

1981

Teaching children with special needs: a Western Australian perspective

Kevin Casey

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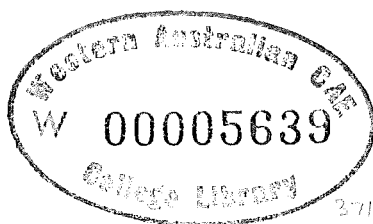
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Teaching Children With Special Needs

A Western Australian Perspective

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1981

P R E F A C E

The education of children with special needs in Australia gained considerable impetus from the report of the Interim Committee for the Australian Schools Commission under the chairmanship of Professor Karmel when, in 1973, it made strong recommendations for a substantial increase in the government expenditure on special education. It highlighted inadequacies in the existing services in special education both in terms of facilities and manpower and suggested greater responsibilities for the education of handicapped children be taken by the State Education Departments. The upgrading of qualifications of teachers in Special Education and the necessary establishment of suitable courses in Australian tertiary institutions were notable consequences of the recommendations.

Running parallel with this substantial thrust for more money and expertise in the field was the growing disaffection with the segregated approach to educating many children with special difficulties, especially those with mild handicaps. A growing number of efficacy studies, especially from the United States, were questioning the value of segregated school placement on pedagogical, social and economic grounds. The trend towards integration or placement of handicapped children into ordinary classrooms, initiated in the 1960's, was accelerated in the 1970's. As the pros and cons of the issue will be debated later in this book, it is sufficient to say that both Schools Commissions recommendations and the Western Australian Education Department policy reflect this trend.

Because of these recent developments it is very important for teachers in ordinary primary schools as well as those in specialised segregated facilities to have an understanding of children with special needs.

As in many developing fields, the nomenclature of special education is rather confusing and inconsistent. This area of education is,

almost by definition, emotionally charged and the terminology used to describe children that are its concern invariably has associated negative connotations. Terms such as "disabled", "deviant" or "abnormal" are to be avoided as much as possible for this very reason whilst "exceptional", the currently popular term in the USA is rather confusing especially for the layman who regards it as a synonym for "gifted or talented" which of course it is, in popular parlance. "Children with special needs" has been chosen for this book as it is essentially an emotionally neutral description and one which accurately describes the population of children concerned.

Quite clearly it could be argued that many groups of children, (e.g., aborigines, non-English speaking migrants, the poor), fall into the category of children with special needs, but the intention of this book is to be concerned with children who come within the broad ambit of Special Education and who demonstrate significant variation across the intellectual, physical or behavioural dimensions. Aboriginal, migrant and poor children fit across these dimensions as do white middle class Australian children and are considered as part of the overall population of children rather than as special cultural or socio-economic entities.

Most of the earlier texts and indeed some of the more recent editions have examined areas of special education in terms of categories of disabilities. This approach based mainly on the medical model of description, reflected the prevailing segregated philosophy of education and saw children described under chapter headings such as "The Mentally Retarded, The Emotionally Disturbed", etc. More recently a reaction to this categorical approach has resulted in texts written with a non-categorical but functional emphasis stressing areas of commonality and organising chapters around general causes, intervention programmes and social implications. I am not convinced that this approach clarifies the issues and the concepts of special education for the beginning students, so a compromise format has been adopted for this book. Many of the chapters relate to children with significant difficulties in the cognitive, physical or behavioural domains with the emphasis on educational implications rather than medical disability, although relevant background information on causes and concomitants will be provided where necessary. Whilst "mentally retarded"

may in many cases be a difficult label to justify, it is clear that many children, traditionally labelled as such, do have general learning difficulties. The emphasis is away from the study of the *handicapped child* and the associated connotations of being the total person who is restricted, and on to the *child with a handicap* and consequent implication of the person as separate from the one or more restrictions he has on his life. Difficulties rather than disabilities are emphasised as the latter implies, limitations on capability levels that are often impossible to justify.

