

LEARNING DISABILITIES: A PROBLEM AREA

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Abstract

School counsellors in their daily work are faced with the investigation of children with "learning disabilities". This article attempts to delineate the major problems in the area, which are those of definition, prevalence, aetiology and remediation, and to suggest ways out of the current "morass". Attempts at definition, ascertainment of prevalence, investigations of aetiology and remedial techniques based on hypothetical states are criticized and support is given for basing investigation and treatment on the presenting problem — usually reading or arithmetic. The basic tenets of remediation are reviewed and a realistic approach is outlined.

Résumé

Quotidiennement, les conseillers en milieu scolaire doivent affronter le problème d'élèves éprouvant des difficultés d'apprentissage. Cet article tente de relever les principaux problèmes dans ce domaine: définition, fréquence, étiologie et approche thérapeutique. On suggère des approches aptes à dissiper la confusion qui règne présentement. On critique des essais de définition, les constatations de la fréquence, les investigations de l'étiologie et des techniques thérapeutiques basées sur des états hypothétiques. On défend une investigation et une approche basées sur le problème en évidence — d'habitude l'arithmétique ou la lecture. Enfin, on passe en revue les principes de base pour toute tentative de solution et on esquisse une approche réaliste.

In their daily work school counsellors frequently have children with learning problems referred to them. This particularly occurs in rural areas where they do not have the support of school psychologists or other professional help. If school counsellors read the professional literature, or even only listen to the comments of parents or peruse articles in the popular press, they will come up against the problem of so-called "learning disabilities" or "learning disorder".

In his "Myths and Realities in Learning Disabilities", Cruickshank (1977) states that the issue of learning disabilities is one of the most interesting phenomena in education but that the field is fraught with misconceptions: that it is ill defined in the minds of most educators and psychologists; not understood by physicians; its implications are not being realized by school administrators and that the hopes of parents are not being realized. He says "it is essential that serious thought be given to this matter and that more appropriate directions be initiated". What Cruickshank (1977) says is very true but unfortunately his own article does little to improve matters and this is the case with most of the literature.

The "official" definition, in the United States and by the usual osmosis, in Canada, is that of the National Advisory Committee on Handicapped

Children (NACHC) to the U.S. Office of Education (1968). This states:

Children with "specific learning disabilities" means those who have a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. Such a disorder may be manifested in imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. These disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental deprivation.

Such a definition is unsatisfactory on many counts. First and foremost it changes the locus of the disorder from the behavioral characteristics (performance) of the child i.e., his failure to demonstrate adequate understanding or use of spoken or written language, etc., to hypothetical "basic psychological processes".

Second, it makes the presumption that failure to demonstrate in performance adequate speech of calculation or reading is due to some "imperfect ability" (this is, of course, a corollary of the first proposition).

Third, it equates the hypothetical disorder in "basic psychological processes" with other

hypothetical conditions such as "brain injury" "minimal cerebral dysfunction", "dyslexia", and "developmental aphasia", each of which possesses vast impementa of connotations associated with it, as well as a recent highly critical literature.

Fourth, and, from a practical point of view, most important of all, it fails to make any operationally based aetiological proposition other than by exclusion. That is, it alleges that "specific learning disabilities" are *not* due to sensory deficiencies, motor handicaps, mental retardation, emotional disturbance or environmental deprivation — the very conditions regarding which we do have evidence of association with poor performance in school subjects.

In toto, then, this defintion fails to adequately specify the nature of the condition or syndrome and it fails to adequately specify the aetiology or aetiologies.

The uselessness of one definition should be obvious to any educator because there is not one condition of disability or failure. As is obvious from Spreen (1976), we need a complex model involving multiple aetiology and multiple effects.

If, in fact, there is multiple aetiology and multiple effects, then any research based on one definition will be in error, partial or indefinite. This being so, there will be no definitive research and, accordingly, no adequately based or accurate prescriptions for remediation.

Furthermore, broad definitions, as Torgesen (1975) points out, which allow "large numbers of children to be placed in a specific category are undoubtedly effective in generating supportive legislation and educational programs, are also destructive of efforts to build adequate theory or conduct integrated programs of research. In fact, attempts to develop coherent and unified explanations for such a diversified range of phenomena have contributed to both the superficial theoretical developments and disorganized empiricism which are so characteristic of the field today" (Torgesson, 1975, pp. 397-388).

