perceptual. If the child's major difficulty is in correctly copying what he sees, it may be described as visuo-motor. Again, the teachers have described these findings in the classroom, but in their own terminology.

Pediatricians, neurologists, and psychiatrists have described the following physical signs of difference between these children and those who learn the three R's:

1. Mild tremor, especially on effort; mild choreiform or athetoid movements.
2. Hyper-reflexia.
3. Excessive clumsiness.
4. Monocular vision or minor ocular imbalance.
5. Disturbance of body image
   a. Right-left confusion and absence of, or weakly established, laterality.
   b. Finger agnosia or impairment of finger-localizing ability.
   c. Impaired spatial concept.

6. Impaired form perception
7. Immature articulation
8. Hyperkinentic behavior with distractibility, short attention span, irritability and emotional lability.

Acknowledging the risks of over-simplification and generalization, these children seem to exhibit signs of disorganization in the integrative perceptual-motor mechanisms of the brain. Any number of conditions--organic, environmental or intra-psychic--may affect the way a child perceives sensory information; the result can be seen in his behavior but the disorganization may not be appreciated by the observer until the child is of school age and fails to perform tasks that depend on perceptual-motor or behavioral organization which should have taken form earlier in development.

As stated earlier, kindergarten teachers tend to describe the behavior of some children as "immature." These same children often prove to have learning disabilities later in the primary grades. Twelve kindergarten and first grade teachers were asked to list what they believed to be the major characteristics of the "immature" child's behavior. In reviewing their descriptions, the most outstanding behavioral characteristics of the "immature" six-year-old appear to be inadequate language skills, poor motor coordination and insufficient attention span. His behavior was described most frequently as disorderly and disorganized rather than hyperkinetic. His vocal and motor output were thought to be excessive and without syntactical or contextual structure. Teachers reported that this child tends to speak and act without thinking, and when compared with normal peers the "immature" child requires much more auditory, visual, tactile and kinesthetic reinforcement. He is described as clumsy and "closer to the ground," clinging and overly dependent on the teacher. The "immature" child, in general, seems to lag approximately one year behind his mature classmates in terms of performance in school activity, physical appearance, social and emotional interactions, and learning ability.

Now, if we re-view our child with "specific learning disability" as seen through the well-trained eyes of the physician, teacher, and psychologist, his identifying characteristics include the following (at least in these the representatives of the three disciplines will agree): (1) poor auditory memory; (2) poor auditory discrimination; (3) poor sound blending; (4) poor visual memory; (5) poor visual discrimination; (6) inadequate ability in visual and visual-motor sequencing; (7) lack of, or weakly established, cerebral dominance; (8) right-left confusion, with problems in laterality and directionality; (9) fine motor incoordination; (10) non-specific awkwardness or clumsiness; (11) ocular imbalance; and (12) attention defect and disordered or hyperkinetic behavior.

Although this child may show evidence of emotional maladjustment and immaturity, the relationship of cause and effect is not clear. The final observation, on which all agree, is that this youngster is of at least average intellectual capacity.

Those of us whose job is diagnosis sometimes create impressive labels and proceed with vigor to pin them on individuals rather indiscriminately. We create "syndromes" too; these are several signs and symptoms which tend to occur together, characterizing a particular disease. A syndrome is a bigger and better label.

Ever since Strauss described the behavior of children with a known history of brain damage, we have lumped together hyperactivity, short attention span, distractibility, irritability, and emotional lability into the "Straussian syndrome," or, more recently, "the hyperkinetic syndrome." Because children with learning disorders often show similar behavior at home and in school, the label "brain damage" fell into place. (For that matter, it has been noted that harried young mothers of pre-school children also may show this kind of behavior!)

Many dislike using the term "brain damage" if there is no evidence of such. In fact, the Oxford International Study Group on Child Neurology in 1962 held a conference, the main achievement of which was the decision that that concept of "damage" be discarded.

Since the diagnosis of learning disabilities is made on the basis of symptoms of disordered function rather than on evidence of anatomical damage, the term "minimal cerebral dysfunction" is currently and justifiably more popular. Because of the heterogeneity of this group of children, it may be helpful to review T.T.S. Ingram's clinical classification in which he defines three main categories within the concept of minimal cerebral dysfunction:

(1) Defined clinical syndromes with constant evidence of abnormality.

