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Dyslexia: What Teachers Need to Know

Dyslexia is not a disease. It is not contagious, but it has been reported that one child in every seven has it to some degree, often with tragic impact on his schooling and life. Some studies suggest that it may be one of the most potent factors behind juvenile delinquency. It probably kept inventor Thomas Edison and the American President, Woodrow Wilson from coping with ordinary schoolwork. It made Hans Christian Andersen an atrocious speller all his life, even though he became a magnificent storyteller. It most likely accounted for the nickname "Mr Dullard" given to a school boy named Albert Einstein. The term "dyslexia" is a Greek word meaning "having difficulty with reading" and was originally made up by the medical profession to describe the reading and spelling difficulties of patients who had suffered certain sorts of brain damage which might have been caused in accidents or wars, or as a result of tumours, strokes, psychiatric disorders, drugs or the effects of ageing. Historically speaking, children who experience reading disabilities have been classified according to a variety of terminology. Strephosymbolia was used by Orton (1937) to describe the child with a "twisted" symbol difficulty. Later on, terms such as alexia, minimal brain dysfunction and word blindness were used. More recently, the term dyslexia has come into wide use to describe children who experience learning disabilities in reading.

Today, the term "dyslexia" is universally accepted and used as a convenient label to describe a learning disability involving difficulty with reading in spite of normal intelligence, adequate educational opportunity, and no evidence of sensory, neurological, or emotional dysfunction. This language disorder is characterised by difficulty with reading, spelling, handwriting, language and memory. (For an extended discussion of dyslexia, see, for example, Richardson, 1992; Siegel, 1985; Siegel and Ryan, 1988; Stanovich, 1988; Vellutino, 1979.)

Although it appears to be unrelated to basic intellectual capacity, dyslexia causes a mysterious difficulty in handling words and symbols. Some subtle peculiarity in the brain's organizational pattern blocks out an otherwise bright child's ability to learn to read, to write legibly, to spell or perhaps to use numbers. Ackerman, Dykman and Gardner (1990) found that children with severe dyslexia were slower in counting from memory and naming alternating digits and letters than those with milder reading impairment.

The dyslexic child is not different from the rest of his peers except his minor impairments become highly debilitating for they make it extremely difficult for him to learn to read. This affects writing and all other academic learning. Earlier, it was thought that this disability occurs much more often in boys than girls (five to six times more), but recent studies show evidence that the number of boys to girls with dyslexia may be closer than previously believed (Shaywitz, Shaywitz, Fletcher & Escobar, 1990). In a study of 249 children with severe reading retardation, Melekian (1990)

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concluded that (a) marital status does not contribute to the causation of dyslexia, (b) large sibships predominate in children with dyslexia, and (c) high ordinal birth positions prevail within these sibships. On the controversial side he found (a) no convincing evidence that parental age is a risk factor in dyslexia and (b) parents', especially mothers', low socioeconomic and educational status cannot be excluded as an aggravating factor of reading and writing disabilities.

The adverse effects of failure in school on the dyslexic child are serious. Usually, he does not show any signs of anxiety until he starts school and is required to use his faulty sensori-motor systems for learning to read and write. His reaction to failure is one of frustration and these frustrations may lead to emotional problems which are an added stumbling block to successful learning. Consider the dyslexic child. He appears to be normal. He is intelligent, often extremely intelligent, with a great capacity to learn. He does not limp, stutter, wear thick spectacles. He may be a good sportsman, a great storyteller, a reliable friend, a good sport - everything boys and girls are, until he goes to school. Then he faces the first and biggest failure of his life. He has trouble learning to read. Since our educational system, with some exceptions, is geared to learning by reading, the dyslexic child may be denied an education and all the economic and cultural rewards that stem from it. In general, children who fail to learn to read and write early may develop all kinds of associated problems. They seldom find status in school either with their teachers, or more importantly, with their peers. They may become friendless and solitary, their lack of confidence inhibiting their ability to make friends. Their teachers may try to help them, but defeated and discouraged by lack of progress, may give up and hope the problem will solve itself. Sympathetic and discerning teachers, however, will seek further advice and professional help.

What can teachers do?

"How do I recognize it?" and "What can I do about it?" are two fundamental questions which any teacher would ask about the dyslexic child in their class. The skillful teacher of reading has no difficulty in recognizing when a child has a reading problem. The difficulty arises in trying to single out the dyslexic child from the wide range of other children who are failing to make adequate progress in learning to read. Furthermore, to have to wait (as is commonly the case) until a child is two or more years behind in reading development, with no obvious intellectual, social, emotional or educational explanation for this, before a proper diagnosis of dyslexia can be made, is a lamentable state of affairs. Surveys (for example, Lowenstein, 1983) have highlighted the urgent need for more accurate assessment of dyslexia in order to be able to differentiate clearly between the dyslexic child and children with other types of reading difficulty.

Diagnosis and screening

The conventional methods for diagnosing dyslexia have remained essentially unchanged for the past two decades. In summary, these involve establishing (a) that the child's reading age is significantly behind his chronological age (usually two or more years behind), (b) that the child's intelligence is not significantly below average, (c) that there are no social, emotional or educational causes for the reading difficulty, (d) that the child is not suffering any sight defects, hearing loss, brain damage, or serious problems of general health, and (e) that the child exhibits some 'positive signs' of the disorder, such as speech problems, difficulty with sequential memory, clumsiness, crossed laterality, and so on. However, the conceptual and methodological inadequacies of this diagnostic system are well-known (Ravenette, 1971; Reid, 1969; Singleton, 1975, 1977).

