WILL YOU LISTEN?

Proceedings of the
Pacific Northwest Conference
For Those Concerned with the
Hearing Impaired

Prince George, British Columbia
April 24, 25 and 26, 1975

THE DEAF CHILD WITH LEARNING DISABILITIES

by

Gary Bunch, M.A.

The Numbers

Educators of the deaf have been aware of the existence of multiply handicapped deaf children for a good many years. Despite this awareness few schools for the deaf admitted such children and fewer provided specialized programmes designed to meet their manifold needs. In the past fifteen years, and particularly in the last five, North American schools have begun to admit significant numbers of these children. A 1972 survey (Bunch, 1973) indicated that among the 2232 children enrolled in ten major Canadian schools were to be found 514 children with handicapping conditions in addition to hearing impairment (Table 1). Of these 2232 children 57 or 2.5% were reported as suffering some type of learning disability. More recent information from the provincial schools at Belleville, Ontario (Bunch, 1974) and Vancouver, British Columbia (Watson, 1973) indicates that the incidence is somewhat higher. In the case of Jericho Hill 5.9% of the school population was reported as suffering learning disabilities and in the case of Belleville, 27.7% (Table 2).

It is obvious that learning disabilities are rare in some school populations or that some schools possess more sophisticated diagnostic resources than others. I lean heavily toward this latter possibility. Support for this position may be found in Vernon's (1966) study of multiply handicapped deaf children. His data (Table 3) states that 88 or 21.5% of the 408 children he tested had aphasoid disorders. In general aphasoid disorders have come to be included under the umbrella term of learning disabilities.

TABLE 1

Multiply Handicapped Deaf Children attending Canadian Schools for Deaf Children, 1972-73

School	Age Range	Re-tarded	Dis-turbed	Ortho-pedic	C.P.	Visual Defect	Learn-ing Dis.	Other	Total
Newfound-land	6-12		2-5	1-2	5				10-12
Nova Scot.	Kg-21			1	2	9	2	38	52
Charles-bourg*	6-19	40	10	3	3	2	5		60
Montreal* (boys)	9-17	25	4	2		1	7		36
Milton*	5-21	92	55	11	27	1	25	15	185
Manitoba		8	15	3	6	3	8	1	44
Saskat-chewan	5-18	19	12		8	3	3	5	43
Alberta	5-17	1	11	1			2		15
Jericho Hill	5-18	20	13	7	13	3	5	6	67
TOTALS		205	125	30	64	22	57	65	514
PERCENT		9.2	5.6	1.4	2.9	1.0	2.6	2.9	

TABLE 2

Multiply Handicapped Deaf Children attending selected Canadian Schools for the Deaf, 1973.

School and Percent	Age Range	Re-tarded	Dis-turbed	Ortho-pedic	C.P.	Visual Defect	Learn-ing Dis.	Other	Total
Jericho Hill	5-18	27	54		20	15	13	22	151
Percent		12.2	24.3		9.0	6.8	5.9	9.9	
Belleville	5-21	117	149	16	15	17	121		435
Percent		26.8	34.1	3.7	3.4	3.9	27.7		

TABLE 2

Multiply Handicapped Deaf Children attending selected Canadian Schools for the Deaf, 1973.

School and Percent	Age Range	Re-tarded	Dis-turbed	Ortho-pedic	C.P.	Visual Defect	Learn-ing Dis.	Other	Total
Jericho Hill	5-18	27	54		20	15	13	22	151
Percent		12.2	24.3		9.0	6.8	5.9	9.9	
Belleville	5-21	117	149	16	15	17	121		435
Percent		26.8	34.1	3.7	3.4	3.9	27.7		

TABLE 3

PREVALENCE OF PHYSICAL ANOMALIES

Etiology	CP/&/or Hemiplegias		MR below 70		Aphasoid Disorder		Visual		Ortho-pedic		Seizures	
	n	%	n	%	n	%	n	%	n	%	n	%
Heredity	79	0	62	0	63	2	63	21	63	2	63	0
Meningitis	92	10	92	14	92	17	87	6	92	5	92	3
Premature	113	18	115	17	113	36	113	28		9	113	2
Rubella	104	4	98	8	105	22	104	30		5	104	0
Rh	45	51	39	5	35	23	45	24		2	45	7

The Problem

The above statistics will not surprise teachers and others who have related to deaf children on a day-to-day basis. The problem for these individuals is what to do about the problem that they know exists. What are the options open for the teacher in pinpointing a disability area? What are the options open to the teacher in remediating a disability once it is pinpointed?

