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THE IDENTIFICATION AND INVESTIGATION OF VARIOUS TYPES OF LEARNING DISABILITIES IN CHILDREN

by

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT.</td>
<td>v</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>2</td>
</tr>
<tr>
<td>Need of the Study</td>
<td>2</td>
</tr>
<tr>
<td>General Questions to be Answered</td>
<td>3</td>
</tr>
<tr>
<td>General Procedure</td>
<td>3</td>
</tr>
<tr>
<td>Limitations</td>
<td>4</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>4</td>
</tr>
<tr>
<td>Summary</td>
<td>6</td>
</tr>
<tr>
<td>2. REVIEW OF LITERATURE</td>
<td>8</td>
</tr>
<tr>
<td>3. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.</td>
<td>21</td>
</tr>
<tr>
<td>Summary</td>
<td>21</td>
</tr>
<tr>
<td>Conclusions</td>
<td>22</td>
</tr>
<tr>
<td>Recommendations</td>
<td>25</td>
</tr>
<tr>
<td>LITERATURE CITED.</td>
<td>31</td>
</tr>
</tbody>
</table>
The purpose of this professional paper was to identify and investigate various types of learning disabilities found in elementary school children.

The paper points out that children with learning disabilities have been described by many different terms, depending on who is doing the diagnosis. The author presents a short history of the first recorded learning disabilities and how they were first regarded by the educational profession.

For a number of years, the origin of learning disabilities was subject to much debate. Prominent researchers at this time were Orton, Hinshelwood, and Morgan.

Some clinical aspects of learning disabilities are presented in this paper to give the reader a better general understanding of the origin and nature of learning disabilities.

Emphasis is on the early recognition by means of tests and observations of disabled learners so that they may be brought to the attention of parents and school officials, thus ensuring that they will not be passed over by our present educational system.

Certain methods of teaching are more appropriate for disabled learners than other methods, but the paper stresses the importance of developing the whole child in order to help him become a well functioning member of society.

When a school program is developed that takes into account the child's particular disabilities and helps him compensate for them, the brain-injured child of normal or near normal intelligence is able to progress in school frequently as well as a normal child with comparative ability. Therefore, it is imperative that school personnel be able to identify these children as soon as it is possible to do so, and that a program is developed to meet these children's educational needs.

The books and journals used for research in this paper can be found at the Montana State University Library.
Chapter 1

INTRODUCTION

A handicap in reading is a crippling disorder in a society such as ours that is increasingly dependent upon literacy. When the avenue to printed material is blocked, the individual not only has the treasures of literature closed to him, but he will also find it extremely difficult to earn a living, to find his way about our complex cities, and to assimilate information that is necessary for his adjustment socially. Those corners of society in which a nonreader might secret himself and attempt to become undistinguishable from his literate contemporaries are almost nonexistent.

It is of considerable importance to be aware of the different senses in which the concept of learning disability is employed. Any hope of recognizing causes and providing treatment will depend upon the differentiation of one type of disorder from another.

If children with learning disabilities can be identified early by adequate history, careful examination, and special tests, they can be greatly helped. Usually medication and appropriate educational methods are advantageous; but even if these are not available, the clarification of the problem, the explanation to parents and teachers, the removal of the blame and guilt can go far to make life more tolerable.
Statement of the Problem

The purpose of this study was to identify and investigate various types of learning disabilities in children.

The researcher used Samuel Kirk and Barbara Bateman's definition of a learning disability:

A learning disability refers to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subjects resulting from psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural or instructional factors. (17:73)

Need of the Study

A school age child is labeled as having a "learning disability." What does this mean to the confused child, to the bewildered parent, to the frustrated teacher? Children who are referred to as having a learning disability, are children with various psychological and educational developmental deficits but who are normal in sensory, physical, or intellectual attributes. These children have been variously labeled, depending not only on their type of difficulty but also on the professional discipline that makes the diagnosis. A physician may diagnose a child as dyslexic, while an educator may label him as a severe case of reading disability. On the other hand, a neurologist might label a child as brain damaged; a psychiatrist might label his difficulty as an emotional disturbance; and a psychologist might say his problem stems from poor visual perception.
In the light of these conflicting opinions, it appears that a need exists to identify and investigate recognized learning disabilities in today's school child. Effective ways of dealing with these children cannot be found until their problem, its causes and cures, can be identified and effectively dealt with, thus insuring each child the maximum good from his educational endeavors.

