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SKILL-REFERENCED INSTRUCTION FOR DISABLED READERS: GUIDELINES AND CAUTIONS

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*Skill-Referenced Instruction for
Disabled Readers: Guidelines and Cautions*

Early in the development of learning disability programs, the terms reading disability and dyslexia were widely used to describe the problem of a child who had extreme difficulty in learning to decode printed words (Jastak and Jastak, 1965), despite conventional educational opportunity (Money, 1962) and apparent capacity to learn (Bateman, 1964). Reading disability was further distinguished from simple reading difficulty by its severity and its duration, with resultant need for highly specialized treatment over a long period of time (Rabinovitch, 1962).

The implications of early writers were quite clear: the child with a reading disability differed from the one who had problems in first grade but caught up with his peers in second grade; neither was he the same as the child with frequent absences leading to gaps in basic skills who responded rapidly to short-term remedial programming. There was, by the early 1960's an abundance of evidence to suggest that the traditional basal and unstructured skill-development techniques were not reaching children in the lowest achievement subgroup. It was (and still is) unknown whether some or all of these children were neurologically impaired, in addition to being difficult and even inadvisable to make this distinction within the public school context (Reed et al., 1970).

Development of learning disability concept.

There was, in the early literature, a strong suggestion that the LD child suffered from some form of neurological impairment. Learners with severe disability were observed to have difficulty in recalling the orientation and sequence of letters, a phenomenon which Orton (1937) termed "strephosymbolia," or twisted symbols. Strauss and Lehtinen (1947) noted that neurologically impaired children saw patterns as fragmented parts rather than integrated wholes, that they were distracted by extraneous details, and that they did not perceive the figure as distinct from its background. Strauss and Lehtinen also discussed the difficulty of their students in relating temporal and spatial patterns, as between letters in a word and the sounds which they represent. They suggested further that the students' tendency to persevere was an indication of inability to perceive new sequences or relationships.

Cruickshank et al. (1961) observed brain injured and hyperactive children in their experimental program. They cited hyperactivity, distractability, and disinhibition as major characteristics. The students in this program were observed to have gaps in memory, to not comprehend verbal directions, to be unable to synthesize separate elements into meaningful wholes, to persevere in response, and to show catastrophic responses to situations they could not understand.

The work of Cruickshank and others suggested that hyperactive children without evidence of brain damage exhibited learning characteristics which were similar to those of the neurologically impaired. It also specified teaching methods which could be used effectively for children with extreme difficulties, regardless of etiology. New labels, such as "minimal brain dysfunction" and "maturational lag" came into use to describe the child with learning disability in the absence of documented neurological impairment.

Specialized remedial programs.

Fernald (1943) was among the first to develop a specialized clinical program based on the learning characteristics of disabled readers. Primarily concerned with her students' negative attitudes, which she attributed to repeated failure, she felt that new methods should be found to direct their attention to success. For children with total or extreme difficulty, she described a kinesthetic method in which they finger-traced words, while looking at the copy and saying the parts aloud.

Gillingham and Stillman's program, published in 1960, was developed much earlier, and based on work by the neurologist Orton. They analyzed the reading act into its simplest components—letters and sounds—and emphasized teaching each association separately, then putting letter sounds together in given sequence to form words. This method began with words which are perfectly phonetic, and followed a carefully structured sequence in teaching more difficult letter-sound relationships. Like the Fernald method, it utilized auditory, visual, tactile, and kinesthetic learning, emphasizing spelling and writing as well as reading.

Bryant (1965) observed that "dyslexic" children had extreme difficulty in abstracting and in making generalizations regarding the sounds and symbols of words. He pointed out that they may have difficulty in perceiving and in retaining a detailed image of the word, and suggested that calling attention to the details was an important part of remedial teaching. He cited difficulties in association of letters and sounds, sound blending and memory as reasons to teach the sounds within the context of words, rather than as separate elements to be blended. Bryant's theory stressed the need for "overlearning" or repeated practice as a way of helping disabled readers make automatic responses to sound-symbol associations. He also emphasized careful lesson planning to ensure correct responding, and specified the need for immediate correction of errors.

Johnson and Myklbust (1967) categorized reading disability into auditory and visual dyslexia, and designed specialized remedial programs

for each category. They observed that students with auditory dyslexia had difficulty in synthesizing sounds into words, and suggested a remedial approach in which they were taught to put together larger segments of words such as compounds, then syllables, and word elements. They also observed the auditory dyslexic's difficulty with relating visual parts of a word to their auditory equivalents, trouble in hearing differences in word sounds (particularly short vowels), difficulty in making generalizations when seeing similarities in word parts, disturbance in sequencing ability (enemy for enemy), and problems in reauditorization (looking at the letter and recalling its sound). Details of their procedures are outlined in their chapter on auditory dyslexia.