Three avenues of action will assist the teacher. It must be remembered that learning disabilities are often difficult to diagnose and attack appropriately. This paper will not tell anyone how to conquer the total problem. However, action in the following areas will reduce the problems encountered and provide a more effective diagnostic and teaching situation for the teacher. It follows that if an improved situation exists, the child will have a greater opportunity to overcome his disability. This "improved situation" can be brought about by approaching the areas of classroom design, classroom testing and programme planning with the needs of individual children in mind.

Classroom Design

If a teacher is to cope successfully and with the highest degree of efficiency with the learning disability deaf child in the classroom, it is necessary to engineer the classroom to meet the needs of all children therein. It is accepted, in theory if not in practice, that a teacher of the deaf should meet the needs of individual children through individualized instruction. It may or may not be possible to succeed in individualized instruction techniques but it has been proven by experience that certain classroom systems are more conducive to those techniques than others.

A. Academic-Occupational Classroom Design

The academic-occupational classroom design leans heavily on the concept that a child can cope with learning efficiently and with minimal stress and programme disruption if a lesson topic is initiated in a particular classroom area and, when the child's interest flags, developed, furthered or supported in other classroom areas. Thus, a lesson emphasizing shapes begun in an academic setting can be furthered in an area designed for crafts, home economics or woodworking. A problem in basic mathematical concepts can be approached at the academic desk, at the kitchen stove, at the woodworking table, at the sewing machine, at the lumber yard, in the class garden or at the crafts table.

The school at Milton, Ontario has developed this concept to the greatest degree in Canadian Schools for the deaf. In their special class section younger boys work from orthodox academic desks in a normal class area but a few steps away is a vocational area equipped with individual work benches, hand tools and a basic assortment of power tools (Figure 1). Girls enter a compact classroom with an academic area, power sewing area, crafts, art and sewing area, beauty culture area and kitchen (Figure 2). Older students have classrooms with increased emphasis on vocational and home training.

Teachers in these areas have found that maintaining a flexible programme, taking advantage of items of immediate interest, designing programmes to meet specific individual needs, integrating into regular classes when possible and developing topics in depth through use of varied learning centers made it possible to cope with widely

divergent disabilities. Analysis of student progress indicated that the programme was positive in preparing students for employment and in increasing their achievement in academic areas (Bunch, 1971).