General Questions to Be Answered

This study attempted to determine some suitable answers to the following questions pertaining to children with learning disabilities.

1. What is a learning disability?
2. What causes a learning disability?
3. What are the distinguishing characteristics of children with learning disabilities?
4. What can be done to nullify the effects of learning disabilities?

General Procedure

The researcher identified and investigated various types of learning disabilities in children through a review of related literature. She gave a brief history of the first recorded observations on "word-blindness," including some early research done in this area.

The researcher presented some conclusions that she made from her review of literature and has made various recommendations concerning
children with learning disabilities.

Included at the end are the names and a brief explanation of some of the tests that are available for administration to disabled learners for purposes of identification and diagnosis.

Limitations

This study is limited to material that can be found in the Montana State University Library.

This study does not include specific activities that can be used by a person working with disabled learners for the purpose of improving academic performance. It is limited to investigating and describing various learning disorders with some conclusions and recommendations made by the researcher.

Definition of Terms

Functional Disability. A dysfunction believed not to be of physical or organic base, but rather of psychological origin.

Auditory Dysfunction. Inability to understand, process, or respond appropriately in words to material that is heard.

Auditory-Vocal Channel. The channel through which one hears, comprehends, and expresses oneself in words.

Hearing Acuity. Ability to hear sounds; not to be confused with ability to gain meaning from what is heard.
Kinesthetic Learning Techniques. Remediation techniques which aid learning through large muscle activity; for example, writing large letters in the air.

Motor Program. A deliberate use of specified physical activities in a therapeutic way; for example, any physical education activity planned to strengthen a weak motor function. This area would include fine-motor function and gross-motor function.

Perceptual Motor Disability. Limited facility in the coordination of seeing and doing.

Tactile Aids. Aids which utilize the sense of touch in remediation; for example, finger tracing of a letter cut from sandpaper gives an additional learning "input."

Visual Motor Channel. The channel through which one gains information through seeing, making association among things seen and expressing oneself in gestures.

Visual Acuity. Relative ability to see at a distance of twenty feet; not to be confused with ability to gain meaning from what is seen.

Dyslexia: Minimal Cerebral Dysfunction: Emotionally Disburbed: Brain Damaged: Reading Disability. Vague terms used to describe children who do not function well in the classroom, especially when the
cause of behavior is not yet determined (16:25-27).

Hyperactivity. This term is applied when a person is generally more active in a purposeless sort of way than are most other people his age when he eats, reads, studies, or does any other activity. He is constantly in motion.

Hypoacusis. The loss in any section of the frequency range of auditory sensitivity.

Anoxia. A deficiency or lack of oxygen, often causing brain damage and often occurring at birth.

Agnosia. The inability to interpret sensory impressions, to identify familiar objects through a particular sense organ.

Aphasia. A defect or loss of the expression of speech, writing or symbols, or of understanding spoken or written language due to injury to, or disease of the related brain centers (19:6).


Summary

In discussing a subject such as specific language disability, many terms and expressions are used by some authors which are not
accepted or used by others. The term "dyslexia" is a good example of this. To some authors it means a general term referring to all types and degrees of impairment in reading which are observed in patients with neurological dysfunctioning. Others may use it to define a situation in which a child is unable to learn to read with proper facility despite normal intelligence, intact senses, proper instruction, and normal motivation. Although this latter definition seems to be the most accepted one, many writers still disagree and assign meanings to the term "dyslexia" which cover a long continuum.

For this paper, dyslexia will be used synonymously with "specific language disability and strephosymbolia," Orton's term for specific language disability. Dyslexia will mean a situation where a child with normal intelligence, intact senses, and who has had normal instruction still cannot read with proper facility.
In order to facilitate understanding regarding theories, techniques, and methods that deal with dyslexia, it is necessary to present a background of information concerning the history of this difficulty in reading.