Although the overall view of this book is eclectic and ideas and strategies emanating from diverse psychological theories are discussed, the basic theoretical framework underpinning the discussion is one of interactionism. The emphasis is on the child as a social being interacting with his environment, modifying it and being modified by it, and the effect of this interaction on his cognitive, physical and affective development. A major concern throughout the chapters is the role of the classroom teacher as a significant influence in the environment of the child and one on whom much of the educational success and emotional satisfaction of the child in school depends.

This book is intended as a primer for beginning students of special education aiming specifically to a) acquaint them with the problems, strengths and weaknesses of children with special needs and help them to appreciate the rich diversity of individual differences within the normal classes and in more specialised settings, and (b) provide information, on the local (Western Australian) scene, about provisions, philosophies, innovations and developments in the area of Special Education. This latter requirement has been difficult to fulfil as the Western Australian special education scene has been in a state of dynamic change and development in 1981. Whilst I have attempted to present an up-to-date account of programmes and services, I suspect that changes, currently in the planning stage, will have been effected.

Much of the content of this book has been developed from my interaction with teachers in the field, students of special education

and professional colleagues and to them I am much indebted. More particularly, I acknowledge and appreciate the efforts of Dr. Rod Underwood for his editings and constructive criticism, Mr. Bill Adams for his effective cover design and Mrs Doreen Williams for her patience and competence in typing from a manuscript that was not always a model of accuracy or legibility.

Stylistic Note: To avoid clumsy alternation between "he" and "she" and "him" and "her", children are referred to as males in this text as there are more male students with special needs in our schools than female. Teachers are referred to as females because there are more female teachers of children with special needs than male.

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CHAPTER 1

OVERVIEW OF SPECIAL EDUCATION : HISTORY, ISSUES AND TRENDS

HISTORICAL DEVELOPMENT OF SPECIAL EDUCATION

An historical overview of special education services in western societies over the past century reveals a steadily changing and expanding scene, which reflects the improving knowledge and attitudes of both the education fraternity and the community at large about the needs of handicapped children. From little or no recognition or support for the educational needs of handicapped children in the early part of the century, through a dramatic expansion in the provision of segregated facilities in the 1950's and 1960's, to an emphasis on integrated education for all but the most seriously handicapped children in the 1970's and 1980's, the education of children with special needs has undergone a constant and dynamic evolution. The trends in Western Australia basically reflect those of Australia as a whole, and indeed most of the major western countries. Dunn (1973) claims that in the 25 years up to 1973 the number of children in the USA receiving special education had increased by 700%. Gulliford (1971) outlines an expanding and changing scene in Britain, whilst Scandinavia in general, and Sweden in particular, seem particularly innovative in their enlightened recognition and provision for handicapped children (Reynolds, 1977). In some communities, notably Madison, Wisconsin (USA), all segregated educational facilities have been phased out, and all children, even those with the severest handicaps, are educated in the regular school system. Drummond outlines the emerging pattern in Australia over the past century. He refers to the period 1970-80 as the decade of rehabilitation and claims that:

1970-80 has already seen the biggest advance in special education of the handicapped and the learning disabled in the history of education in Australia. (Drummond, 1978, p. 1).

A number of authors (Dunn, 1973, Gearheart and Weishahn 1976) have outlined stages in the development of attitudes and services for handicapped children. In general, the past century could be quite conveniently, albeit simplistically, divided into three major eras —

1920's — Era of Neglect in which the prevailing attitude seemed to be one of "out of sight, out of mind" and in which provisions for handicapped children were minimal and, in some areas, non-existent. Children with serious difficulties were either locked up in institutions or hidden away at home, whilst those whose problems were less severe were lost in overcrowded classes with no attempt being made to cater for their "special needs". It was a period of general ignorance of, and callous indifference to, the needs of handicapped children. Custodial institutions contained many children who nowadays would receive formal education. It is a rather sobering thought to consider the number of children, with considerable potential for learning, who would have been incarcerated because they had not satisfied some arbitrary criterion of capability.

