Dyslexia: a practical cursory background to be used by the classroom teacher as a guide in identification of the dyslexic child and in the selection of suggested remedial methods

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DYSLEXIA: A PRACTICAL CURSORY BACKGROUND
TO BE USED BY THE CLASSROOM TEACHER AS A
GUIDE IN IDENTIFICATION OF THE DYSLEXIC
CHILD AND IN THE SELECTION OF SUGGESTED
REMEDIAL METHODS

by
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A great deal of emphasis has been placed on reading today. Newspapers, magazines, schools, etc., are stressing the importance of successful reading. Students currently graduating from high schools are required to be able to read at, at least, a sixth-grade level.

The critical importance of the ability to read becomes clearer when it is realized that during the later school years, almost 90% of a student's studies depend upon reading ability (Goldberg & Schiffman, 1972). The student who fails to develop highly-skilled reading abilities is faced with a serious handicap for the future as a productive citizen (Goldberg & Schiffman, 1972).

The obvious disadvantages of being a poor reader include failure at school, the prospect of a less-rewarding income and less social status (Goldberg & Schiffman, 1972). Another factor interwoven with reading failures is that poor reading, or the results of it, may lead to juvenile delinquency and other antisocial consequences (Goldberg & Schiffman, 1972).

About 20%-40% of the school population is handicapped by reading problems, and there are as many as 8,000,000 to 20,000,000 who have reading problems (Goldberg & Schiffman, 1972).
Some neurologists believe that in the center of a community of poor readers, there exists an amount of cases where the tendency of the learning defect is inborn and independent of any intellectual inadequacies, emotional factors, educational or linguistic shortcomings which happen to co-exist (Critchley, 1964). These cases are examples of "developmental dyslexia" and identifying these cases among the multitudes of poor readers is not an easy task (Critchley, 1964). It has been suggested that 23,000,000 is a low estimate of those with some degree of dyslexia in the United States today (Clarke, 1973).

Statement of Purpose

It was the intent of this paper to provide the classroom teacher with a practical cursory background to be used as a guide on dyslexia, emphasizing the following areas: (1) a discussion of the term dyslexia as found in the research literature; (2) a brief etiological background; (3) characteristics; and (4) suggested remedial methods that have proven successful in the past. Major emphasis was placed on assisting the teacher in identifying the dyslexic child and presenting some remedial methods to be used.

While a vast array of information has been accumulated on the subject of dyslexia, there exist noticeable gaps in interdisciplinary communication which have prevented full use of what is known (Westman, Arthur & Scheidler, 1973).
Definitions

Reading Disability. For research purposes, "general" reading disability has been defined "as underachievement in reading of one or more years at the elementary level" (Hill, 1973, p. 51).

In describing the reading problem, it is necessary that a distinction be made between "slow" reader and the "retarded" reader (Goldberg & Schiffman, 1972).

Slow Reader. "The slow reader is one who reads below his grade level, but whose level at reading is consistent with his intelligence level" (Goldberg & Schiffman, 1972, p. 18).

Retarded Reader. "A retarded reader is one who reads below his grade level but who may be of higher-than-average intelligence" (Goldberg & Schiffman, 1972, p. 18).

Dyslexia. It should be pointed out that there are differences among more precise definitions of dyslexia, and it seldom means the same thing to any two people. In the field of learning disabilities, dyslexia is a term used to identify children who have difficulty in learning to read (Lerner, 1971 (a)). Dyslexia means faulty or defective reading; it is the inability to read even with adequate teaching.

The writer used the summary by Lerner (1971 (a)), who indicates that the diverse definitions of dyslexia cover a
wide range and include:

(a) evidence of an etiology of brain damage, (b) the observation of behavioral manifestations of central nervous system dysfunction, (c) the indication of a genetic or inherited cause of the reading problem, (d) the presence of a syndrome of maturational lag, (e) use as a synonym for reading retardation, and (f) use to describe a child who has been unable to learn through the regular classroom methods (p. 185).

**Limitations**

Research was reviewed from 1962 to the present. Dyslexia, as it pertains to the reading disabled child in the elementary grades, was investigated.

This paper was limited to providing the classroom teacher with a practical background on dyslexia. Major emphasis was placed on the characteristics of dyslexic children and suggested remedial methods to be used by the classroom teacher.

**Summary**

In this chapter, it was indicated that the ability to read is probably more important in our society than ever before. Almost 90% of a student's studies depend upon reading ability.