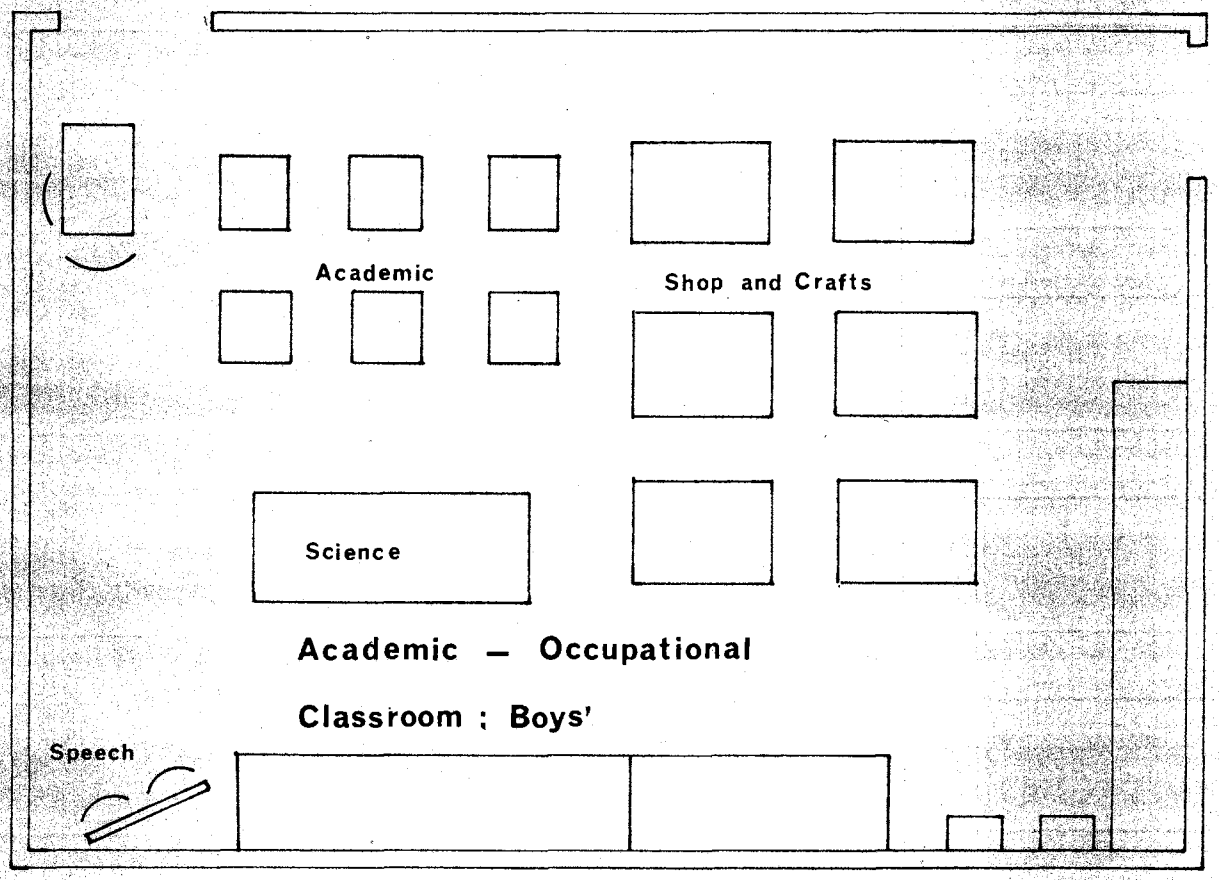


Figure 1

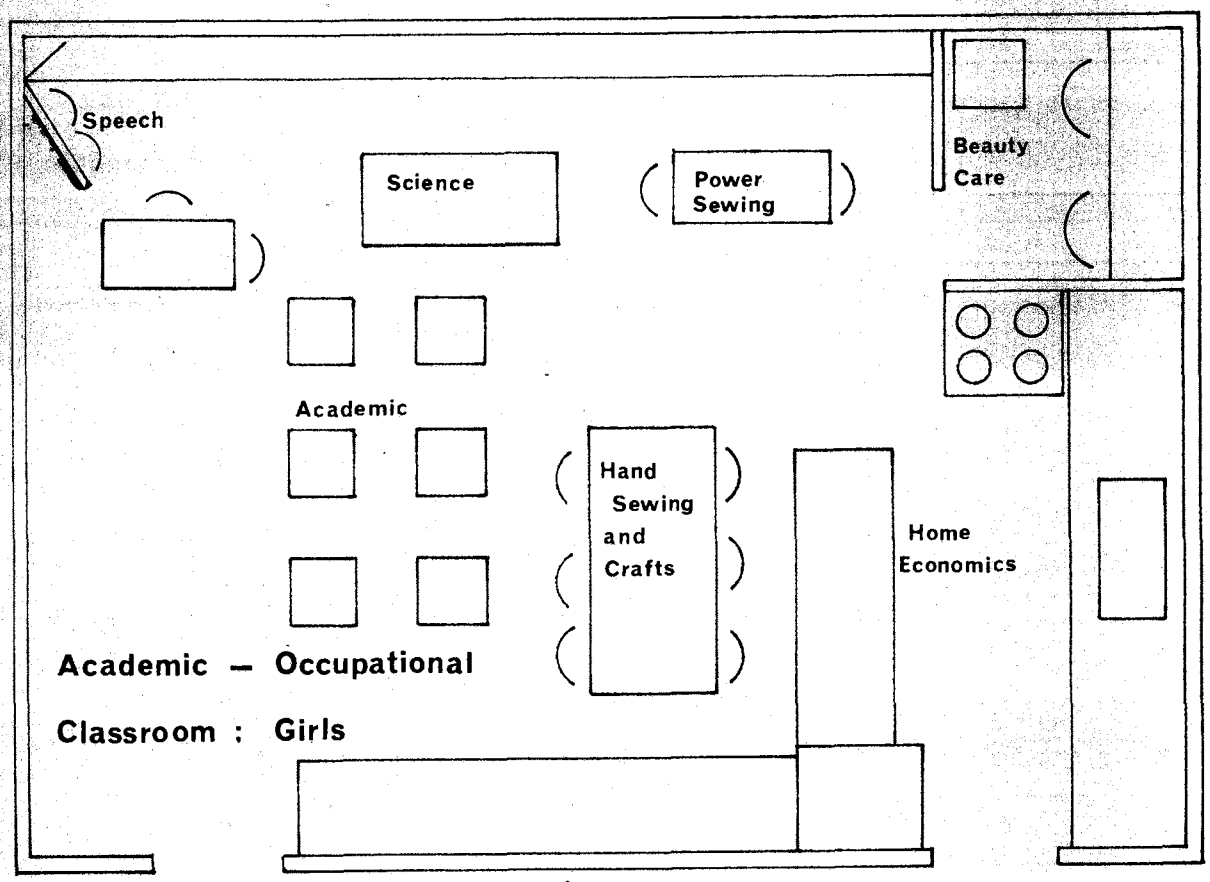


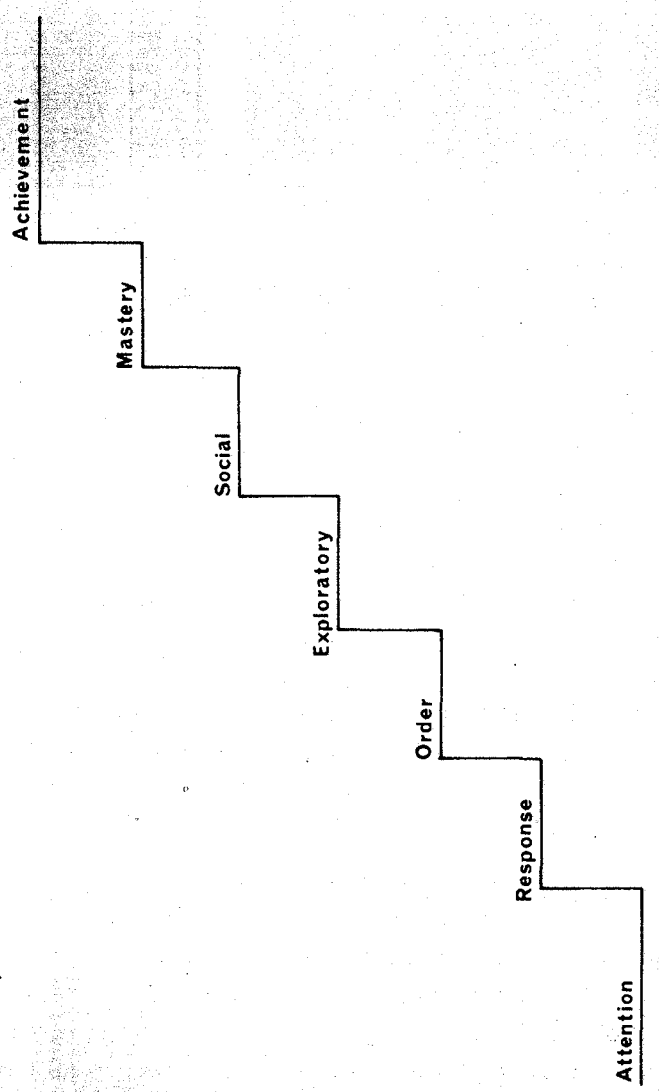
Figure 2

B. Engineered Classroom Design

A number of schools for the deaf are following the engineered classroom concept put forth by Hewitt(1968). The Alberta School For the Deaf in Edmonton utilized Hewitt's design and principles to educate emotionally disturbed children and over the past few years have modified them extensively for their own needs. Basically Hewitt designed a classroom for emotionally disturbed children and suggested that it could be generalized to the education of any group of handicapped children. His programme has an operant conditioning base but this base need not be employed to make the classroom an area in which one or more children with learning disabilities can learn in association with other children.