Instead of arguing from exclusion as the NACHC definition does we would be on much firmer ground if we followed the following propositions stated by Claxton (1977) in his recent germinal article:

- (1) the whole orientation must change from 'basic mechanisms' to 'eliciting circumstances'. In what conditions do people of a certain kind manifest a particular ability?
- (2) one must ask what controls the *range* of situations that trigger these abilities?
- (3) before making any generalization whatsoever, even within a circumscribed population, we must sample a *range* of materials and contexts, all of which represent examples of the hypothetical process we are trying to track down . . . If people were content to say initially that result R occurs in *circumstance*

C, then they would be eager to try different conditions to see if R still occurred, rather than, as at present, reluctant, in case it didn't . . .

- (4) if we would stop assuming that 'doesn't' implies 'can't', we could switch our research attention to what people *do* do . . .
- (5) we must take seriously not only situations, but actions. Real progress in understanding how we understand can only occur if we are prepared to look at understanding-in-the context-of-meaningful-action. We must ask not only 'what?' but 'what for?' . . . (pp. 99-100)

Along the same lines Lloyd (1977) note that "there is a growing number of educators who maintain that children do not have learning disabilities but rather, schools have dyspedagogies. By this line of reasoning, the proposed guidelines should focus on the characteristics of school settings . . . rather than solely on the characteristics of learners" (p. 70).

It is of extreme importance, however, not to replace dispositional characteristics of pupils merely with dispositional characteristics of teachers or of classrooms. The essence of Claxton's (1977) argument is that we should be looking at relationships.

After examining the etiological focus, the concerns of professional and lay groups, psychometric problems, psychological and sociological aspects of learning disabilities, Gaddes (1976) has developed the following definition:

A child of school age is identified as suffering from a learning disability if his Learning Index, as derived from the formula officially accepted in his school district, state, or country, falls below the cut off point officially recognized. (p. 23)

While this approach is much sounder than that of the NACHC, because at least, it focuses on the child's performance on established subject matters, reading and arithmetic in particular, it gives rise to two major sources of difficulty: (a) the excellence of the particular formula used, and (b) the degree of specificity of the criterion variable.

Nevertheless, this seems the only realistic approach to the question of definition, if, and only if, one needs a definition of a hypothetical state. Perhaps it would be far more efficient to merely presume that if a class teacher says a child has a problem in learning she has good reason for believing this and the professional called in to advise should investigate: (a) whether in fact the child in question is sufficiently different from his fellows or the same age to warrant special attention; and (b) what is the best way of remediating the deficiency, if such exists. The answering of question (a) may involve the use of a formula but this may involve an inefficient use of professional time. The precision one needs in research may not be necessary in daily practice in the schools.

Prevalence

Gaddes (1976) notes that in recent years in Great Britain and North America several attempts have been made to carry out prevalence studies of learning-disabled children. With the possible exception of the Isle of Wight Study (Rutter, Tizard and Whitmore, 1970) these have been incomplete or seriously limited due to "the debilitating methodological problems inherent in the task".

Cruchshank (1977) writes that, in his experience, claims for a prevalence ranging from 1½ to 83½ have been put forward. "The reality of the situation," he says, "is that we do not know how many such children there are in the schools of this nation. There are absolutely no adequate data of either an epidemiological or demographic nature to provide a base for adequate programming." (p. 61)

Some of the reasons for this state of affairs are given by Gaddes (1976). First the concept of "epidemiology", based on the medical model, is inappropriate in the field of education. As learning disabilities do not imply disease but a level or quality of deficit behavior, "prevalence" would be a better term. Second, etiological studies of underachieving children suggest that their inferior performance may result from deficits in one or more of the three major causal areas: constitutional; psychological and social. Third, that "Since most abnormal psychological and behavioral syndromes lack a sophisticated taxonomy with universally accepted and operationally defined criteria for assignment to each diagnostic category, a systematic compilation is extremely difficult if not impossible" (Caddes, 1976, p. 6).

The way out of this problem, as in the case of definition, may be to undertake studies of the prevalence of problems in reading or arithmetic.

A very thorough attempt to describe the necessary delineation of the class of children needing help with reading has been made by Rutter and Yule (1975). They distinguish between *backwardness*, which describes reading which is backward in relation to the average attainment for that age, regardless of intelligence, and *retardation* which is a term used to describe a specific disability in reading — specific in the sense that it is not explicable in terms of the child's general intelligence.