Dyslexia has many diverse definitions and seldom means the same thing to any two people. In the field of learning disabilities, it means faulty or defective reading. Other definitions covered in this chapter were reading disability,
the slow reader and the retarded reader.

Literature on dyslexia was researched from 1962 to the present, and was mainly directed to the elementary-grade child.

The intent of this paper was to furnish the classroom teacher background information to be used as a practical guide on dyslexia. The effect of dyslexia warrants research; therefore, discussion of the term dyslexia, its etiology, characteristics and suggested remedial methods were emphasized.
CHAPTER II
THE TERM "DYSLEXIA" AND ETIOLOGY

Introduction
One child in every seven has the problem, up to three-quarters of juvenile delinquents may suffer from it, and such people as Thomas Edison, General George S. Patton, President Woodrow Wilson, Hans Christian Anderson, Albert Einstein and Nelson A. Rockefeller became successful in spite of it. The problem these people have in common is called dyslexia (Young, 1976).

Dyslexia, as previously stated in Chapter I, means defective reading. Kochevar (1975) indicates that 5% of the population is estimated as having dyslexia.

Dyslexia has been known to the medical field for over half a century. The first bridges to education were laid by an American neurologist, Dr. Samuel T. Orton. Dr. Orton believed that the inability to read was due to a laterality problem, which is confusion between the two sides of the brain (Wagner, 1971). Dyslexia is recently becoming a more widely used term in education to identify children who are having difficulty competing with other students (Bush & Waugh, 1976).

This chapter briefly discusses the term dyslexia. There
CHAPTER III
CHARACTERISTICS

Introduction

"The initial problem of the dyslexic child is that he is seldom recognized" (Crosby & Liston, 1976, p. 114).
Vernon (1973) states that "the child is not of low intelligence nor emotionally disordered, he need not be suffering from brain damage; he is not the victim of adverse environmental circumstances" (p. 12).

Bryant (1973) indicates that "dyslexia first becomes evident as a child reaches kindergarten and first grade, though it is often not recognized until much later and is frequently never recognized for what it is" (p. 116).

It is difficult to physically identify the dyslexic child for he/she appears to be normal and is intelligent (often extremely intelligent) with a great capacity to learn (Crosby & Liston, 1969). One of the first problems a teacher may experience is to recognize the dyslexic from among other problem readers. The dyslexic child looks like other slow readers; he/she may appear to be either lazy, mentally slow, culturally deprived or emotionally disturbed (Crosby & Liston, 1976).

Some teachers may incorrectly label a child dyslexic
because of not being adequately informed as to what dyslexia is and what comprises its characteristics. What type of characteristics should a classroom teacher look for in order to determine whether or not a child is dyslexic? This chapter summarizes some of the evident symptoms.

**Characteristics**

According to Jordan (1972), no single behavior characteristic establishes dyslexia. Literature reveals, however, that the incidence is higher in boys than in girls.

Crosby & Liston (1969) outline some helpful suggestions to be used as a guide for the classroom teacher: (1) Dyslexics can read some. (2) Dyslexia has some relationship to left-handedness. However, do not suspect all left-handed children to have dyslexia, but do suspect a neurological basis for the difficulty in a left-handed poor reader. (3) When listening to a child read, he'll be slow and very careful. (4) The dyslexic child is more often readily detected through spelling than reading. (5) The dyslexic is also dysgraphic\(^1\). (6) More than likely, he/she will have a speech impediment; diction will be good, but what is said will be incomprehensible.

Many dyslexic children have short auditory memory spans, inferior sense of rhythm, lags in visual-motor performance, and laterality confusion (de Hirsch, 1968).

\(^1\)Dysgraphia: inability to write.
They also have a limited vocabulary, trouble with word finding and grammatical construction, and speech disorders which include cluttering (de Hirsch, 1968).

Kaluger & Kolson (1978) point out that a dyslexic child may learn words presented one at a time, but will miss these same words when placed in context.

Bryant (1973) indicates that in spite of learning to recognize some words, the dyslexic child has extreme difficulty in associating the sounds with the visual symbols of letters, and has great difficulty in learning sound associations as they are commonly taught in the classroom.

Franklin & Naidoo (1973) emphasize that the dyslexic child may have emotional problems due to the frustration and the failure to learn, which comes so easily to most of his/her classmates.