1920's - 1960's — Era of segregation in which the needs and problems of the disadvantaged and handicapped children were recognised in a more enlightened climate of improved social attitudes to individual differences. Segregated specialist facilities proliferated, usually on the initiative of private welfare organisations, and it was generally considered the most appropriate form of education for children with handicaps to be taught exclusively with others of their own kind. Special schools and classes flourished and children, seen to be significantly different from their peers, were all too readily referred for segregated schooling.

1960 — Era of integration in which the prevailing attitude is one of "normalisation" of the child's life style and the provision wherever possible for children with special problems to be educated in the ordinary schools among non-handicapped peers. This change of philosophy resulted from a number of causes, not the least of which was a lack of consistent evidence to show that demonstrable improvement, in either the academic or social areas, was gained in specialised segregated education.

THE WESTERN AUSTRALIAN SCENE

The development of special education in Western Australia generally parallels that of Australia as a whole with the blind and deaf being the first focus of attention. (1860 the first school in Australia, 1897 the first in W.A.). It is interesting to note that since 1919 education

of blind and deaf children has been compulsory in W.A. but it was not until 1952 that the Education Act was amended to make comparable access for mentally defective children. (Jecks, 1979). In both the national and state arenas it was the private welfare organisations that provided the initial facilities and it was the establishment of the Guidance Branch soon after World War II that proved to be the springboard for the escalation of special education services.

The development of educational provisions for the intellectually handicapped in Western Australia has been slow and marked by considerable confusion and controversy. Before 1920 no significant schooling was provided for such children (Jecks, 1979). In 1919 a special class for "mentally defective" children was established at North Fremantle and children were selected on the basis of their results on a Binet-Simon test of intelligence (Weiland, 1975). Questions were soon raised in Parliament about the validity of the testing instrument and the effect of labelling children on the basis of its results. Thus began the local version of the controversy of the labelling and educational placement of children with intellectual handicaps, an issue that has remained healthy to this day.

The Guidance Branch was established after the war and very soon afterwards education for intellectually handicapped children was made compulsory. The Education Department became much more involved in the teaching of children with all forms of handicaps at this stage and gradually took full responsibility for providing teachers and materials in all areas of Special Education. The subsequent years saw a substantial increase in the number of specialised facilities, special classes, special schools and advisory teachers (Fig. 1.1).

In 1974, the Western Australian Council for Special Education was established by the then Minister for Education to advise and make recommendations to the government on all aspects of special education. Since its inception the council has examined and reported on the education of children with: cerebral palsy; hearing impairment; visual handicaps and intellectual handicaps. Among its recommendations that have been actioned is the building of new special schools for physically handicapped children in northern and southern suburbs. These schools are different in both kind and degree in the services provided, from their predecessors; education is the prime concern

| Year | Special Schools | Children in Special Schools | Year | Special Schools | Children in Special Schools |
|------|--------------------|--------------------------------|------|--------------------|--------------------------------|
| 1960 | 18 | 589 | 1970 | 23 | 1077 |
| 1961 | 18 | 629 | 1971 | 23 | 1257 |
| 1962 | 18 | 679 | 1972 | 23 | 1340 |
| 1963 | 17 | 763 | 1973 | 23 | 1415 |
| 1964 | 18 | 820 | 1974 | 25 | 1336 |
| 1965 | 19 | 866 | 1975 | 25 | 1439 |
| 1966 | 20 | 906 | 1976 | 26 | 1480 |
| 1967 | 22 | 914 | 1977 | 27 | 1645 |
| 1968 | 23 | 946 | 1978 | 27 | 1541 |
| 1969 | 22 | 993 | 1979 | 28 | 1617 |

Fig. 1.1 Showing the growth of special schools in Western Australia during the two decades 1960-1979.

for the children, with medical and para-medical services available in a support capacity. (The Education Department actually employs the professionals in these areas). They also reflect the current concern for "maximum useful association" with children in ordinary schools, by being built adjacent to new government schools which are accessible to physically handicapped children.