The first evidences of the recognition of such a disability as dyslexia comes from the mystical writings of St. Teresa of Jesus in 1515-82. These writings mention how during her states of ecstasy words and letters would lose their meaning. According to A. L. Benton, Johan Schmidt (1624-90) was one of the first physicians to clearly describe the loss of an ability to read. In 1843, in a personal account written by Professor Lordat of Montpelier, he describes his inability to make sense out of printed symbols following a recovery of a speech disorder. Other instances of acquired aphasia in which the individual became unable to comprehend letters and words were briefly described by Forbes Winslow in 1861; Falret in 1864; Peter in 1865; and Schmidt in 1881 (1:25-26).

Kussmaul is most often credited with being the first in 1877 to isolate an aphasic loss of the ability to read. It was he that proposed the term, "word-blindness." The term "dyslexia" was first suggested by Professor Berlin of Stuttgart in 1877 in a monograph.

Such was the sparse background upon which the conception arose.
about a defect in the art of reading, which it was felt, was inherent or inborn, and not acquired through disease. In 1895, James Hinshelwood, a Grasgow eye surgeon, wrote to the Lancet (a newspaper) on the topic of visual memory and word-blindness. This letter prompted Dr. Pringle Morgan, a general practitioner, to describe a paradoxical case of an intelligent boy of fourteen who was incapable of learning to read. This became one of the first cases that subsequently became known as "congenital word-blindness." At about this same time, James Kerr, Medical Officer of Health of the City of Bradford, and a pioneer in school hygiene wrote of the:

... unique cases found with most bizarre defects. Agraphia, for instance, may be unintelligible to a teacher, especially if it occurs, as in one of my cases, in a boy who can do arithmetic well so long as it involves Arabic numerals only, but writes gibberish in a neat hand for dictation exercises (20:1378-1379).

The early detection of these cases remained for a time with British observers and especially with ophthalmologists. Hinshelwood (13:1506-1508) wrote in a case study in 1902:

I have little doubt that these cases of congenital word blindness are by no means so rare as the absence of recorded cases would lead us to infer. Their rarity, is, I think, accounted for by the fact that when they do occur, they are not recognized. It is a matter of the highest importance to recognize the cause and the true nature of this difficulty in learning to read which is experienced by these children, otherwise they may be harshly treated as imbeciles, or incorrigibles, and either neglected or punished for a defect for which they are in no wise responsible.

The syndrome of "word-blindness" was becoming known outside of Great Britain. Reports came from Lechner in Holland in 1903, Wernicke
in Buenos Aires in 1903, and Peters and R. Foerster in Germany in 1903-1904. The first American observations being made by Schapringer in 1906 (1:25).

What could be considered the early history of this condition was closed by 1917, when Hinshelwood brought out his second monograph which was entitled "Congenital Word Blindness." The early period had been one of description and identification. Thereafter began a stage of analysis accompanied by much discussion with considerable change in orientation. In 1946, the multifactorial notion reached its peak when H. M. Robinson listed some twelve causes or varieties of reading failure. Scientific attitudes toward the subject of dyslexia have oscillated like a pendulum over the past sixty years.

Samuel T. Orton entered the scene in 1952. As Director of the Greene County Mental Clinic in Iowa, he discovered a number of children who could not read. His first patient was a sixteen year old junior high school student who had never been able to read. As the boy himself told Dr. Orton, "Mother says there is something funny about me, because you could read anything to me and I'd get it right away, but if I read it myself, I couldn't get it." Orton found that there appeared to exist noteworthy correlations between left-handedness or ambidexterity and a tendency toward reversals when attempting to read and to write. These tendencies could even culminate in mirror-reading and mirror-writing.

Orton proposed the term "strephosymbolia" for these phenomena
on the idea that there lay a physiological state of ambiguous occipital
dominance, a basis largely physiological in nature; a faulty patterning
of brain function. Thus, it is apparent that neurological concepts of
reading difficulties are not necessarily new, neither are they necessarily
in agreement from country to country.