In this group there is strong evidence of a fairly constant association between brain abnormality and particular symptoms and signs. In this category he includes the choreiform syndrome of Prechtl, the syndrome of overactive purposeless behavior known as the hyperkinetic syndrome, and the definite focal neurological abnormalities such as mild unsteadiness with intention tremor, mild ataxia, mild paresis of movement, and involuntary movements found in some clumsy children. The disorders included in this category comprise recognizable clinical syndromes in which the history or evidence of brain damage is fairly constant. For example,

children with Prechtl's choreiform syndrome usually have a history of perinatal hypoxia. Evidence of temporal lobe damage may be found in a high proportion of children showing hyperkinetic behavior. In general, the same causal factors that are found in cerebral palsy may be found in most of these patients. Many, in fact, are regarded by some as having mild cerebral palsy, and the disorders are classified appropriately. For example, children with the so-called choreiform syndrome are appropriately classified as having mild dyskinesia or choreoathetosis.

Though there seems to be a relatively constant association between brain injury or abnormality and the disorders described in this category, it is important to remember that environmental factors may influence the symptoms. Hyperkinetic behavior, for example, seems almost self-perpetuating in some children whose parents themselves over-react to the child's unpredictable outbursts or apparently unprovoked tantrums. The magnitude of behavior abnormality depends greatly on the parents' reaction to the child's abnormal behavior (Prechtl, 1961; Pond, 1961).

(2) Defined clinical syndromes with inconstant evidence of brain abnormality.

Ingram's second category comprises those disorders of learning where, in some patients, but not in all, there is evidence of an association between the disorder and detectable brain injury or abnormality. In this category he includes specific retardation of speech development, which he calls developmental dysphasia, "specific developmental dyslexia" and dysgraphia, and some cases of "clumsiness." Sometimes a history of brain injury can be found. For example, specific difficulties in reading and writing following measles encephalopathy are quite common (Meyer and Byers, 1952); but in a high proportion of patients with reading and writing difficulties there is a lack of other evidence suggesting that brain damage has occurred.

Before assuming that slow speech development, or clumsiness, or specific difficulties in writing or reading are the result of brain dysfunction, it is well to remember that there is a wide distribution of ability in children. For example, though the vast majority of children have IQ's between 90 and 110, a few normal children are well below average and a few are above average intelligence. Similarly, while some children are very dextrous others show less than average dexterity and may be called clumsy. Some apparently normal children say their first words before the age of nine months and others may not speak until over the age of two years.

Secondly, it must be remembered that many of these disorders can occur in generation after generation of apparently normal children. For example, slow speech development and specific difficulties in reading and writing often associated with ambidexterity or poor lateralization of handedness are relatively common in the families of Campbell and Maclean in Scotland. Are we then to assume that all Campbells and Macleans have brain abnormalities?

A major factor, which is often ignored, is the influence of environmental factors in producing specific clinical manifestations. A high proportion of children with retarded speech development, for example, have a history of being neglected by, or separated from, their parents in later infancy.

(3) Behavioral symptoms in which brain abnormality may be an inconstant direct cause or an indirect contributory cause.

The third category includes disorders of behavior in which brain damage may be a contributory factor in a proportion of patients. There are a large number of these. Characteristics of the behavior of children with "brain damage" are said to be: unpredictable variability of behavior, hyperactivity, distractibility, impulsiveness, irritability, and difficulties in abstract thinking. Anxiety and emotional immaturity often may be found also. These symtoms include most of those for which children are referred to Child Guidance Clinics. Apart from hyperactivity of the characteristic type which has been described, all these disorders may occur in the absence of any suspicion of brain injury. Yet a significant proportion of thepatients can be shown to have either a history highly suggestive of birth injury, or minor neurological signs which alone are of little importance, but which, in combination with these symptoms, may indicate that the brain is functioning abnormally.

Such a variety of symptoms and signs cannot be ascribed to the direct effect of brain injury, but abnormality of the brain in such patients may have contributed to the behavior abnormalities by damaging the infant's ability to adjust to the conditions in which he finds himself. These difficulties in adjustment are commonly reflected very early in the feeding situation, and this in turn may initiate maternal anxiety and a chain of events resulting in further disturbances in the mother/child relationship. There are some excellent studies that describe mothers' difficulties in making good relationships with abnormal babies. (Oppe, 1960; Prechtl, 1961). However, it is necessary to differentiate between the normal child in an abnormal environment and the abnormal child in a normal environment; in either case behavior is disturbed.