Two types of dyslexia are identified by Jordan (1972): visual and auditory. "The most prevalent form of dyslexic handicap is that of visual dyslexia" (Jordan, 1972, pp. 4-5). He describes this as the inability to translate printed language symbols into meaning and has little to do with vision itself. Visual dyslexics are forced to work slowly because of their scrambled perception (Jordan, 1972). The visual dyslexic also has these problems:

1. Confusion with sequence. Generally, this disability functions whenever the dyslexic tries to deal with time,
arrangement, or other relationships of entities along a continuum. Many visual dyslexics cannot remember the day, the month, and the year of their birth.

2. **Faulty reading comprehension.** Visual dyslexics are especially susceptible to faulty retention of information presented in sequence.

3. **Difficulty with the alphabet.** It is common for the visual dyslexic to mix capital and lower-case letters when writing the alphabet, as well as mixing manuscript and cursive styles.

4. **Oral reading.** Often dyslexics read whole words in reverse.

5. **Errors in spelling.** Because the primary disability is not being able to handle items in sequence, the visual dyslexic cannot recall a clear mental image of whole word forms. Usually the student is able to identify most of the sound units which make up specific words, but the letters will be in scrambled order when he writes the word (Jordan, 1972, pp. 13-25).

Auditory dyslexia refers to the inability to distinguish separate elements of the spoken language and is similar to tone deafness (Jordan, 1972). Some of the characteristics these children have are outlined as follows:

a. They do not master phonics because they do not comprehend, or perceive, sound-symbol relationships accurately.

b. A primary characteristic of auditory dyslexics is the inability to comprehend variations of vowel sounds. A similar problem is evident when dyslexics encounter consonant clusters, also called blends and digraphs.
c. One of the earmarks of auditory dyslexia is the student's inability to tell whether words are the same or different.

d. One of the surest symptoms of auditory dyslexia is chronic erasing, crossing out, or marking over to correct written mistakes.

e. An easily detected characteristic of auditory dyslexics is difficulty with rhyme.

f. Since he is never sure that he has heard accurately, the dyslexic writer continuously asks the speaker to repeat (Jordan, 1972, pp. 30-42).

Cotterell (1973) adds that some dyslexics have language auditory difficulties and the severe auditory dyslexic tends to be slow, indistinct and hesitant in his speech, as if he is "finding words." Auditory dyslexics have a deficit in reauditorisation, that is, words cannot be remembered for spontaneous usage. Also questions tend to be answered monosyllabically -- keeping words to the minimum (Cotterell, 1973).

Auditory dyslexics also have a tendency to twist words in spontaneous speech; e.g. "communication" may come out as "mocunication," "telescope" as "stelescope" (Cotterell, 1973). "Discrimination of short vowels is one of the greatest problems of the auditory dyslexic. Although he understands words such as 'big,' 'beg,' and 'bag' in context, he is unable to perceive differences when they are heard in isolation" (Cotterell, 1973, pp. 52-53).
Money (1962) specifies that dyslexics have difficulty in establishing concepts and a specific conceptual problem is in color recognition and naming.

Dyslexics make reversals. Goldberg & Schiffman (1972) indicate that the dyslexic child is unique in that he makes so many of them for so long a time. They summarize the causes of these reversals as "(1) maturational lag, normal in children under the age of five years; (2) lack of auditory and visual feedback; (3) stress (usually emotional) or pressure; (4) pathological sequential disability as in parietal lobe dysfunction; (5) delayed development of handedness and body image" (p. 135).

Rome & Osman (1977) have summarized the following "Error Patterns in Dyslexic Persons":

1. Reversals and inversions
   Of letters: d-b, q-p, u-n, W-M, t-f
   Of sequences of letters: was-saw, felt-left, oh-no, plea-peatl, blind-build

2. Confusions
   Between letters: f-l, k-h, m-n
   Between small words: of-off, at-it, of-it, me-we

3. Omissions
   Of letters and syllables: stad (stand) afaid (afraid), perstent (Persistent), stike (strike), transportion (transportation), place (palace)

4. Substitutions
   a-the, off-on, pretty-beautiful, house-home, woods-trees, grand-great (p. 75)
Cole (1977) points out "dyslexic children usually suffer from poor self-esteem. Their educational experience has been demoralizing, and often they are made to feel that the fault is entirely theirs. Only a short step lies between this point of view and the attitude 'I am dumb, I can't learn, and there is no use trying.'" (p. 111).