Orton's theory of dominance is probably the most widely discussed
theory of dominance. Orton suggests that the right hemisphere of the
brain controls the left side of the body, and the left hemisphere
controls the right side of the body. He further theorized that the
right-sided person develops a memory for printed words in the left
hemisphere and also develops memory traces in the opposite hemisphere.
These are mirror images of those in the opposite hemisphere. This is just
the opposite set of dominant circumstances that happens to the left-sided
person. However, difficulties may arise if the person fails to develop
a completely dominant side and remains an incomplete or mixed laterality.
In this case, Orton says there will be confusion between the two hemi-
spheres as to which image to produce. The child will have difficulty
in learning to read, write, spell, and speak; and many reversal errors
will be made (21:19-30).

Connors states,

. . . that much evidence points to the fact that after birth
the left hemisphere becomes increasingly specialized for language
functions and symbolic processing, while the right appears to
become specialized for spatial and temporal processing.
He concludes that it is not surprising that many people, starting with Hinshelwood and Orton, have noted some relationship between "dominance" and reading disorders. This fact has unfortunately been obscured by the relation of cerebral dominance with handedness, which is only a rough guide to cerebral dominance, especially in left-handed people.

Conners goes on to speculate that in certain children either cerebral trauma or genetic factors lead either to left hemisphere, right hemisphere, or diffuse impairment. He feels that stimulant drugs would improve reading, spelling, or other language behavior when the cause is generalized impairment of attentional functions or when impairment to either hemisphere is such that by increasing stimulation to those areas some threshold is achieved which allows the system to function consistently (4:106-107).

This past history of neurological problems only serves as a foundation for the improved understanding of "specific language disabilities" today. In addition to understanding the history of dyslexia, it is essential that one become familiar with the medical terms and medical aspects of neurological problems.

Brain damage refers to any lesion involving the intracranial contents which is clinically characterized by disturbing behavior. Such a disturbance of behavior may result from impairment of the emotional, intellectual, sensory, and/or motor spheres of activity. A defect of any one of these will result in a modification of the relationship of
the patient to his environment.

A lesion in the cortex can result in the permanent conditions of short attention span, lack of alertness, confusion, and disorientation. There may also be disabilities in sense perception, voluntary movement, learning, remembering, thinking, emotion, consciousness, and personality integration. Disruption of smooth and coordinated motor function may be caused by damage to the cerebellar system (Thomas, 25:108).

Benton (1:86) describes two types of dyslexia, parietal and occipital. In parietal dyslexia, a combined dyslexia-dysgraphia, the responsible lesions are presumed to be in the posterior parietal lobe, particularly in the regions of the angular and supramarginal gyri. In the occipital kind, the parieto-occipital area of the dominant hemisphere is involved. Drew (17:70) mentions parietal lobe involvement as the anatomic substrate for a disturbance of Gestalt function, which is a part of dyslexia as well as in other learning disabilities related to neurologic disorder.

Geshwind (25:133) writes that since the angular gyrus acts in some specific way to process visual language, "bilateral maldevelopment of this region would be substrate for difficulty in learning to read."

Brain injury can occur at any stage of development; prenatal, paranatal, or postnatal. It can result from genetic factors, toxic agents, physical deprivation, infectious disease, or injury. Frequently
listed as prenatal causal factors are maternal diseases, such as encephalitis, syphilis, and German Measles during pregnancy; blood incompatibility, defective cell structure, and some metabolic disorders, and poisons in the blood stream of the mother. Paranatal causes are very prolonged or difficult labor and a difficult delivery or the use of instruments; marked prematurity; and lack of oxygen during the birth process. Postnatal causes frequently mentioned are infections accompanying measles, whooping cough, scarlet fever, encephalitis, meningitis, and other childhood diseases; poisons, drugs, and intoxicating substances which poison the tissue cells of the brain; malnutrition, prolonged and frequent seizures; and severe head injuring (7:22). The injury may be localized and only affect the functions controlled by that part of the brain; or the injury may be diffuse and cause impairment in many areas of behavior and learning.