Using the regression equation first outlined by Thorndike (1963) and developed by Yule and his colleagues (Yule, 1967; Rutter, Tizard & Whitmore, 1970; Yule, Rutter, Berger & Thompson, 1974), it is possible to calculate the expected value of reading attainment for any particular level of the predictor variables (age or IQ). In this way one can determine whether the child scores above, at,

or below this predicted value, and the statistical probability of this deviation. This technique was used in the investigation of specific reading retardation in five "epidemiological" total population studies (Rutter, Tizard & Whitmore, 1970; Yule, 1973; Berger, Yule & Rutter, 1973).

In general, the distributions of "over-" and "under-" achievement in the school population are Gaussian ("normal curve") in nature. However, it has been asserted, by Critchley (1970), among others, that there is a "hump" at the lower end which represents the presence of "dyslexic" children.

Using the data from five studies of a total child population, group tests of intelligence and reading, and three studies of the same population, as well as individual intelligence and reading tests, Yule, et al., (1974) found the rate of severe specific retardation (defined in terms of underachievement at least 2 standard errors below prediction) was above the predicted level . . . Instead of the expected rate of 2.28½ some 3.5½ of Isle of Wight 10-year-olds, about 4.5½ 14-year-olds and over 6½ of London 10-year-olds showed specific reading retardation . . . It may be concluded with confidence that there is a "hump" at the lower end of the distribution and that extreme degrees of specific reading retardation *do* occur at a rate above that expected if the distribution of over- and under- achievement was entirely normal . . . There is no comparable excess at the top end of the distribution." (Rutter & Yule, 1975, pp. 184-185)

Aetiology

The field of study of the aetiology of learning disabilities is in chaos. How could it be otherwise when there is no clearly defined condition of which the causes are sought.

As Wallace and McLoughlin, (1975) in their eminently sensible text point out:

Learning disabled children seem to defy efforts to be arranged in neat categories or syndromes. Ross (1969), McCarthy (1969) and Bloom and Jones (1970) have all struggled with the issue of classifying LD children. Our inability to identify a consensus of opinion about these children underscores the heterogeneity of the population. This actually necessitates individual analysis of learning problems. Etiological factors in the learning disabilities of one child may not have the same significance in another child . . . Consequently, educators must first examine the most educationally relevant factors in learning disabilities. (p. 52)

Similarly, the Schonell Educational Research Centre, University of Queensland, in its evidence to the (Australian) House of Representatives Select Committee on Specific Learning Difficulties (1976) notes:

(a) educational procedures to assist children experien-

cing difficulties with school learning have little dependence upon aetiology per se and should be organized according to educational needs rather than the diagnosed labelling of children;

- (b) the search to date for a suitable narrow definition of specific learning disabilities has not been fruitful. In practice it is difficult to decide whether a child's problems relate to intrinsic deficits, instructional inadequacies, or a lack of match between the child and the instruction he has received. In other words, the diagnosis of 'dyspedagogia' as a cause of failure to learn is usually as tenable as that of 'dyslexia', 'minimal brain dysfunction', or other such terms.

Among the conclusions of the Select Committee are these:

- (e) It is important in the first instance to focus attention on the kind of learning difficulties children have, rather than the kind of children who have them, or the reasons they have them. Severity of a handicap is not necessarily correlated with severity of a learning difficulty. It may well be found that there are some children with no organic handicapping condition whose learning difficulties are as severe as those with such handicapping conditions.
- (f) The ACER Survey material provides the most useful kind of information by focussing on tasks that can or cannot be performed. This provides a more reliable measure of the effectiveness of schooling than does information stating a percentage of children with particular disorders. Knowledge of the incidence of disorders might not necessarily indicate the kind of learning difficulties resulting from the disorder. Establishing what is it that children cannot do has the most immediate implications for the provision of educational services. Knowing the occurrence of particular disabilities does not necessarily indicate what educational services may be needed. (p. 11)

Probably the best thing one can say about aetiology at this time is the comment by Torgesen (1976) that "present etiological formulations are probably more relevant to prevention than to remediation of learning problems." (p. 389)