The pervading trend of the seventies has been one of integration of handicapped and non-handicapped children. In all of the major educational reports pertaining to the field of Special Education in W.A. (Karmel 1973; Schools Commission 1975; Council for Special Education 1975, 1976, 1978, 1979) emphasis has unequivocally been placed on "normalising" the education of all children with special needs. Referral to special classes has been resisted more than in the past and regular schools are encouraged to provide education for an increasingly wider diversity of students (Fig. 1.2).

This decrease in special class numbers occurred during a period in which the total school age population of the state rose by over 62,000. The parallel increase in special school population indicated in Fig. 1.1 reflects more a policy of educating children with an increasingly lower level of achievement, than one of returning special class children back into special schools.

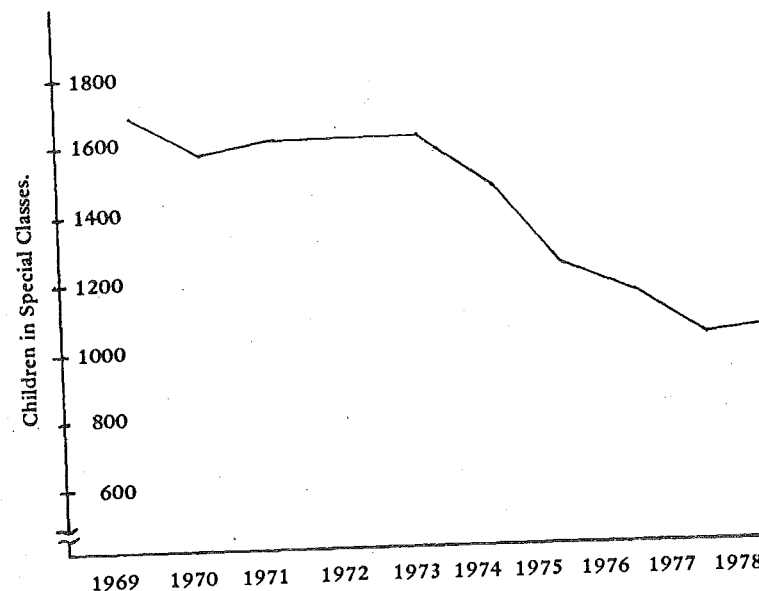


Fig. 1.2 Graph showing the decline in special class numbers over the decade 1969-1978.

The most recent policy statement of the Education Department (Education Circular, 1979) reiterates the commitment of the Department to the notion that wherever possible children should be taught in ordinary classes. It does, however, consider the provision of separate classes and schools necessary for those children whom it is judged cannot cope in the regular stream. Such recommendations for segregated placement are made after comprehensive testing and consultation.

Placement in special education is usually recommended after discussions have been held between parents, class teacher, guidance officer, and Special Education Branch Staff.

The statement goes on to say that "maximum useful association" is to be promoted between children in specialised settings and those in the normal schools.

ISSUE OF INTEGRATION VERSUS SEGREGATION

Much of the recent momentum for integrating children with special needs into ordinary classes can be traced to a number of thought provoking studies in the 1960's (Johnson, 1962; Dunn, 1968). These articles produced:

- (a) a rash of efficacy studies examining the relative merits of integrated and segregated placement (Haring and Krug, 1975; Bradfield, 1973; Goldstein, Moss and Jordan, 1965);
- (b) intense questioning of the premises upon which segregation is based (Lilly, 1970; Christopholoz and Renz, 1969; Gardner, 1976); and,
- (c) a hostile reaction from those committed to the value of segregated placement (Kolstoe, 1972; Valetutti, 1969).