Hewitt proposed a developmental sequence of educational goals appropriate for the education of exceptional children (Figure 3). With this developmental sequence he proposed an exhaustive educational assessment system, a good many teaching ideas and a classroom design. It is primarily with the developmental sequence and the classroom design that this paper is concerned.

Very simply, the developmental sequence hypothesis that a child must pass through certain hierarchially-ordered steps if he is to learn successfully. These steps are part of a continuous sequence of development beginning with the need to pay attention to a task and ending with personal achievement of the task and application of the principles learned to other similar tasks. After attending to a task the child must respond to it. Both attending and responding must be carried out in an ordered manner so that the child may explore his environment



Developmental Sequence of Educational Goals (Hewitt, 1968)

Figure 3

with increasing success. As he does this, the child will contact other children and learn to work in groups of various sizes as he tests his knowledge and expands his skills. Finally, the child will master the various skills required to complete the task at an appropriate level and utilize his mastery in other areas.

The classroom design should make movement through the sequence a logical and fluid totality. Hewitt suggests that various centres can be created to expedite learning and to be efficient of student and teacher time (Figure 4). In effect the classroom has only three major areas as various levels of the developmental sequence relate closely to one another and may be treated in the same general area. A child may work in different areas on different subjects at the level he has achieved in that subject. At times he may work singly on a task and at others in company. He may be responding to a math worksheet and following ordered computations early in the day, manipulating various shaped metal objects to assemble a puzzle later and measuring lengths of wood for a project next. This type of system lends itself admirably to the needs of children with learning disabilities.

C. Summary - Classroom Designs

The above two designs are similar in nature but somewhat different in the division of academic-vocational orientation. Choice of design rests on school philosophy and supporting programme availability. The major point here is that both lend themselves to individual programming without a significant additional workload for the teacher once the basic classroom is established. Tasks specifically oriented to the alleviation of known learning