Over the last ten years, there has been progress made in identifying

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'positive signs' of the disorder. There have been efforts to base diagnosis on differential performance in subtests of general intelligence scales (Ellis and Miles, 1981; Thomson, 1982) and also on the reading and spelling errors and language difficulties of the dyslexic (Snowling, 1983; Thomson, 1984). Several studies have confirmed that retarded readers are generally poor at certain subtests of the Wechsler Intelligence Scale for Children (WISC), particularly on the Information, Arithmetic, Digit Span and Coding subtests (Tansley and Panckhurst, 1981; Thomson, 1984) and one study reports a similar profile on the British Ability Scales (Thomson, 1982).

A common approach has been the compilation of assorted diagnostic procedures designed for use in screening for dyslexic-type difficulties (for example, Aubrey et al, 1982; Clay, 1979; Miles, 1983). However, one of the major difficulties in screening is setting the cut-off points in order to minimize false negatives (cases where children are not identified as being 'at risk' by the screening procedure but who are later found to manifest dyslexic symptoms) while at the same time, not including an unacceptably high number of false positives (children who are labelled 'dyslexic' as a result of screening but who turn out to be quite normal). Perhaps the two most well known screening tests are the Aston Index (Newton and Thomson, 1976; Aubrey et al, 1982) and the Bangor Dyslexia Test (Miles, 1983). The Aston Index is designed both as a screening device for children shortly after school entry and as a diagnostic test for reading failure in older children. It involves (a) the assessment of general intellectual ability and (b) the analysis of performance on reading-related and dyslexia-related skills. In addition, details of social and emotional development, family background and medical history are taken. For older children, the Index includes tests of spelling and oral reading (Schonell). By contrast, the Bangor Dyslexia Test concentrates more on 'positive signs' of dyslexia, such as knowledge of left and right, ability to repeat polysyllabic words, subtraction tables, saying months of the year, digit span, sentence memory, rhyming ability and familial incidence. Reading age and intellectual ability are also taken into account.

An analysis of the child's problems should indicate the best way to help him. Diagnosis should be dealt with by an interdisciplinary team composed of medical, psychological and educational experts. The most useful report for a teacher will be one which gives the child's potential intellectual ability, the results of tests of word reading, reading speed, comprehension and spelling, an indication of the child's perceptual abilities as indicated by tests of visual and auditory discrimination and motor coordination. As mentioned earlier, the Aston Index, an early predictor of dyslexic type difficulties which includes tests which teachers can administer when pupils do not make expected progress in the written language skills, can also be used. The teacher needs to know what makes a child "tick", so an interview with his parents is essential, and if there are other teachers involved, they should also be consulted.

Teaching

With early identification, a dyslexic child need never experience failure and become a candidate for remedial education. The child with a faulty sensori-motor system loses out on all counts - not only can he not recognize or recall whole words easily, but he also has a problem in that neither a "look-and-say" nor a "phonic" approach would be appropriate either by itself or in combination. A dyslexic child may fail even with remedial help because his specific needs are not met. Success can be achieved when the language training achieves harmonious interaction of all the senses, that is, when the learner sees, hears, speaks and writes simultaneously. This is multisensory learning. The learner is using visual, auditory, kinesthetic and oral abilities in an integrated process, thus encouraging the various parts of his sensori-motor system to support each other in making permanent sound-symbol associations.

Most teachers are aware of the importance of encouraging their pupils' fluent spoken language to promote good comprehension and pleasure in reading, coupled with a facility in writing for enjoyment and communication. If these attributes are to be within the scope of a dyslexic child, in addition to training in oral and written construction for organizing and expressing his thoughts in speech and writing, he needs to acquire the necessary mechanical skills for recognizing and producing the printed word. Unless teachers can be helped to recognize the problem and be willing to undertake some training, many dyslexic children will continue to represent the "hardcore" of the teacher's problems.

It is often said that a backward reader needs only the encouragement of a sympathetic teacher. This may be true of a pupil who has failed to read for reasons which are primarily emotional. Many sympathetic teachers who have taken up remedial teaching because they want to help children to learn to read, have been defeated by their own lack of knowledge when they attempt to teach a dyslexic child who cannot make sense of known methods of learning. The teacher needs to study how to teach the skills in a way that the dyslexic child will understand. Because such a child may have experienced many beginnings and failures, he will need to have complete faith and confidence in his teacher. This situation will only come about if the teacher is an expert in her field. Good relationship between teacher and learner will not last without progress.

What hope is there for dyslexics?

Fortunately, even the victims of severe, classic dyslexia can now learn, with proper help to read at a decent speed and to write legibly. The experts' consensus is that the best solution is educational: careful, systematic, one-to-one tutoring on a regular basis, to teach the dyslexic child using multisensory approaches.

Since every dyslexic child's problems are different, individual tutoring techniques must also vary.

The encouraging prognosis for properly tutored dyslexics was documented in a study by Margaret Byrd Rawson who carefully followed a group of 20 boys with moderate to severe dyslexia, all of whom had been given structured, multi-sensory language training in school. All but one went to college; 18 earned degrees; then, went on to obtain a total of 32 postgraduate degrees. Not all dyslexics will do as well. Yet, it is also clear that dyslexics no longer need to fail simply because of language and reading problems.

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