Benton (1:98) in listing the behavior traits of the brain-injured child of adequate general intelligence or only considered mildly retarded, categorizes them in three groups. Motor characteristics which include over activity and restlessness, awkwardness in locomotion, and poor articulation and disturbances in rhythm. Intellectual traits are impairment in ability to concentrate, distractibility, visuomotor and perceptual disabilities, and weakness in reading, arithmetic, and abstract reasoning. Personality traits are impulsiveness, irritability, outburst of aggressive feeling, and a lack of affective bonds between the child
and other people. Other experts, Kastor and Hubbard (17:84) add motor disinhibition or the failure of the brain-injured child to refrain from responding to any stimulus which can produce a voluntary-muscle response, dissociation or the inability to see things as an entirety, figure-background disturbance, and self-devaluation. Kaliski (18:4-10) adds short attention span; distorted body image; disturbed spatial temporal and size relationships and sequences; confused laterality; and general language and specific speech disturbances.

Strauss and Lehtinen (23:118) and Goldstein (11:54) mention the impairment in attitude toward abstract ideas or concepts; things in concrete situations can be tolerated and understood, but those in an abstract situation usually cannot be. The brain-injured child characteristically has difficulty in seeing relationships and in drawing conclusions based on these relationships.

A variety of functions can be impaired by brain injury, either singly or in combination. These functions that can be impaired are: perception, cognition, judgment, concentration, impulse control, visual and auditory memory, perceptual motor functions, and symbol organization. Brain injury can contribute to certain behavioral deviations, language disorders, and learning disabilities in the absence of specific neurological signs of mental retardation (5:13).

Studies have pointed out that disabled readers are more often left-handed, or left-sided, have crossed or mixed dominance, or exhibit
an inconsistency as of preference in left- or right-sidedness

Not all of these researchers stand on the same platform, however, as to the importance and significance of such factors. Some authors have come out against this hypothesis in denying that there is any correlation between various type of dominance and reading ability. Other authors have stated that they believe it makes no difference one way or another in reading ability (24:100-108).

Delacato (6) says the establishment of a preferred hand is developmental and 85 per cent of the time it proves to be the right hand. He further states that if the right hand becomes dominant, the right eye will generally become dominant, because it is the closest hand. Harris (12) disagrees saying that this only happens two-thirds of the time (6:33-42).

The development of a preferred side is still unknown, although there are many theories concerning this phenomena. It is known, however, that most infants use both hands an equal amount and that they begin to show a preference between eighteen months and five years (24:108).

As the child continues to use his "choice hand," that hand becomes more skilled than the hand that is not chosen. The eye choice then develops and usually it is the eye closest to the choice hand. Even though both eyes are being used to see, the eye that is predominant becomes the stronger one. This pattern is also followed for footedness. As these processes are taking place, hemispheric function is changed
into a relationship with the dominant hemisphere controlling the skills while the sub-dominant hemisphere serves a subservient role. This particular development begins at age three and reaches its final stages between five to eight years of age. Cultural factors can determine the complete establishment of hemispheric dominance, with brain injury being a factor with one of the highest correlations (6:33-42).

Gesell and others began the tracing of the developmental sequence of an individual. They looked at individuals from birth on and developed insights into the fact that handedness was developmental. They also found that there seemed to be many other factors affecting neurological maturation and dominance besides handedness (10:91-112).

Although many studies show more left-sidedness than right-sidedness in problem readers, the majority of the authors read by this researcher found that mixed dominance or inconsistency in preference of dominance were by far the most frequent factors.

Johnson (15:101) also believes that neither hand nor eye preference seems to be completely significant in reading disability. But, a mixing of the two may point to a basic problem. In agreement with this is Delacato's statement that the presence of incomplete dominance is by far the most harmful state in reading development.

In looking further at the continuum of dominance, Orton, Dearborn, and Delacato all agree that mixed dominance is a more serious condition
than complete left-sidedness.

In attempting to apply problems in cerebral dominance to reading problems, it is apparent that a great majority of authors dealing with this factor feel that an appreciable number of disabled readers show poorly developed or left-developed laterality and that slow speech development is also common. The majority of these studies want to say that poor laterality might be possibly linked to incomplete cerebral dominance. Zagwill asks the question the informed educator would ask when he says, "If this is so, is the maldevelopment genetic or is it the result of the brain injury?" He may also wonder why all such children are not poor readers.