It is almost impossible to assess the contribution made by brain abnormality to the emotional disturbances shown by children in this category. Certainly babies who have recovered from the effects of perinatal brain damage may continue to suffer in later life from the disturbances of mother/child relationship which have resulted from the original difficulty. In order to understand the behavior of a particular patient it may be helpful to know that there has been brain injury, but this discovery does not lessen in any way the need for adequate assessment of the environmental causes of emotional stress (Eisenbert, 1957; Pond, 1961).

The diagnosis of "minimal cerebral dysfunction" usually is made on the basis ofclinical behavior, history, psychological evaluation, neurological signs, and EEG findings. The psychological evaluation includes tests of: verbal and non-verbal intelligence, perceptual ability, language development (including comprehension, vocabulary, motor speech function, reading readiness and reading skills) and behavioral characteristics. With regard to the EEG, in spite of the lack of agreement in this field, the high frequency of borderline records reported may be significant. For instance, the 6 and 14-per second positive spiking pattern has clearly been found by Schwade and Geiger to be associated with outbursts of violent behavior. This is an important area for research. In general, however, it should be pointed out that the majority of neurological and neurologically oriented articles may not even refer to electroencephalographic findings, or may simply mention these in passing.

The accumulated weight of various signs and symptoms, or the singular specificity thereof (e.g., hyperactivity, dyslexic errors, large scatter or discrepancy between verbal and performance scores on the WISC), guide us in making a diagnosis. These must be evaluated carefully against a background of environmental and interpersonal determinants. At this stage of our knowledge it is logical to assume that any disorganization of brain function due to injury or to naturally occurring constitutional deviation places a hardship on the developing child. If, in addition, the interpersonal environment is unfavorable, the child is more likely to experience problems compounded of his original perceptual defect, his reactions to the attitudes of persons surrounding him, and to his own failures. These accidentally or naturally occurring deviations must exist in a scale from gross to subtle and to different degrees in the various functional and interlocking units within the brain.

Too often we have seen good parents who have a child who cannot learn to read, or who is a behavior problem, or who is impulsive and hyperactive, or whose speed of mentation is

is distinctly different from his siblings, for us to jump to the conclusion that the parents must have mishandled the child. The prevailing climate of opinion in both professional and "magazine" psychiatry is such as to create in these parents the conviction that somehow, by some magical abberation in their attitudes and behavior, they are to blame for the child's condition.

Possibly we have gone as far as we can, at this time, in our search for cause. We begin to sound too glib. Now is the time to search more diligently for more suitable teaching techniques. It is highly doubtful that we are describing one condition. In fact, when these children are placed in various remedial settings, it becomes apparent that some begin to learn following psychotherapy with remediation, some with psychotherapy alone; some begin to learn when they are given visual-motor training; some show marked improvement when they are provided a corrective optical lens and orthoptic training. Some of these youngsters show remarkable improvement with specialized remedial reading such as the Fernald or Gillingham methods; some do well with remedial reading after they have received visual-motor training, and some seem to "grow out of it."

Since we are talking about a hetergeneous group we must turn our attention to closer and more detailed examination of each child, not just in the examining room but in the classroom. In every case where a child demonstrates an atypical approach to learning, there must be an adjustment in the ways the pupil is taught. An effort should be made to make as many adjustments as possible in the regular class, utilizing supplementary tutoring or "resource rooms" when possible. Wherever the severity of the learning disorder reaches certain proportions, class size must be reduced in order to maximize the individual interaction between the teacher and student. Kindergarten and primary teachers must be trained to utilize multisensorial techniques, to provide visual-motor training in the classroom, to search continuously for methods of instruction that will fit a child's needs rather than search for ways to make the child fit a particular method or curriculum.

Very often it is not until a child responds to a particular teaching technique that the underlying cause of his learning disability becomes apparent. Our teachers must receive appropriate training as well as every assistance from consulting psychologists and physicians; school programs of instruction must be flexible enough to permit a continuing search for new teaching methods; and the administrative leadership in the schools must not only allow but encourage experimentation, both with identification procedures and with adjustable methods of instructions.