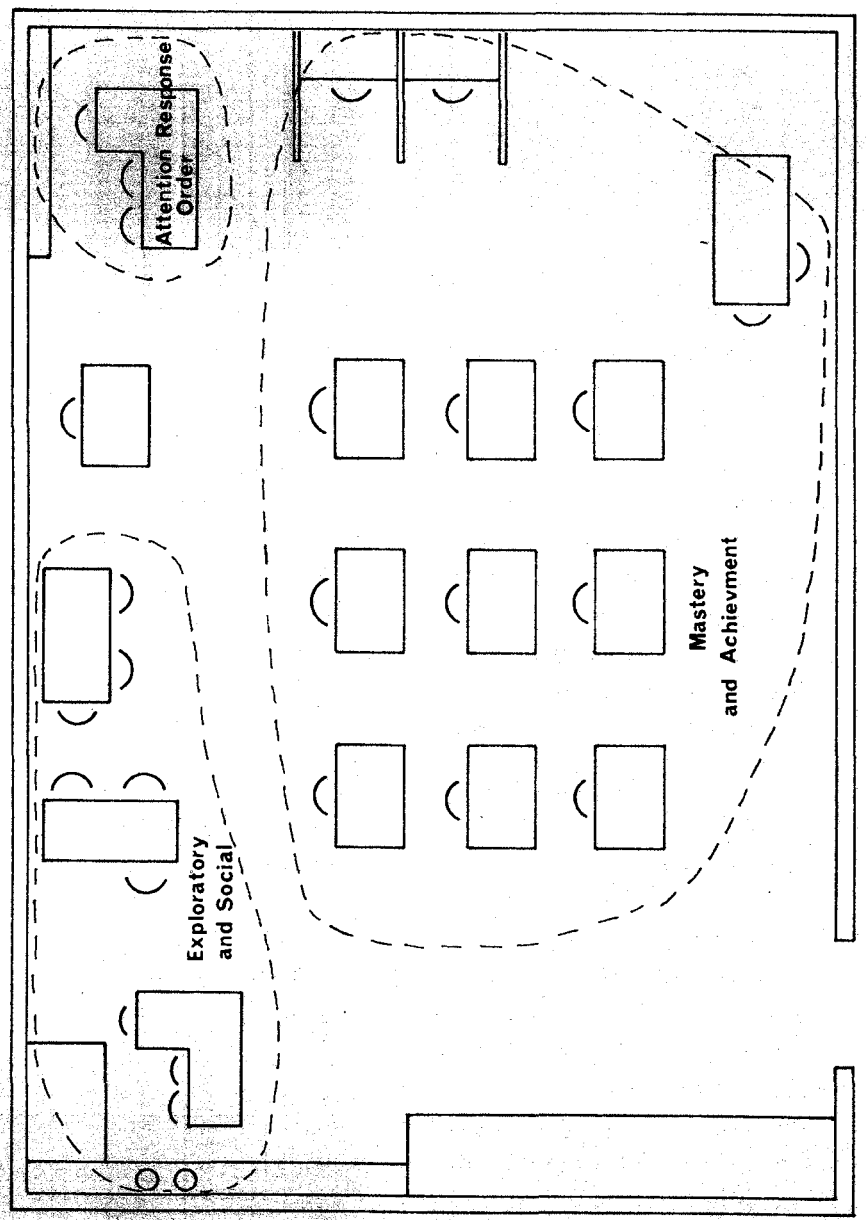


Figure 4 Engineered Classroom (Hewitt, 1968)

learning disabilities can be employed in a variety of interesting situations with minimal stress to the child and maximum effectiveness. Both designs lend themselves to a hierarchial ordering of task difficulty with the possibility of additional emphasis on disabilities in learning areas of significant personal motivation and lesser emphasis in areas of little personal motivation.

Classroom Testing

The selection of an appropriate classroom design should be made in the light of diagnostic information about the child or children being educated. The designs suggested have proven their efficacy with retarded and disturbed children as well as children with learning disabilities. Since these are the major multiply handicapping categories and since it is in the first two areas that most diagnostic information is available, the teacher is presented with only one problem. That problem is deciding on the appropriate programmic approach given the needs of the children, the resources available and the training of the teacher.

Diagnostic and programmic assistance is not readily available in the area of learning disabilities. Teachers of the deaf have long been aware of some children with or without behavioural problems or limited intelligence who could not achieve at the level of their apparent potential even though they seemed to be working diligently. The studies of Vernon(1966), Auxter(1971), Hartung(1970) and others offer some explanation for this finding through the documentation of specific learning disabilities among the deaf population.

Unfortunately few psychologists possess the clinical expertise required to diagnose these disabilities in deaf children. In most cases even when some sophisticated assistance is available, programmic assistance is not. The teacher is faced with the problem of planning a programme with little or no diagnostic assistance and less programmic assistance.

There are a variety of tests which the classroom teacher can utilize to discover some learning problems which will yield to classroom remediation. While the following suggestions do not begin to cover the spectrum of tests which can be applied in the classroom by the teacher, they do give the general concept of the type of test in question.

Dominance:

Have the child stand relaxed with his arms at his sides. Present a piece of chalk or rolled paper tube, etc. to the centre of his body (midline) where he can reach out to grasp it easily. Normally he will grasp it with his dominant hand. In addition, observe which hand he uses to write, catch, etc. Lack of dominance is fairly common problem and one which will affect many learning tasks.

The dominant leg can be checked easily by observing which leg leads when the child walks, runs or climbs. Mixed dominance can produce very real problems for the child.

Balance:

Tests for balance are quite simple. Have the child walk heel to toe, arms at the sides and face up with eyes forward. Have the child balance on one

leg and then the other. Have the child jump using first one leg and then the other.