The controversy has been exacerbated by a growing disenchantment with the use of medically oriented disability labels and categories in special education, and the growing number of successful law suits brought against U.S. education authorities for labelling and placing children into segregated classes.

Whilst the questions and issues are very much interrelated, it would seem profitable to examine the evidence for:

- (a) academic merit of specialised placement;
- (b) the emotional and social benefit to the child; and
- (c) the general effect on the regular classroom population of a marked extension in the range of individual differences implied by integration.

Academic Achievement. The evidence on the effectiveness of segregated schooling for children with mild intellectual handicaps is, at best, equivocal. Gardner (1976) claims that special class placement has proven to be inferior to or at best equal to integrated education in terms of the academic achievement of such children. His conclusions, as are those of Johnson (1962), are based on rather outdated research, the most recent of the studies quoted being from 1959. More recent

studies both support and refute the finding of inferior academic achievement in special classes, but most of them manifest problems of research design and their conclusions are necessarily tentative. Studies by Haring (1974), Bradfield, Brown, Kaplan, Rickert and Stanmond (1973) and Haring and Krug (1975) all give support to the conclusion that academically these children are better off in the regular classroom. Goldstein, Moss and Jordan (1965), in a well designed study of children randomly assigned to special and regular classes, found that neither group was superior to the other in academic achievement. Post hoc analysis of the children's performance revealed that those with higher IQ's fared better in the integrated setting than did those of lower IQ who seemed to benefit more from the special class environment. A more recent study by Macy and Carter (1978) supported the notion of improved performance of mildly retarded children in the normal classroom settings.

Kolstoe (1972) is highly critical of research studies that purport to demonstrate the superiority of integrated placement over special classes. He is particularly concerned with the problem of education for employment and claims a marked superiority for the segregated setting in developing appropriate and effective pre-vocational education.

Bruininks and Rynders (1971) sum up the state of the research in the 60's:

Inadequacies in research design and problems of interpreting the findings of studies concerned with ascertaining the efficacy of special classes for E.M.R. (Educable Mentally Retarded) children led inevitably to the conclusion that available evidence is less than conclusive, it is basically uninterpretable. (1971, p. 4)

Nothing that has happened in the last decade has substantially altered that conclusion. It seems that the best we can say is that if there is no other overriding reason for special class placement, such a placement on the grounds of academic improvement is not warranted.

Emotional and Social Development. It is frequently maintained by the proponents of segregation that the mildly handicapped child will suffer emotionally and socially by being placed in a heterogeneous normal class in which his chronological age peers are markedly superior performers. It is argued that the more competitive nature of the regular class, with its emphasis on academic progress and its significantly larger

numbers, places the weaker child in an emotionally vulnerable position. The special class is often significantly smaller in numbers, intellectually more homogeneous and in the charge of a teacher specially trained to cater for the individual needs of a child with special difficulties. Intuitively one would think that low achieving and handicapped children should be protected from invidious comparisons which would tend to undermine self-esteem and isolate them within the class – conditions more likely to pertain in the regular than in the special class. Efficacy studies designed to demonstrate effects on self-esteem and social adjustment are rather scarce and predictably equivocal.

Gardner (1976) quotes a number of studies which suggest that, far from being beneficial for the emotional and social adjustment of the intellectually handicapped child, the special class increases his self-derogation. Bryan (1976) found that learning disabled children were significantly less socially accepted than their peers in normal classrooms. Gottlieb, Campbell and Budhoff (1975) report a high level of anxiety and unhappiness among mildly retarded children when integrated into normal settings. These findings were reversed in Macy and Carter's (1978) comprehensive study in which intellectually handicapped children were reported to be well adjusted and enthusiastic about their normal class programmes. Once again the research lacks consistency and, as MacMillan observed:

The real issue is not whether special classes or regular classes are better for mildly retarded but rather – the extent to which a wide range of individual differences can be accommodated in the regular class. (1971, p. 401)

Many factors such as the availability of specialist support, reduced class size, and favourable teacher attitudes influence greatly the extent to which the range of individual differences can be extended in a regular class.