I should like to close with a quotation from Mr. John Holt's new book,

How Children Fail:

"Some people say of non-readers, "These children can't or don't read because of the way they use their minds." Others retort, "No; they don't read because of the kind of minds they have." The argument seems to be unreal as well as useless. The distinction between what our minds are and how we use them is one that exists only for purposes of talk; it does not exist at the level of reality. The mind is not a kind of thinking machine that someone or something inside of us uses, well or badly. It is: and it works, perhaps well; perhaps badly; and the way it works one time has much to do with the way it will work another time.

Religious mystics in India, so we are told, stand for many years with an arm raised, or a limb distorted or immobilized in some fashion. After a while the limb becomes unusable. What sense does it make to argue whether the cause of this is physical, or lies in the way the limb was used? It was the way it was used that made it the kind of a limb it was, a limb that could not be used in any other way. It is probably true of the mind, as well, that the way we use it determines how he can use it. If we use it badly long enough, it will become less and less possible to use it well. If we use it well, the possibility grows that we can use it even better. We must be wary, then, of assuming that because some learning difficulties seem to be caused by brain dysfunction they are therefore incurable. The brain, as an organ, may have far more flexibility and recuperative powers than we realize. What it cannot accomplish one way it may be able to do another. Conversely, we must be aware of the extent to which, in causing children to make poor use of their minds, we may be making their minds less and less useful to them."

f i n a l l y

This paper by Doris Johnson, speech and hearing specialist, of Northwestern University, fulfills what we see of the educational requirements . . .

EDUCATIONAL PROGRAMMING FOR CHILDREN WITH LEARNING DISABILITIES

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There are many reasons why children do not learn normally. Some cannot hear; some cannot see; some have limited intellectual potential; some may be poorly motivated; still others may have specific learning disabilities. As special educators we are concerned with a large group of exceptional children who do not profit from the normal learning experiences in their home and school environments. All of these children have unique needs; however, the nature of their needs will vary with the type and severity of the disorder.

Our concern here is with children who have specific language and learning disabilities. They do not have sensory deficits nor limited mental capacity. They are not primarily emotionally disturbed nor experientially deprived. They do have a discrepancy between expected and actual achievement in one or more areas of learning such as spoken, read, or written language, mathematics or nonverbal behavior. Their failure to achieve is due to a disturbance in some basic psychological process such as perception, memory or conceptualization.

The population of children with learning disabilities is heterogeneous. Because of the complexity of the human brain and the tasks that children are expected to learn, it is evident that a variety of problems will result from even a minor disturbance. Some learn well visually, but they cannot perceive, interpret, or remember what they hear. Others are good auditory learners but are unable to process visual information. Many have input disturbances while others only have problems of output -- that is, with oral or written expression. Others show variability in intrasensory and intersensory processing. They may be able to learn via a single sensory channel but they cannot integrate information from two or more modalities. Some can process only certain types of information. For example, they may be able to process verbal or nonverbal information but not both. Still others have marked discrepancies in the level at which they can process material. Whereas some have disorders of perception, others have disorders of memory or conceptualization.

In the normal child all learning processes are relatively intact, albeit allowances must be made for individual differences. If a child hears, we expect him to understand; if he comprehends

we expect him to speak. If he reads silently we expect him to be able to read aloud. These same assumptions cannot be made in regard to children with learning disabilities. Instead, various learning systems must be examined to determine the specific nature of the problem.

The evaluation of a child requires the competency of many professional persons, including psychologists, educators, pediatricians, neurologists, opthomologists and others. Information regarding health, sensory integrity, mental capacity, home and educational background, achievement, personality, and motivation are all basic to the diagnosis. The primary task of the diagnostic team is to determine why the child is not learning. Although many professional persons may be involved in the initial study, the basic management or treatment is educational. While certain children may require medical attention in the form of drug therapy it is not essential for all. Similarly, some children may need counseling or psychotherapy but the primary modification pertains to the educational programming. Hence, the most important part of the evaluation is the psycho-educational study which is designed to explore both mental capacities and learning processes. When planning remediation, the teacher must be aware of mental and achievement levels, but she also must know how a child learns or does not learn. Knowing only that a child performs at a second grade level on a reading or spelling test is inadequate information for outlining goals. Without consideration for learning processes, the methods tend to be vague or even inappropriate.