To these questions, Zagwill offers some hypotheses of why some illateralized children have reading difficulties. First of all, he agrees slow speech and reading problems are common in children who switch speech from left to right cerebral hemisphere. Second, he says that a "certain portion" of children with poor laterality have a constitutional, or hereditary, weakness in maturation. His third theory is to the fact that children lacking a strong hereditary laterality or having a strong sinistral laterality, may be more vulnerable than other children to the stress of school (Ingram, 14:68-70).

Family groups may have an influence on the handedness that develops. Orton (21) and Ingram (14) have found that left-sidedness is apparent in family groups in which an appreciable number of dyslexics
are found. Ingram states, on the other hand, that many disabled readers are fully dextral, and that their families have been so.

It is not the purpose of this paper to explore all of the theories offered in trying to explain reading disabilities, but rather to show that although these theories have produced approaches that work on some cases, none of them have been proved, and no general agreement has been reached. We must, however, recognize that dominance is one of several possible causes of reading disability.

While there is agreement among the experts on medical terms, medical aspects, and the importance of dominance with the neurologically impaired, there have been almost as many lists of characteristics or symptoms of brain injury as there have been articles written on the subject. The majority of these lists include several characteristics emphasized by Strauss; these are activity, distractibility, perseveration, short-lived aggression and destructive behavior, poor controls, and heightened variability (23:100).

Even as Strauss emphasized the visual-perceptual approach for remediation, others emphasized approaches to remediation aimed at different characteristic defects of children with learning disabilities. One can discern, for example, a linguistic approach, Bateman; a motoric approach, Kephart; a movement approach, Barsch; a neurological reorganization approach, Delacato; a visual-perceptual approach, Frostig; the application of tactual techniques, Fernald; and other
approaches not as neatly characterize (e.g., Getman and Haeussermann) (18:4-10).

Perhaps no other single label connotes a greater variety of seemingly unrelated conditions in human beings than the term "learning disabilities." Conditions categorized as learning disabilities include, among others, dyslexia, dysgraphia, perceptual handicap, neurological impairment, and autism. Professional reaction to this diverse assortment of labels has been nicely characterized by Capobianco, "Perhaps the one irrefutable characteristic attributable to children with learning disabilities is their wide variety of behavior (2:187)."
Chapter 3

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The disabled learner is a person very much like the rest of humanity. He is not a "type," but rather a variant of one type; therefore, he has more or less of the common characteristics of all other pupils in school. He has the same basic needs, the same ways of learning and about the same amount of variability and unevenness of abilities and other resources. By definition, somewhat less intellectual, he does not reason or learn to manage abstractions and symbols as well as his peers.

If an individual cannot read and write reasonably well, his alternatives in today's world are extremely limited. At some distant time in the future, education may evolve to the point where reading and written communication are no longer the primary foundations for teaching and learning in our school.

The concept of the importance of symbols in the lives of mankind was never more succinctly put than in the phrase, "In the beginning was the Word."

On the word; written, spoken, seen, and heard hangs civilization, the thoughts, desires, and accomplishments of mankind (3:140). Yet a portion of our population is denied access to all of these things.
The disabled learner has the same fundamental needs as other individuals, he also has the same "status" needs for belonging, affection, and likeness to others. His inability to realize these needs through the channels normally open to average and brighter children motivates much of the disabled learner's behavior. He requires contact and harmony with reality in order that he may have a rational basis for his behavior. He requires the opportunity for increasing self-direction as he grows older and learns to manage affairs more adequately. He, too, needs to grow in self-realization, in perception of selfhood. He needs to understand and accept himself for what he is. He needs the same balance between success and failure that all other children need.

**Conclusions**

In the classroom setting, the brain-injured child may not be recognized as a child in need of special teaching techniques. A teacher's guide published by the Orange County, California, Board of Education in 1959 describes the most common picture of the neurologically handicapped as a hyperactive boy with reading and writing retardation who over-acts emotionally.

The brain-injured child cannot sit still in class. He may suddenly speak out in class, reporting an irrelevant happening or an insignificant detail as important. As long as this child has only to perform simple, uncomplicated responses, he can achieve as well as the
other children. But, school tasks do not stay relatively easy; and as these tasks become increasingly complex, the child's perceptual disturbances become apparent.