As teachers, it is important to realize that the dyslexic child is no different from the rest of mankind, and that a dyslexic child can be helped if we can learn how to recognize the various characteristics in order to develop an appropriate program for him/her.

**Summary**

This chapter discussed the various characteristics that a dyslexic child could possess. These characteristics were presented in order to assist the classroom teacher in identifying the dyslexic child. Being aware of the various characteristics may avoid mislabeling a child as dyslexic.

Dyslexic children may have an impairment in ability to perform fine motor skills, poor sense of direction, difficulty in writing, reading and spelling, may not master language symbols, have difficulty translating symbols into meaning and may not be able to express themselves, and show immaturity in perceptual and conceptual behavior. On the other hand, the dyslexic child may give every indication
of being a normal child -- he may be bright and intelligent, personable, athletic and mischievous (Crosby & Liston, 1976).

Once a dyslexic child is identified, a teacher may be able to prescribe an appropriate program for him/her.
CHAPTER IV
REMEDIATION TECHNIQUES

Introduction

Once a child has been identified as dyslexic, what can a teacher do to help him/her? What type of techniques can be used in remediation? According to Slingerland, "education as a whole has offered little useful knowledge and training to guide teachers for work with dyslexics" (p. 68).

McGuire (1970) states that "dyslexics can be taught to read when methods are adjusted to their learning styles" (p. 232). No single technique can remediate the problem of dyslexia. Schweizer (1974) states that "any method is only as good as the teacher" (p. 297).

This chapter presents some guidelines and suggested remedial techniques which could be employed by the classroom teacher.

General Principles

The following principles are not intended to be methods of remediation, but are a framework on which effective remediation can be built:

Bryant (1968) proposes that:

1. A child with dyslexia does not readily abstract and make generalizations to improve basic skills of reading on his own.
The teacher should focus remediation upon a child's difficulties and simplify the work so that confusion is avoided and the basic perceptions and associations are learned so well that they will not be forgotten.

2. The remedial teacher should plan the learning experience and modify the presentation of the task on the basis of the child's performance so that the child is correct in nearly all of his responses, regardless of whether they are made aloud or to himself.

3. There should be frequent review of the basic perceptual, associational and blending skills, and as rapidly as possible these reviews should involve actual reading (p. 397).

It is important to keep in mind the cardinal principles of simplicity, repetition and step-by-step progression into higher-level skill areas (Jordan, 1972).

Kochevar (1975) suggests that the room atmosphere is important; it should be bright and cheerful. She also advises that (1) visual distractions should be minimum and students should have a quiet place to work; (2) study carrels\(^1\) could be used to block out distraction; and (3) a "quiet corner" could be set up where a student may go when he/she wants to be alone.

Naidoo (1973) specifies that remediation is based on knowledge of a child's strengths and weaknesses. A child

\(^1\)Individually enclosed spaces; i.e., a desk with raised sides and front which act as a screen.
must be motivated positively toward learning to read. To motivate this desire to read could be a very difficult task for the teacher. Teacher/pupil relationships must be more than good, for a child needs reassurance that should be given by a sympathetic understanding teacher with whom he/she feels free and comfortable to talk to about problems (Naidoo, 1973). The first lessons especially should lead to success -- "nothing succeeds like success" (Naidoo, 1973).

Ekwall (1976) states that "most severely disabled readers require much repetition and drill to the point that is often referred to as overlearning. Overlearning, in most cases, refers to something that has been learned so well that it evokes an automatic response" (p. 234).

"Remediation is almost doomed to failure if it merely repeats the classroom procedure requiring the child to abstract and associate common visual and sound elements when several associations are to be learned at once" (Bryant, 1973, p. 117).

Research (Vernon, 1973) indicates that individual remedial teaching by methods which are appropriate to the particular child is more effective than group teaching. "Some writers consider that the type of remedial teaching should be appropriate to the particular deficits of the child, circumventing the major deficit, visual or auditory, while including special work on the deficits themselves" (Vernon, 1973, p. 6). Crosby & Liston (1969) suggest,
however, that one should teach to the child's strengths, and not to his weaknesses.