Effect on the Normal Class. It is to this issue of the increased range of individual differences within the ordinary class that most of the cautionary words have been addressed. Cruickshank (1974) argues eloquently the case of proceeding slowly so that children and teachers are not disadvantaged by wholesale and indiscriminate integration. Reduction in class sizes, training of teachers to cope with a greater range of ability, teacher attitudes to handicapped children, access to a resource teacher and materials, etc., all seem central considerations in the successful implementation of integration programmes.

Valletutti (1969) touched a sensitive nerve when he pointed out the effect of placing a handicapped student into a class run by a teacher whose attitude to such a child was negative and debilitating. He also maintained that the teacher's needs and those of the other children in the class must be considered before the decision to integrate is made. As he suggested, many children may be "de-segregated" but hardly "integrated" if the classroom atmosphere is not supportive.

One further variable to be considered when examining the issue of integration is the effect on the so-called "normal" children. It could be argued that segregation is limiting for the children in the ordinary classes as they are not being exposed to as full a range of individual differences as possible – a situation that may lead to a lack of sensitivity to the diversity within the society and a failure to become sufficiently understanding and supportive of their less capable peers. Evidence to be examined later in the book shows clearly that attitudes to the handicapped and the different in our society improve with contact.

There may be considerable benefit to other children in learning to mix with, appreciate and, where necessary, care for children who are different from them in particular ways. (Karmel, 1973, p. 109)

If the aim of normalisation of the lifestyles of the handicapped is to be achieved, the problem of changing community attitudes needs to be addressed. The more the handicapped are a part of the normal environment the better and more natural will be their acceptance within the community. To this end it is most effective to integrate children as young as possible, before prejudices and stereotypes have become established.

Studies by Guralnick (1976), Peterson, Peterson and Senven (1977) have demonstrated the effectiveness of imitative learning and specifically the modelling of handicapped pre-schoolers' behaviour on the behaviour of non-handicapped peers. Modelling in this context, refers to learning by imitation that can occur in both spontaneous and structured situations within the integrated class when a child with special needs observes and copies the behaviour of his non-handicapped peers. This powerful effect of modelling is also a rich source of learning for the handicapped child in the regular class and, whilst empirical research

on its effectiveness is scarce, it does provide a further prima facie argument for integration. Peer modelling can be effective not only in shaping social behaviour, but also in the development of academic and motor skills. By skilful structuring of the modelling situation, and by the utilisation of the principles of reinforcement, a teacher can make the task of integration an easier and more pleasant experience for the child with a special difficulty.

Legal Consideration. A factor which has accelerated the process of integration has been the success of litigation in the United States. The law suits have typically been taken out by parent action groups against county school boards over the mis-diagnosis and mis-placement of children into special classes. The cases have invariably been won by the plaintiffs and the children have been withdrawn from the special classes and returned to regular education. In the United States the All Handicapped Children's Act (PL 94 - 142) was passed in 1975, and it provides legal backing for the best possible education for handicapped children, by the mandatory requirement of access to public education for all handicapped children in the "least restrictive environment". Schools or county education authorities failing to comply with its requirements have their federal funding terminated.

This law has no parallel in Western Australia (or indeed Australia) as many children are still denied access to public education and, in the final analysis, ministerial discretion can be exercised in the determination of what education is available to which handicapped child.

The new Western Australian Education Amendment Act (1976) whilst it does require the formation of an advisory panel, containing at least a teacher and a trained psychologist to recommend the placement of children into appropriate educational settings, permits the Minister to direct parents to place their children in settings recommended by the panel.