Johnson and Myklebust (1967) also described a program for visual dyslexics, who, they noted, had difficulty with visual discrimination of word configuration, slow rate of perception, reversal and inversion tendencies, trouble in retaining a sequence (pan/nap/npa), and problems in visual analysis and synthesis. These procedures specified in their chapter on visual dyslexia, stress an academic approach to remediation, using a minimum of "readiness" work with figures such as circles and squares. These authors also suggested that, instead of a multi-sensory approach, some disabled readers may need uni-sensory input, since they seem unable to process information through two input channels simultaneously.

Development of ability-testing and training .

Concomitant with the growth of specialized remedial programs was the realization that learning disabled children were not a homogenous group and that effective teaching depended on identification of the specific areas in which each individual had specific strengths and weaknesses. This provided the impetus for development of diagnostic tests such as the Marianne Frostig Developmental Test of Visual Perception (Frostig, 1961) and Illinois Test of Psycholinguistic Abilities (Kirk, McCarthy and Kirk, 1968), with prescriptive remedial programs based on the results of these tests.

There was a body of early literature on ability testing which seemed to strengthen the observations of the clinical writers regarding the learning characteristics of disabled readers. These characteristics, or correlates, indicated difficulties in auditory discrimination (Wepman, 1960), visual perception (Frostig, 1961), and integration of abstract sounds and symbols (Birch and Belmont, 1964). In addition, early summaries of research with the ITPA (Sievers et al., 1963) consistently showed that disabled readers were more likely to have ITPA deficits in the "automatic level" of functioning, rather than in higher level learning skills. These results suggested that they did not remember a sequence of symbols they had seen or heard or recognize a whole object when a part was missing, and that they continued to use language forms incorrectly long after others with comparable education and background had mastered them. The whole pattern of findings seemed to indicate that disabled readers, as a group, showed some basic learning deficits, as follows:

1. Poor perception of details in the pattern of a word.

2. Difficulty in association of sounds with symbols.
3. Difficulty in discriminating between words which look or sound alike.
4. Difficulty in combining sounds to make words.
5. Inability to remember words learned.
6. Difficulty in transferring learned skills to the reading of new words.

These problems may be compounded by a short attention span, a negative attitude, a tendency to perseverate, and/or to attend to the wrong stimuli.

While theoretically promising, attempts to measure these deficits, to use test data for remedial programs, and to evaluate the results of remediation, have been disappointing. Zach and Kaufman (1972) pointed out that while deficits in visual perception were frequently identified by tests which measure visual-motor performance (copying), their treatment often consisted of training in visual discrimination (matching). Hammill (1972), while acknowledging the fact that training may not have been correctly implemented, concluded that the research didn't support the theory and questioned whether visual perceptual processes could even be trained. Hammill and Larsen's (1974) review of the research on remedial programs based on the ITPA implied that the value of these programs had not been demonstrated, and that the least satisfactory results had been shown on the automatic level skills—the same skills in which previous studies had shown disabled readers to be most deficient. Hartman and Hartman (1973) summarized by suggesting that the lack of validated tests to measure perceptual deficits and the use of remedial programs which taught skills only theoretically related to those deficits were major weaknesses in the perceptual process approach. In addition, the ability testing-process training approach may have over-emphasized diagnosis, leading to categorization and labeling, which were misinterpreted by some as explanations of disability.

Complete cycle.

Initially, special educators became concerned when certain students demonstrated potential yet failed to respond to regular instruction, either in the classroom or in the ordinary remedial reading program. These children were called "reading disabled" or "dyslexic" because their learning characteristics, as identified by clinical observations and special tests, seemed to differ from those of "normals." When attempts to remediate their learning "processes" not only led to labeling and segregation, but also yielded questionable results, the emphasis shifted back to the identification and remediation of specific academic skill deficits or learning "products."

This "new" remedial emphasis now focuses on the identification of reading skills, categorized as objectives, in which the child is deficient (specific letter symbols which he cannot name, vowel sounds which he fails to recall, etc.). The major tools for identification of these skills are criterion-referenced systems, such as those reviewed by Rude (1974), and written collections of skill-oriented remedial activities, based on the results of informal tests (for example, Boyd, 1975). The better systems provide the teacher with a series of remedial activities and a supplementary list with

book titles and page numbers of lessons which may be used to help the child meet the objective.

Rationale for skills approach with disabled learners.

Inherently, the skill-referenced approach seems to be appropriate for disabled readers, since it presents tasks which are directly related to their learning problem—reading words. Hartman and Hartman (1973) have suggested that remedial programs which stress lower-level skills (such as eye-motor coordination) may leave gaps in learning because they are so far removed from the task that there is no transfer of training. In view of what is known about the LD child's tendency to perseverate, his difficulty with transfer and generalization, the skill-referenced approach—with appropriate adaptations—seems promising.