Some principles as to the techniques to be used for the auditory and the visual dyslexic child are outlined as follows:

**Auditory Dyslexics**

Jordan (1972) implies that the classroom teacher must

1. **Make immediate tangible applications of abstract rules.** If auditory dyslexics are to master the foundation concepts of sound-symbol relationships, they must experience immediate, tangible reinforcement. . . . It is usually necessary to provide concrete associate experiences between sounds and their symbol counterparts.

2. **Build a stock of mnemonic cues.** When there is no visual model for him to see, the auditory dyslexic is helpless to reconstruct accurate word forms on paper.

3. **Emphasize consistent spelling patterns.** Drill word families which introduces children to stable, similar configurations that stay within the rules.

4. **Provide visual cues.**

5. **Allow oral answers to test questions.** (pp. 85-93).

Traditional phonics instruction is almost meaningless to most auditory dyslexics because they simply cannot identify the discrete variations of speech sounds, nor do the rules and generalizations make sense (Jordan, 1972).

Cotterell (1973) further adds that auditory dyslexics "respond best initially to a whole word approach and
syllables are easier to recognize than individual sounds. The greater visual strength should be utilized as far as possible" (p. 53).

**Visual Dyslexics**

Jordan (1972) suggests the following aides for the classroom teacher for various areas:

1. **Teaching chronological sequence.**
   Provide children with visible, tangible cue systems that illustrate chronological order. Dyslexic children must be drilled in the basic units of time.

2. **Teaching alphabetic sequence.**
   If alphabetic sequence is to be mastered, it must be done by rote drill — arranging movable letter forms in correct order, copying from clear models, and writing the sequence from memory.

   In mastering the alphabet, it is essential that dyslexic children learn only one major concept at a time.

3. **Correcting reversals and rotations.**
   This usually requires a one-to-one teaching relationship. Remediation should begin with honesty, informing the student the kinds of mistakes he tends to make, and then developing a cue system to help him monitor his work.

4. **Matching word forms.**
   Daily drill activities can be devised by the teacher to develop accuracy in word discrimination. A simple word is presented on a flash card. After a quick glance, the dyslexic student tries to find a matching word within a line of similar word form (pp. 71-80).
Cotterell (1973) suggests that for the visual dyslexic, who is weak in word recognition and visual recall, it would not be beneficial to wait for his sight vocabulary to develop before discussing phonics; this type of child is bound to fail by the "look and say" method. He also indicates that "fluency of reading with simple material is better than word by word reading of a difficult book" (p. 69). It is advisable that if a visual dyslexic is also auditorily affected, it is wise to teach long vowel sounds first because they are easier to differentiate than the short vowels (Cotterell, 1973).

**Remediation Program**

A good remediation program will include

- **A multisensory approach.** This means using all three pathways to implement learning -- visual, auditory, and kinesthetic-tactile.

- **Phonics.** The dyslexic must learn the phonic units of the language in order to succeed at reading and writing.1

- **Rules and generalizations.** The dyslexic student must also be trained to hear speech sounds and to name or write all the phonic units used to represent each sound.

- **A structured program.** In educating a dyslexic student, "structured program" means (1) teaching necessary elements from simple to complex, step-by-step; (2) teaching each new element until it is securely learned before introducing

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1 The writer wishes to point out that, as previously stated in this chapter, phonic instruction for some dyslexics is not beneficial and may not be successful.
a new one; and (3) training the student to relate the new element to the other pieces of information he has already mastered (Rome & Osman, 1977, pp. 81-82).

Rome & Osman (1977) further mention that visual, auditory, and kinesthetic drill work, decoding and encoding skills and repetition are essential in a remedial program.

Ekwall (1976) offers some suggestions to be utilized for kinesthetic drill work: (a) "use modeling clay to form letters and short vowels; (b) use three-dimensional letters available commercially; (c) use salt or fine sand in a shallow box such as a shoe lid in which the student can trace letters or words; (d) place paper or a piece of screen wire and have the student write on it with crayon. This will leave a raised surface on the paper when it is removed so that each letter and/or word can be felt" (pp. 234-235).

Rome & Osman (1977) suggest to avoid any program that "does not employ a multisensory approach; requires the dyslexic to learn most words as whole units through sight recognition; emphasizes speed reading; uses machines to any great degree; relies heavily on spelling lists that must be memorized by rote; requires pages of unsupervised work in workbooks; isolates children and requires them to work on their own" (p. 90). The writer listed these items to be avoided to be used as guidelines for the classroom teacher when planning an effective remediation program.
Howard Rome (1977) points out that "the key word in the remediation process is compensate" (p. 13). The ability to cope with their confusions with independence and self confidence is the goal for dyslexics -- not speed (Slingerland). Each new learning must be structured for them (Slingerland).