One of the most effective means of gathering information about a child's learning is task analysis. By analyzing tasks, including the nature of the input, the expected output, and the processes necessary to complete them, a teacher can begin to understand the patterns of success and failure. Furthermore, an emphasis on task analysis will shift the educator's orientation from subject matter of the curriculum to learning processes.

We analyze tasks along the following dimensions. First we look at the nature of the input. Does the task involve intrasensory (i.e. one modality) or intersensory (two or more modalities learning?) For example, some reading tasks involve only visual learning -- the child is asked to draw a line between a picture and the word that goes with it. Others involve intersensory learning -- the child is asked to circle a word which the teacher says. While the normal child is able to per form on either task, the child with a learning disability may be able to complete only one type of activity.

Secondly, we note whether a task is verbal or nonverbal. Certain children can perform well on nonverbal activities but not verbal; they recognize an interpret environmental sounds or pictures, but they cannot understand the spoken or printed word. Others are poorest in nonverbal learning; they read well, but they

but they get lost going from place to place because of spatial disorders. Certain children with nonverbal problems cannot interpret gestures and facial expressions normally but they understand words -- that is, verbal symbols.

Next we note whether a task is meaningful or nonmeaningful. Some students cannot work effectively with isolated sounds or nonsense syllables. If they are introduced to reading systems that require memory of letter sounds they fail because they need meaning in order to remember. Others cannot interpret meaningful material. They quickly learn letter names or sounds but they cannot comprehend what they read.

Another part of the analysis pertains to the level of the task. Often learning disabilities are viewed only in terms of a perceptual or a symbolic disturbance. We find that the disturbance may occur at various levels. Hence, the educator together with the psychologist, tries to determine whether the impairment occurs primarily at the level of perception, memory, symbolization, or conceptualization.

Finally, the mode of response is examined. Systems for output can be categorized into three major types. The first involves recognition, manipulation, gesture or pantomine. The second is oral (spoken) and the third is visual-motor (written). If classroom teachers become more aware of the ways in which they ask children to respond they may realize the reasons for varied performance. For example, a student who scores nearly at grade level on a multiple choice spelling test, but fails on a dictated test, recognizes the correct word, but he cannot convert a word which he hears to the visual system.

Task analysis has three major purposes. First it is done to determine which learning processes are impaired and which are intact. Secondly, when this determination is made the classroom teacher can modify activities so that the learning disabled child can respond more effectively. Parents also can be given suggestions for ways of modifying instructions and activities at home. Finally, task analysis is critical for the special educator as he must know what to "remedy."

In order to be of greatest help to children with learning disabilities, we are obliged to initiate programs of early identification and special education. By doing so, we can shift the emphasis from rehabilitation to habilitation. Every attempt should be made to detect learning problems before a child experiences repeated failure. Programs of early detection are not necessarily synonymous with pre-school identification. Although many disabilities can be identified in early childhood, others will not be manifested until students are exposed to new symbol systems in school. For example, severe auditory perceptual problems can be detected by the age of nine or ten months; however, disorders of written language may not be

identified until seven or eight years. Only when the environment places new demands on the learning systems will certain disabilities become evident. In like manner, the limitations of an electrical circuit are apparent only when overloaded with too many appliances.

Programs of early identification, to be most comprehensive, should consist of periodic assessments at crucial periods of development. These "check points" might be compared to the developmental milestones observed by the pediatrician. Our "check points," however, would pertain specifically to learning. In reality, these check points occur every time new concepts or experiences are introduced, but the identification process could be systematized by having psychoeducational teams perform screening batteries on a routine basis. The specific behaviors to be studied would vary with the age of the child and what is expected of him.

Many school systems currently have routine testing programs which could be very useful for early detection of learning disabilities. However, all too often, the test results are utilized only in a gross way to determine whether a student should be promoted or retained, or whether he should be placed in a high or low group. These same test results, including an analysis of raw data, could be used much more effectively. Any low test score or failure constitutes a warning signal -- a signal that something should be done. That "something" usually involves a more careful study of the child. In certain instances the problem may be due to faulty vision or hearing; in others it may be due to poor motivation or study habits. But failures also result from specific learning disabilities. In any case, the reasons for the poor performance should be explored and appropriate recommendations should be made. Identification of a disorder without some educational modification is of little benefit to the child.