It should be clear from the above treatment that the field of learning disabilities is a morass! The only way out of the morass, as we see it, is to start from the presenting problem. By and large, the presenting problem is Johnny is not learning to read or hasn't acquired his "number facts" or both. As Torgesen (1976) notes, "It therefore seems to be appropriate to describe those who read poorly as demonstrating failure on a specific task rather than as having a general 'learning disability'. Sound investigation of the psychological processes involved in reading failure will very likely demonstrate their involvement in other kinds of learning problems, but this has yet to be established. At present, it seems best to study the skills relevant to learning specific tasks without attempting to unify them under the learning disability rubric." (Torgesen, 1975, p. 388)

Torgesen (1976) goes on to say "Programs which develop special tasks to train deficient abilities may actually be teaching skills irrelevant to reading. A more effective approach, in the light of present knowledge, would require instruction and practice in regular academic skills which is structured to compensate for or help strengthen suspected areas of deficit. Such an approach seems realistic at present because it does not depend too heavily on unproven assumptions about the importance of specific abilities for performance in school or the effectiveness of current diagnostic techniques in identifying which children are deficient in those abilities." (p. 414)

Remediation

All children with learning difficulties need to be helped without being discriminated against on the basis of criteria established from ignorance of aetiological factors.

A first priority basis for help is the accurate assessment of the child's levels of attainment in reading and arithmetic. This should be based on detailed diagnostic tests of the areas of learning within each subject. Each of these should be assessed on a criterion-referenced test as well as on a normative basis. It is necessary to know the extent of the problem from the normative approach and the content of the problem from criteria in each of the areas.

It is the responsibility of counsellors at the secondary school level just as much as of teachers, reading specialists, or school psychologists at the elementary level, to obtain this information via the best available techniques. It is then possible to begin planning what to do for the student. If technique of greater diagnostic specificity and applicability than the currently very useful devices such as Woodcock Reading (Woodcock, 1973) or Key Math (Connolly, et al., 1971) become available then they should be selected. Generalized tests of knowledge give few indicators for prescription.

Two negative points should be considered. At present there is little support for the training of processes such as visual perception and auditory perception as no transfer to reading or calculating processes has been established (see Hammill & Bartel, 1975). Secondly, although a remedial technique must always start below the difficulty level of the student's failure, use of a standard scheme for reading, even though task-analyzed to the simplest prerequisites, is not a guarantee of success in remediation of a particular individual's learning problem. The remediator must have an organized approach in terms of access to graded and progressive materials, so that he knows what he is doing subject-wise, but he must not accept them as a substitute for his own teaching endeavour.

Any learning problem in reading and arithmetic has developed in the social setting of the classroom and has had effects on peer relations and teacher-pupil relations. The interpersonal affects continue into family relations and effect the failed learner in terms of feelings of aversion-avoidance of the specific activity, frustration, humiliation, and de-valuing of self. Frequently the reactions are depression or overcompensation by being outstanding on something else — e.g., bad behaviour. The feelings of worthlessness or rebellion must be remediated *at the same time* as the academic skill deficit. If not, a well adjusted or well socialized non-reader may result.

It has been suggested that the remedial specialist is of great importance in providing support by acting as an auxiliary ego when the student's has been weakened by failure or delay in development. If the student is unable to tolerate the anxiety of learning from persons, a period of learning from machines (e.g., computer-assisted learning) which reduces the complexity of human interaction but still allows for controlled interaction, may be necessary. If ordinary human interaction is possible, peer tutoring appears helpful in some settings and the attribution of failure to the difficulty level of material — not the deficiencies of the learner — is also helpful.

It is important to plan remediation in terms of a progressive scheme from a one-to-one situation to a one-to-two, very small group, larger group, and finally full classroom, situation, in order to control skill progress and the number of problems to be faced at any one stage of the student's development. For this reason, special settings, e.g., special school or class or resource room, may be necessary.

There is no *one* combination of type of teacher, type of teaching method, and type of setting which will guarantee success in remediation because children with learning problems do not have only one type of difficulty or one set of abilities. Nor is there one absolute standard which all students may be expected to meet. A study of high-achieving students shows very different personality patterns from low-achieving students (Banreti-Fuchs, 1972). A perusal of this should convince the most optimistic teacher that the majority of children who develop learning problems will never be like the high achievers. In other words, it is important to settle for the stage of skill development at which the student is able to live with himself and others, and does not suffer too severely in an achievement-oriented school setting. For the self-esteem of the remediators themselves, it is important to remember that, on a realistic bias, you can't win them all!

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