It is important to remember that not all dyslexics can be taught in the classroom. As Kochevar (1975) states "dyslexia is a matter of degree, and severe dyslexic children cannot be remediated in the classroom" (p. 76).

Specific Remedial Methods

There are some specific remedial methods that have been found to help the dyslexic child. The writer wishes to point out, however, that not all or any of these programs might benefit the dyslexic child. These are presented merely as recommendations; each teacher has to determine which method or methods would be most beneficial to a student. The choice of the method(s) should be related to the needs of each child.

The Orton-Gillingham Approach

The writer has briefly described this approach which was taken from Myers & Hammill (1969):

Gillingham's (1946) approach makes use of six basic combinations of the visual, auditory, and kinesthetic modalities. . . . . Tracing, as she incorporates it, involves kinesthetic rather than tactile stimuli. The six basic patterns for integration of fundamental associations are these:
V-A Translation of visual symbols into sound, vocalized or not.

A-V Translation of auditory symbols into visual image.

A-K Translation of auditory symbols into muscle response, for speech and writing.

K-A Movement of a passive hand by another to produce a letter form, in order to lead to the naming or sounding of the letter.

V-K Translation of visual symbol into muscular action of speech and writing.

K-V The muscular "feel" of the speaking or writing of a letter, in order to lead to association with the appearance of that letter (pp. 206-207).

Wagner (1971) summarizes this method as

Orton's retraining method requires the pupil to sound out and trace the visually printed word. Training usually starts with the teaching of basic language units (individual letters and phonemes) and strengthening the visual and auditory patterns by introducing motor elements of speech and writing at the same time. Using step-by-step progressions, the pupil is gradually prepared for longer units, such as more syllables, phrases, and whole sentences (p. 115).

**The Fernald Method**

Harris (1961) describes this method as follows:

**Stage 1. Tracing**

The word is written for the child on a strip of paper about 4 inches by 10 inches, in large cursive writing (manuscript printing can also be used). The child traces the word with his finger in contact with the
paper, saying each part of the word as he traces it. This is repeated until he can write the word from memory. He writes it on scrap paper and then in his story. Later the story is typed and read in typed form. Each new word that is learned is placed by the child in an alphabetical file. The following points are stressed:

(1) Finger contact is important; tracing in the air or with a pencil is less useful.

(2) The child should never copy a word, but always writes from memory.

(3) The word should always be written as a unit.

(4) The child must say each part of the word either to himself or out loud as he traces it and writes it.

(5) Whatever he writes must be typed for him and read by him before too long an interval; this provides transfer from the written to the printed form.

Stage 2. Writing without Tracing

After a while (days in some cases, weeks in others), the child does not need to trace most new words. He looks at the word in script, says it to himself several times, and writes it from memory. Library index cards with the words in both script and print form are substituted for the large word strips and are filed alphabetically.

Stage 3. Recognition in Print

It becomes unnecessary to write each new word on a card. The child looks at the word in print, is told what it says, pronounces it once or twice, and writes it from memory. Reading in books is usually started about the time that this stage is reached.
Stage 4. Word Analysis

The child begins to identify new words by noting their resemblance to words he already knows, and it is no longer necessary to teach him each new word. Although phonic sounding of word parts is not allowed, skill in word analysis is gradually developed.

Total nonreaders are started at Stage 1. Children with partial disabilities are often started at Stage 2. No special techniques are used to overcome such difficulties as reversals or omissions; these are said to drop out without special attention.

The Color Phonics System

Bannatyne (1966) describes this system --

The Color Phonics is a set of individual letters and letter combinations printed on small cards, the letters being color coded in such a way that once the principle of the coding has been learned the child can immediately identify each sound. A key word and illustrated object are printed on the reverse side of the cards to provide additional cues. The theory behind the system is that most dyslexic children suffer from the inability to remember constantly changing patterns of sound-symbol associations and that, therefore, the simultaneous manual, auditory, and visual sequencing of phonemes and letters is the essential element in learning to read.

Color Phonics is not good for the color blind, nor in cases of brain injury with color agnosia.