The first screening to be initiated in a school system could be arranged prior to kindergarten entrance. The areas of learning to be assessed would include at least the following: (a) hearing and vision; (b) mental capacity; (c) general behavior, play and social skills; (d) auditory behavior including comprehension and expression of language; (e) visual behavior, including various dimensions of visual perception and memory; (f) visual-motor skills; (g) conceptualization, including number, time and space; (h) motor behavior -- gross and fine coordination. The kindergarten teacher, alerted to patterns of strength and weakness, could modify groupings and activities accordingly. In large school systems, children could be grouped in rooms where specific skills would be emphasized. Small developmental kindergartens can be established so that certain children can be observed more carefully. Those designated as having specific learning disabilities might be assigned to a

special teacher to work on the deficits.

Another crucial period for screening follows the year of kindergarten. Readiness tests should be analyzed, not according to an overall state of readiness, but according to learning patterns -- that is, according to strengths and weaknesses. Such an analysis could provide the basis for groupings in the first grade, particularly for reading, writing and language. Children might be grouped according to their styles of learning, not just their rate of learning. While rate is an important variable, it is not always the most significant factor.

During the latter half of first grade, we recommend a more careful study of each child's reading ability. Detailed observations regarding the nature and number of words a child remembers, his comprehension, and his ability to attack new words should be included in the analysis. By second grade, specific attention should be given to writing, spelling and mathematics skills. The child's style of imagery should be observed in order to determine the most effective means for study. Every attempt is made to reduce random recommendations, particularly if the child has an uneven pattern of learning and development.

In the middle grades, all areas of language and academic achievement are important; however, special attention in the screening should be given to written language and to higher levels of conceptualization. Some students are adept at learning the skills for reading and writing, but they cannot conceptualize. Hence, by fourth or fifth grade when they are expected to see relationships, make comparisons, or draw inferences, their integrative problems become more apparent.

At the junior and senior high school levels, in addition to noting specific disabilities, we need to observe the size and balance of the academic load. As indicated previously, the child -- much like an electrical circuit -- has a threshold. Therefore we must avoid overloading. Some students with learning disabilities should be permitted to take a lighter load. Even though they do not have limited mental capacity, they do have thresholds for dealing with quantities of certain types of information. Conceivably, some can take lighter loads and go to summer school; others might plan to go through high school in five years rather than four years.

Identification of learning disabilities and modification of programs may extend through college. While some may terminate their education at the end of high school, those with high mental ability can complete a university program provided they receive special guidance and programming.

Although the earliest proposed plan for identification here was for kindergarten entrance, ultimately the screening programs should begin sooner -- at least by three years of age. With the help of pediatricians, social workers, psychologists, and other professional personnel, dynamic programs could be inaugurated to study infants.

After the children are identified we need special education to meet their needs. The nature of the program will depend upon the severity of the disorder and the multiplicity of involvements. Most communities need at least two broad categories of programs at various age levels. Special classes may be necessary for those children whose learning and adjustment problems are so great that they cannot profit from any regular instruction. Others, however, do not need to be removed from the group all day and can profit from many classroom activities. They can be seen by a learning disabilities teacher for an hour or more each day for work on special problems. Our experience suggests that the majority can remain with their peers for at least part of the day.

Careful planning of an integrated educational program is essential. Decisions regarding the type and number of activities a child can handle are based on discussions with many members of a school staff. One literally "walks" through the child's curriculum to determine in which areas he deviates. It should not be assumed that the learning disabled child is only integrated with his peers during art, music, or gym for these may be his most difficult and overstimulating periods. Integration into regular class activities depends upon the nature of the deficit, the child's level of functioning, and the specific skills or content to be learned.

At the very young ages, programs for nursery schools should be established. The importance of early stimulation cannot be overemphasized. In addition, considerable emphasis should be given to parent education so that the family can understand the child's problem and be of greatest help to him.

Whether the child is seen in a special class or a resource center, one must consider the need for "clinical teaching." We have defined this as individualized instruction based on objective test data and clinical observation (Johnson and Myklebust, 1967). Often we try to clarify the meaning of clinical teaching by describing what it is not. First, clinical teaching is not tutoring in school subjects. Our goal is not merely to keep the student up in his daily assignments, but rather to close the gap between achievement and potential. This means that some work must be done on the learning deficit.