Ocular tracking:

It is important for the child to be able to follow objects, people and print with his eyes. A difficulty with eye control can affect a child's progress immensely.

Hold a pencil about 18 inches in front of the child seated in front of you. Instruct the child to hold his head still and follow the pencil tip with his eyes. Move the pencil slowly through different planes and observe the child's attempts to track it with his eyes.

Visual Perception :

Ask the child to show you specific shapes from example.

Ask the child to create patterns from example.

Ask the child to print or otherwise assemble simple words from example.

Number Concepts:

Ask the child to match concrete objects to set numbers of concrete objects.

Ask the child to match concrete objects to abstract pictures of objects.

Ask the child to match the printed form of a number with the appropriate number of objects.

Ask the child to do simple arithmetic problems.

Summary - Classroom Testing

The foregoing tests may appear extremely simplistic. They are meant to appear so. We must be careful not to confuse simplicity with lack of utility. Through the use of these and other classroom diagnostic materials the perceptive teacher can pinpoint major areas of difficulty. Certainly a trained and capable psychologist can be of considerable assistance in ferreting out the disabilities borne by any child. Discussions with such

a psychologist following assessment can be a valuable experience for the teacher and have positive results for the child. We must remember two points however. Often a trained and capable psychologist is unavailable for a number of reasons. There is no magic to much of diagnosis. The classroom teacher can and should assist her children by a planned series of informal tests. Once such tests have been completed a programme to alleviate apparent disabilities can be initiated.

Programme Planning

Programme planning is one of the most difficult and easiest areas. It is difficult because people are afraid of it; afraid because they do not know where to start; afraid because they feel inadequate; afraid because they don't know whether what they do will be effective. It is easy if you adopt a simplistic approach. You do have limitations but you are the one who is going to work on the problem. Accept the fact that you must get down to work and start working. Once you start things will flow.

The following suggestions will assist you with setting up your programme.

1. Carry out your programme of informal classroom testing.
2. Decide on one or two areas to attack. Attempting to attack more will result in inefficient use of your energy and confuse the child.
3. Set a target the child should reach after a specified length of time. Be conservative in targetting.
4. Set a time in your day when you or someone else can work individually with the child.

5. Check some references and talk to other teachers to obtain a general idea of the things done to alleviate the disability in question.
6. Choose a few tasks below the level at which you believe the child is functioning.
7. Sit down with the child and do the tasks. Observe his attack skills, movements, pauses, etc. carefully.
8. If the child handles the tasks easily, choose a few more at a slightly higher level.
9. When the child reaches the target behaviour, set a new target in the same area or another area of concern.

Summary

We tend to be threatened as teachers and parents when one of our children appears to have a learning disability. If we can accept the fact of the disability, that most disabilities can be alleviated to some extent, that we are the ones who must work on the disability and that we must get down to work, the child's chances will be improved significantly. The ideas in this paper, while simplistic, have proven effective in the test of experience. Others have used them to help children. There is no reason why you cannot adapt them to suit your teaching needs.

References

Auxter, D. ; Learning Disabilities Among Deaf Populations. Exceptional Children, 1970-71, 37, 573-577.

Bunch, G.O.; An academic-vocational programme for multiply handicapped deaf students. Volta Review, 1971, 73(7), 417-425.

Bunch, G.O. ; Canadian services for multiply handicapped deaf children. Canadian Teacher of the Deaf, 1973, 2, 27-31.

Bunch, G.O.; Classroom management of multiply handicapped deaf children. Paper presented at the National Conference of the Council for Exceptional Children, Ottawa, October, 1974.

Hartung, J.H.; Visual perceptual skill, reading ability, and the young deaf child. Exceptional Children, 1969-70, 36, 603-608.

Hewitt, F.M.; The emotionally disturbed child in the classroom. Allyn and Bacon, Inc., Boston, 1968.

Watson, K.; The educational needs of multiply handicapped deaf children in B.C., Jericho Hill School, Vancouver, British Columbia, 1973.

Vernon, M.; Multiply handicapped deaf children: A study of the significance and causes of the problem. Unpublished doctoral dissertation, Claremont Graduate School, 1966.