The short time available for the learning specialist to work with each child further strengthens the rationale for use of the skill-referenced approach. Given a twenty minute remedial lesson with a child who confuses words having similar visual patterns, the teacher can present instruction which is either direct (practice in discriminating between words which have similar configurations) or indirect (exercises in discriminating between sequences of forms such as circles and squares). Logic dictates that the teacher would want to pretest the child and present instruction using sequential patterns of circles and squares only if necessary. Even where this lower level of instruction is necessary, the teacher would still have to follow it with direct instruction using words. The direct approach, then, particularly if it is based on a pre- post test management system, can help the teacher to specify each learner's needs and to track his mastery of skills.

Possible misuses of skills approach.

It is probable that skill-referenced approaches such as those described by Rude (1974) will most often fail with disabled readers as a result of their abuse, rather than their use. Remedial teachers could easily abuse these systems in at least the following ways:

1. by becoming worksheet dispensers, assuming that skill sheets or activities are self-instructional.
2. by using remedial activities which do not precisely match the lesson objective.
3. by failing to stress and test for mastery of one skill before going on to a new skill, thus increasing the chances of confusion due to partial learning.
4. by stopping after teaching the skill in isolation, rather than going on to help the child apply this skill to the reading of words in context.
5. by assuming that skill mastery measured by an immediate posttest is permanent, and therefore failing to present frequent reviews necessary for retention.

Since the better systems suggest that skill teaching is only part of a sound total reading program, this type of failure will result from incorrect implementation, rather than inherent weakness of the approach.

Guidelines for implementation.

Although it is obvious that disabled readers need to develop basic skills, it is not so obvious that they will acquire these skills by exposure to activities which have surface validity only, as may be the case with some of those referenced in the skills systems. Because any given "LD" child may have one or more special learning problem; the skill-referenced systems may need careful evaluation, with at least three basic types of modification prior to and during use with this group.

1. Suggested teaching materials and activities may need adaptation. Durkin (1974a, 1974b) has pointed out that there are serious flaws in some of the phonics instruction recommended by teacher's manuals. She classifies these flaws into instruction which is irrelevant and that which is incorrect, and cautions reading teachers about unquestioning use of commercially developed materials. Teachers will need to examine specific activities carefully, discarding or modifying those which use distracting stimuli, which introduce words too rapidly or present an inadequate amount of practice. They should also avoid materials stressing the memorization of "rules" which are not consistent with the structure of the language or have little application to the actual reading of unknown words.

2. The terminal objectives of some of the skills lessons may need to be analyzed into a series of smaller subtasks. This could be done in at least three different ways. First, in some cases, the objectives are extremely broad (i.e. "short novels," "consonant blends," "synonyms," etc.) suggesting far more content than the LD child can assimilate at one time. In these cases, individual lessons which focus on a single pattern or generalization will need to be developed, and a series of review lessons in which the terminal generalization is presented will need to follow. Second, even when the lesson objective is narrow, the disabled reader's teacher may need to subdivide the lesson into steps, as determined by the learner's response level. An intermediate step in learning to name a given word by sight, for example, might be to circle the stimulus word, identifying it from among a choice of several, when it is pronounced by the teacher. A child who could respond correctly at this level would need to be led through a series of carefully programmed steps to the terminal objective of sight recognition (recall). A third type of task analysis might focus on the "characteristics" of "correlates" of the child's learning difficulty. When a child has difficulty with auditory discrimination, for example, one of the steps in each lesson for him would focus on the difference between the target word and other words which are auditorily similar. Further guidelines on the task analysis process can be found in Bateman (1971), while the works of Bryant (1965) and of Gillingham and Stillman (1960) further specify the subskills in the decoding task which may need emphasis.

3. It will be necessary for the LD child's teacher to monitor his responses to skill-referenced programming through continuous evaluation of effectiveness. Freschi (1974) is among those suggesting charting the rate of correct and incorrect responses as a means of providing concrete data to monitor performance and modify each child's educational specifications.

The work of those whose methods have proven effective with this group may offer guidelines for needed modifications. Haring and Hauck (1969) are among those who have demonstrated the effectiveness of a carefully structured reinforcement program in conjunction with sequential presentation of basic word attack skills. Johnson and Myklebust (1967) and Blau and Blau (1968) have suggested ways of helping disabled readers block out irrelevant stimuli as a way of overcoming multi-sensory interference. Englemann and Bruner (1969) have shown how to use hand signals to control attention, how to structure no-fail sequences of instruction by fading prompts and cues, and how to stress overlearning of basic response units as a way to circumvent memory deficits. Finally, evaluations will need to measure whether the child can retain and apply the concept, as well as whether he has mastered the lesson objective.

Recommendations.

Brown and Botel (1972), summarizing the present state of the art in treating reading disability, emphasize that the trend is not to explain why a child can't read, but rather to specify the conditions under which he does learn. Specification of those conditions will require careful review of what is known about learning difficulties and selection of techniques which have proven successful. The skill-referenced approach, while promising a management-measurement system, must not be poorly implemented or indiscriminately applied, or it too will fail to meet the needs of LD children.

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