Clinical teaching is not synonymous with overall reduction of goals. Unfortunately, many learning disabled children are placed in slow tracks as a means of helping them. While this plan may be effective in some instances, it is inadequate for a number of reasons. Since the children have at least average ability, many are understimulated in slow groups. Furthermore, many are worried that they are slow or "stupid" and this placement tends to confirm their suspicions. Often self concept is impaired when they are placed with groups of slow children. We emphasize the fact that learning disabled children do not have reduced potential; therefore, we do not necessarily reduce goals. Rather, it is the route to the goal which varies.

Clinical teaching is not merely teaching to assets. Our goal is to raise the deficit. If one works only on the things which the child does well, he may overcompensate to the point where the deficit can never be raised. We see the results of this approach among teen-agers and young adults who were permitted to respond orally in class rather than being taught to read and write. As young adults they are very handicapped in today's society; furthermore, many are still eager to learn.

On the other hand, clinical teaching is not merely teaching to deficits. It seems inadequate to try to raise the "valleys" in a child's psycho-educational profile by bombarding the deficits. For example, if a student has a deficit in auditory perception, the clinical teacher does not only select activities to improve auditory skills. Rather she utilizes each individual's integrities to try to raise the deficit. If the child is good visually, she may encourage the child to watch the speaker's lips; if the child cannot look and listen simultaneously, she may ask the child to close his eyes and listen very carefully to pairs of sounds or words. We attempt to balance the input stimulation so the child can learn.

Clinical teaching is not synonymous with multisensory stimulation. Often it is assumed that if you bomard the child through all sensory modalities he will surely learn. Our experience suggests that some children are overloaded by this approach and fail to integrate the information.

Clinical teaching is not simply a method approach. Rather methods are selected which match the child's style of learning. For example, in reading, one child may have auditory problems so that he cannot learn by a phonic approach which requires sound blending. Another cannot retain a whole word for a "look-say" approach. Therefore, methods are selected which capitalize on their strengths. Meanwhile, every attempt is made to facilitate learning through the impaired sensory channels.

Progress must be evaluated periodically to determine whether the procedures are appropriate. Goals may need to be adjusted from time to time. In some cases, progress is rapid; in others it is slow, but usually improvement can be demonstrated. Prognosis is dependent upon many factors, including overall level of intelligence, motivation, parental cooperation, age of identification, special education and level of aspiration.

Educational programs for children who have learning disabilities are not only justified; they are mandatory if we are to meet the needs of a rather large segment of the population. Without special education, many children will not be able to actualize their potential. Most will remain among the underachievers and, perhaps, will join the ranks of the school drop-outs, and eventually the unemployed. Unfortunately, this is a great waste of human potential. The rationale for special programs might well be taken from Gardner's book, Excellence. Although he was not referring specifically to children with learning disabilities, his eloquent message is pertinent. Gardner states, "The fact that large numbers of American boys and girls fail to attain their full development must weigh heavily on our national conscience. And it is not simply a loss to the individual. At a time when the nation must make the most of its human resources, it is unthinkable that we should resign ourselves to this waste of potentialities. Recent events have taught us with sledge hammer effectiveness the lesson we should have learned from our own tradition -- that our strength, creativity and further growth as a society depend upon our capacity to develop the talents and potentialities of our people." In another instance he says, "What we must reach for is a conception of perpetual self-discovery, perpetual reshaping to realize one's best self, to be the person one could be."

The goals and purposes of education for children with learning disabilities are the same as those for all children. Lest we become bogged down with special techniques and procedures, it is well to review the purposes of education outlined by Inlow (1966). He states that "basically, education has three major purposes: the Transmissive, the Adaptive, and the Developmental. To fulfill the transmissive purpose, education gives continuing stability to life by passing on to each new generation the tried, if not necessarily the true." -- "To fulfill its adaptive purpose, education helps the individual to acquire the skills, the knowledge, and the emotional adjustment needed by him to relate successfully to himself and to his world." -- "To fulfill its developmental purpose, education guides the individual toward his optimum growth, along these same dimensions, at each maturational level". -- "The transmissive, the adaptive, and the developmental are not serially related, rather mutually interacting

and reinforcing. All three relate to man as a holistic organism made up of many parts and to a social order which is, and has ever been, multifaceted and complex." These are our goals and purposes. Hopefully, with the inauguration of programs of early detection and proper education, these objectives can be attained.

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