Fundamentally, the brain-injured child learns in the same way that other pupils learn: by imitation, reasoning, and generalization. He tends to be more impulsive and to accept a fairly workable solution or approximate result rather than exercising caution in advance. Or, he may be severely critical of the adequacy of his behavior for the situation at hand. He is usually more insistent on knowing what the purpose of an activity is or where the activity is leading. He insists on quick results and is impatient and inclined to lose interest in the face of deferred or intangible returns (8:65).

Strauss and Kephart (24:171) also noted that the brain-injured child follows the same course as the normal child in the development of the sensory-motor, perceptual, language, and conceptual levels. At an early age, this developmental pattern deviates in greater or lesser degree according to the severity of the damage of the organism.

The brain-injured child's percepts become a collection of cues which serve to identify the object but are not related into the structured whole. The child often sees his world as a series of shifting, poorly related scenes in which foreground and background images seem to merge in confusion or as isolated events, detached from their context are accepted as reality.
A similar situation occurs in relation to the brain-injured child's awkwardness. There is a lack of integration of the perceptual and motor systems, as well as a failure of the visual perceptual processes to provide substantial and clearly defined structured patterns for the motor actions to follow.

The minimally brain-injured child, with which this paper is concerned, may not show any of the usual neurological signs. Stone (22:72) suggested that the mildly brain-injured child would show immature, retarded, or regressed motor play, locomotion, grasping, sucking, devouring, or postural reflexes or the pattern of clinging, with facile identification tendencies and anxiety. Clemments (5:13), in writing on minimal brain damage, states that the symptoms may not be apparent in infancy, often present as developmental deviations in the preschool years, and most frequently noticed in the early school years when adjustment and academic problems occur. The two most striking features of brain damage are hyperkinesis and distractibility. As indicated in the previous chapter, the overall demeanor of this type of child is disorganization, disruptiveness, and being very unpredictable. His behavior is typically non-goal-directed, semi-involitional, and seemingly an irrational deviation from normal patterns.

Although different authors list various characteristics for the brain-injured child, they all list as a common denominator what appears to be disorganization of the child's functioning at some level, in some
Recommendations

The retarded brain-injured child is often referred to as a "slow learner" without qualification for the kind of learning under consideration. However, in instances of learning simple tasks, the brain-injured child may learn as quickly as the normal child. He is impoverished in the breadth and complexity of relationships into which the acquired simple learning can enter. The phenomenon of rapid learning is met frequently in brain-injured deficient children when the stimulus material is clearly organized and vividly structured. When the child has thus grasped the organization of the task, a moderate amount of repetition will make it permanent (24:189).

When a program is developed that takes into account the child's particular disabilities and helps him compensate for them, the brain-injured child of normal or near normal intelligence is able to progress in school frequently as well as a normal child with comparative ability. Therefore, it is imperative that school personnel be able to identify these children as soon as it is possible to do so, and that a program is developed to meet these children's educational needs.

M. Monroe of Chicago has constructed a battery of six basic investigations using six different tests which take into account a comparison of the child's composite reading grade with the average chronological, mental, and arithmetical grades. In contrast to this
method, the educator may turn to the relatively simple but practical tests of reading which Hinshelwood employed as a routine procedure.

It seems advisable to have at one's disposal several types of reading tests. By the use of such techniques, the developmental cases of dyslexia might be sifted from other types of retarded readers. Special neurological and psychological investigations are called for beyond these scholastic tests. Whenever routine tests are adopted in testing for learning disabilities, careful attention must be paid to the speed with which the child reads aloud. Furthermore, the nature and number of mistakes should be observed and recorded.

When testing children with learning disabilities on silent or oral reading, it is not infrequently found that the child performs no worse, if not at times better, if the book is held upside down. To some children letters standing in isolation possess little or no identity as units of a verbal sort, but instead they take on concrete non-linguistic properties. Thus, a capital Y might be a pole support or an S might look like a traffic sign.

Another important point in reading performance is the variability of performance. The child may execute reversals, repetitions, omissions, intrusions, and so on at one sitting but not at another.