... the Minister may, on the recommendation of the panel, serve on the parent of the child a direction in writing, requiring the parent to cause the child to attend such school or schools as is or are specified in the direction, during such times as are so specified. (Section 20A(1) Education Act 1976)

The Act further states:

Where it appears to an advisory panel that a child has a mental or physical disorder or disability of so severe a nature that the presence of that child in a Government school would disrupt the normal operation of the school the Minister may, on the recommendation of the panel, serve on the parent of the child a direction in writing directing the parent to refrain from causing the child to attend any Government school and whilst the direction remains in force the Minister shall refuse to permit the child to attend any Government school. (Section 20A(1)).

Thus access to public education in the least restrictive environment in W.A. falls short of that being achieved in the USA (especially in communities such as Madison, Wisconsin), although it compares favourably with that of other Australian states. Both the W.A. Council for Special Education (Jecks, 1979) and the Slow Learning Children's Group have recommended that all severely handicapped children, currently being provided for in day activity centres run by the private welfare organisations, become the responsibility of the Education Department. Indeed some severely intellectually handicapped children, who have until now been confined to an institution, are beginning to receive education in special schools.

Wyne and O'Connor (1979) have outlined the issues tackled in the court cases in the United States:

- (a) testing, especially IQ testing is a culturally biased, inaccurate measure of learning ability;
- (b) bi-lingual and ethnic minority groups are inappropriately assessed;
- (c) parents often have little say in the placement;
- (d) the special classes were stigmatising.

Dunn's claim (1968) that 60-80% of all children in special classes and schools for mentally retarded were from low status and/or ethnic minority backgrounds, highlighted the culture bias and the inappropriateness of the testing instruments used in much special class place-

ment, but it is the issue of stigma and the irrevocable nature of disability labels that has precipitated much change in orientation in special education over the past decade.

DISABILITY CATEGORIES AND LABELLING

It has long been the practice in special education to group children with special needs into disability categories, e.g., "mentally retarded", "emotionally disturbed", etc., on the assumption that it is best to teach children with the same "disability" in a homogeneous group and for administrative and funding purposes it is considerably more convenient. In recent years such categorising has come under considerable criticism and tends to be seen now as often inappropriate and sometimes counter-productive. Some of the weaknesses of this classification are:

- (a) the categories are not mutually exclusive and many children are multiply handicapped;
- (b) most children, particularly those with mild handicaps, have much more in common with non-handicapped children than they do with their more handicapped peers (e.g., a child with mild cerebral palsy, whose only manifestation of the problem is a slight aberration of gait, is more like his non-handicapped peers than cerebral palsied children with severe restrictions on mobility, intellectual functioning and speech);
- (c) the categories are often based on the medical (disease) model rather than an educational model. Medical diagnosis and categorisation depends upon the recognition of a discrete set of symptoms which necessarily indicates the presence of a medical condition, e.g., "measles" may be accurately diagnosed when a child has: 1) high temperature, 2) viral symptoms such as runny nose and eyes, 3) papilla rash starting behind the ears, 4) spots in the mouth, etc. It is certainly not possible to describe "emotional disturbance" or "dyslexia" in such precise terms. Educational problems do not lend themselves to medically oriented classification. Nor is the quest for causes always as fruitful in education; it seems of little consequence to the classroom teacher to know that his "dyslexic" child is such because he suffers minimal cerebral dysfunction;

Physicians require labels to prescribe treatments and effect cures. Educators do not provide treatment or such cures, they enrich the lives of the students and facilitate their acquisition of knowledge and those skills that will assist them in acquiring interdependence and independence. (Bender, Valettutti and Bender, 1976, p. 9).

- (d) The negative effects of labelling children inappropriately.

Labelling refers to the description of a child by the use of a stereotyping term which for educational purposes is inappropriate, (e.g. the "hyperactive" or "dyslexic" child). Labelling children has an effect on the teachers. Extrapolations from Rosenthal and Jacobson's (1966) controversial study on teacher expectations would seem to indicate that teachers expect and receive academic performance and social behaviour from children according to the label that has been applied. Many labels carry connotations of inherent disability and irremediability, so low expectations are made and low performance is achieved.