One very simple way of using the system is for the teacher to set out a sentence composed of the letters, which the child will then be able to read by sequencing the phonemes, the vowels of which he is able to identify by means of the color name (pp. 193-200).
Remedial Reading Drills by Hegge, Kirk & Kirk

This method is "designed primarily to aid children who have become retarded in reading (Hegge, Kirk & Kirk, 1977). The teacher follows the outline given in the manual which has the necessary drill lessons to be given in the order indicated.

Gardner (1973) describes another method: "Moore's 'talking typewriter': a picture is flashed on a screen and identified by a voice; the child then tries to spell the word correctly through the use of a typewriter that remains locked until the correct keys are pressed" (p. 64).

Hanley & Sklar (1976) specify that severely dyslexic children could learn Braille.

The use of an eclectic method usually works best (McClurg, 1970).

Summary

After a child has been identified as dyslexic, the next step a teacher should take is to develop an effective remedial program. This could be a difficult task, but knowledge of general principles and possible methods that were successful in the past, as presented in this chapter, might serve as guidelines.

The writer does not advocate any one particular method. A teacher must select the appropriate method which best meets the child's needs. Perhaps an eclectic method is the best.
CHAPTER V
CONCLUSION

It is apparent that a great deal of learning is dependent upon reading ability. Emphasis is placed on successful reading in our society today, and the student who has a reading disability is found with a handicap as a productive citizen.

One type of reading disability, *dyslexia*, was the subject of this paper. It is used to identify children with normal intelligence who are having difficulty competing with other school children.

It is quite evident that research reflects differences in opinion regarding the term dyslexia. A renewed and widespread interest in dyslexia has been evident in the field of education recently. Even though dyslexia tends to be an ambiguous term, it is the writer's contention that it does exist in the educational system.

The writer agrees with the findings of Roswell & Natchez (1977) who indicate that dyslexia is a "symptom-descriptive and not a diagnostic term." As Miles (1970) indicates . . . "do not worry too much about the name, but make sure the child is in the hands of someone who is determined to understand where his difficulties lie" (p. vii).

As indicated in the literature, there is no one cause that is associated with dyslexia and some of the causes still
remain uncertain. Divergencies of opinion have arisen in the fields of medicine and psychology.

Some of the causes listed were: brain damage, pre-, peri- or postnatal cerebral insult, impaired sensorimotor integration, environmental toxins, nutritional deficiency, hereditary factors, psychotic factors, inadequate teaching, injury following an accident, and immaturity in the reading readiness stage. Regardless of its causes, and even though the problem is medical, the solution is educational. The teacher should devise an appropriate remedial program for the dyslexic child, after he has been correctly identified.

To identify a dyslexic child is no easy task for the classroom teacher, since he has no apparent physical deficits. Some teachers who are not familiar with dyslexia and its characteristics are apt to mislabel children as dyslexics. Therefore, it is important that evident characteristics be known. Some dyslexics have been rejected by their classmates, treated as lazy, stupid or mentally disturbed by teachers and parents. It is no wonder that a dyslexic can become filled with frustration, as well as rage and psychological pain.

Teachers may be advised that there is nothing they can do for dyslexics in the classroom. Most dyslexic students can respond to corrective measures that are feasible within a typical classroom setting.

It is important to select an appropriate remedial
technique after a child has been identified as dyslexic. The remedial program should include a multisensory approach -- visual, auditory and kinesthetic -- decoding and encoding skills, phonics (for those who will benefit by a phonics approach) and repetition. The teaching technique should be one of simplicity and step-by-step progression. Motivation and good teacher-pupil relationships should be developed. An important element in the reading process is to learn to compensate. Guidelines and general principles were suggested for the classroom teacher in order to help the dyslexic child. Various specific methods which have been used for dyslexics and have been successful were also mentioned.

It is felt by the writer that no one particular method or methods should be used -- the teacher should select those that meet the particular needs of the child. An eclectic method is, perhaps, the best.

Children with dyslexia can succeed, as evidenced by the history of numerous individuals such as Winston Churchill, Thomas Edison, George Patton, Woodrow Wilson and others. These individuals were classified as dyslexic and yet enjoyed successful lives and careers.

In conclusion, the goal of special education experts, as summarized by Klasen (1972), is

- to develop and redevelop, to collect and screen, to interpret, distribute, and apply any findings, teachings, and methods that might be of help to the retarded reader.

It cannot be expected to be easy, but it certainly is a challenging and rewarding task (p. 16).
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