Although the children generally write very badly, they can often copy printed or cursive texts quite accurately. Trouble occurs when they try to write spontaneously or from dictation (Harris, 12:259-70).
The disabled learner often displays penmanship errors quite often. The most common defects are: malalignment, intrusion of block capitals into the middle of the word, omissions, or repetitions of words and letters, rotation of letters, of punctuation marks, and misspellings. Often times, unusual mistakes can be found in this child's work. They may use unorthodox ways of joining adjacent letters. One letter may fuse with the next to form a strange merger, difficult to identify out of context.

The spelling mistakes in the writings of these children differ in many respects from the errors made by normal individuals who lack educational training. One characteristic is the tendency by the word-blind to employ too few letters, either by telescoping the words together or by omission of letters.

Arithmetic retardation may be associated with disabled learners but not necessarily. Some children may have an inability to visualize numbers or to retain a series of digits in the memory for a sufficient length of time to do the arithmetic problems.

A similar inconsistency may apply to their artistic abilities. Ordinarily, their achievement is to be rated as average, while many of these children seem to be peculiarly inept as far as drawing is concerned. Some show no sense of perspective in drawing and poor color sense.

The penmanship, spelling, silent and oral reading, errors
listed are all clinical manifestations of learning disabilities which help a clinician analyze and diagnose children with learning disabilities. However, though this condition can be analyzed, there is no reason to think it always occurs in isolation. It can, in fact, be part of any number of causal factors (Goldstein, 11:60-67).

Grace Fernald has done extensive work in the field of treating children with learning disabilities in the Clinic School at the University of California, Los Angeles. Fernald approached the remediation of basic school subjects in the spirit of a scientific pedagogist. She says:

All difficulties in individuals of normal or superior intelligence can be removed or compensated for, provided proper techniques can be employed. Emotional disabilities, poor physical adjustments, and difficulties in school subjects can be overcome if proper diagnosis and treatment can be provided (9:2).

Whether failure in school is due to emotional problems or vice versa is not entirely clear, but many practitioners observe that school failure and emotional problems are related. Fernald listed four conditions to help cope with this problem:

1. Do not call attention to emotionally loaded situations.
2. Do not use methods by which the individual cannot learn.
3. Do not subject a child to conditions which cause him to feel conspicuous or embarrassed.
4. Try to direct the child's attention to his progress rather than to what he cannot do.
Fernald felt that success was necessary for favorable conditioning to reading and other school subjects, because failure can cause emotional blocking with stops all meaningful progress (9:2-4).

As stated in Chapter One, the purpose of this paper is to identify and investigate various types of learning disabilities in children. It is not the researcher's intention to prescribe various teaching techniques for children with learning disabilities other than to note that there are certain techniques that work better with this type of child. Although it might be added that good teaching techniques employed by a competent, concerned, accepting teacher work well on most school children.

Kinney and Roush give some suggestions for working with the learning disabled child that could apply to children who do not have any specific learning disabilities.

They suggest that the teacher or counselor let the youngster understand that you are aware of his weaknesses and strengths. State your awarenesses in his terms and in a non-threatening way since his feelings may not allow him to open the subject. Emphasize how the child feels concerning his weak performance and encourage him to talk about his feelings. Be honest with the child in a sincere, straightforward fashion. Do not appear infallible and without error to the child who feels he has many shortcomings.

The child should be helped to understand his successes and to
actively enjoy and savor these successes as his remediation program moves along. The child should be aware of his progress and be a collaborator in helping to structure his own education program and in the formation of goals. He should be asked what he wants to try, what goals he feels are within his reach (Kinney and Roush 16:25-27).

From the researcher's investigation into learning disabilities, certain conclusions have been reached by reviewing pertinent literature in this area. First of all, a child diagnosed as having a learning disability has one or more significant deficits in his essential learning processes requiring special techniques for its remediation. Second, this learning disability will appear as a discrepancy between expected and actual achievement in one or more areas, such as spoken, read, or written language, mathematics, and spatial orientation. Third, the learning disability referred to is not primarily the direct result of sensory, motor, intellectual, or emotional handicap, or the lack of an opportunity to learn. Fourth, deficits should be defined in terms of accepted diagnostic procedures in education and psychology.

Children who are unable to learn as easily and as quickly as other children need to be identified as soon as possible so they may receive special attention and training to facilitate their educational, social, and emotional development.
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