Labelling and segregating children also has a marked effect on the child — it draws negative and unsolicited attention to the child's area of weakness, and it stigmatises the child in the eyes of others. Whilst administrative changes alone do not necessarily eliminate labels, they can withdraw the official stamp of approval which may lead the children to feel, and be treated as, different.

Due to the limitations of our language, some modified form of labelling will always exist, but people must remember that labels at best, are descriptive, not diagnostic. Labelling according to disability categories, then, is under considerable attack, and the current trend towards describing children's special needs according to their educational and behavioural performance is more appropriate and relevant to maximising their education. A label has the unfortunate effect of evoking in others a reaction consistent with its worst interpretation. Thus "emotionally disturbed", even when applied to a child whose behaviour is only mildly and inconsistently deviant, connotes uncontrolled behaviour, psychosis and ineducability. Expectations about the child's behaviour are reduced to the lowest common denominator, and others' reactions to him are consistent with those expectations.

SUMMARY

The integration of children with special needs into ordinary classes, and the associated breaking down of the traditional medically oriented categorisation system for providing for such children, is an accepted and desirable trend in special education. From the evaluation of the arguments it would certainly appear that, as a guiding principle, integration into a normal class environment should be the goal for the mildly handicapped child. The need for caution and preparation accepted, a movement which leads to a breakdown in a system emphasising difference and deviance is to be applauded. There is danger, however, in making broad generalisations about situations in which there is considerable scope for individual evaluation. The specific and significant factors relating to individual children, classrooms and teachers need to be considered. Thus it is quite conceivable, and indeed consistently obvious, that for certain mildly handicapped children placement in a special class under a particularly competent and understanding teacher will be more beneficial than placement in a normal class in which the teacher might be unable to cope with the extended range of individual differences within her class. In Western Australia the Education Department recognises the importance of evaluating and placing children according to their individual needs, and advocates a policy of "maximum useful association" for those children who require specialised placements.

Certainly, for the trend towards greater integration to succeed, the normal class teachers need to be very well equipped to cater for the increased range of abilities in their classes. Not only must they be competent in developing individualised programmes, but they must also be aware of the special emotional needs of the less capable members of the class. An integral part of each teacher's role is that of attitude formation. It is unrealistic in the extreme, to expect benefits from a policy of integration when the attitudes of teachers and children to difference and handicap are stereotyped and negative. Teachers must be aware of the need to engender attitudes of tolerance and acceptance of all children regardless of their apparent deviance from the class concept of normality. In addition our schools must adopt an extended role. We need, and seem to be slowly acquiring, a pedagogical system that will provide education suitable to each individual child's developmental growth rate. The child's education must develop at a pace suitable to his social, emotional,

physical and cognitive needs. Education must be geared to success not failure so that the slow child, as well as the competent, can enjoy his learning experiences and be educated to the limited of his capacity.

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CHAPTER 2

INDIVIDUAL DIFFERENCES

Mixed Ability Classes.

All children are unique. They differ from each other genetically, psychologically, physically, sociologically and intellectually. (Lowenbraun and Affleck, 1976, p. 1).

A primary school class is a microcosm of the society, replete with the full richness of individual variation that makes for interesting and enriching social and educational interactions. Many dimensions across which children differ are obvious and easily quantified, e.g., height and weight. Others however, such as intelligence, personality, language development, etc. are less amenable to precise differentiation and this problem has led to considerable disagreement among professionals over the origins and causes of such variation.

The issue variously labelled "nature versus nurture", "innate determinants versus environmental factors" is basically concerned with the roles of heredity and environment in the determination of individual differences. Do individuals develop their uniqueness from a genetically determined blueprint or from the specific set of environmental circumstances with which they interact? Even identical twins sharing the same genetic characteristics live in different environments. Philosophers and psychologists have expended much energy in attempts at outlining the relative merits of the two factors in determining the variations throughout the population. In no area of individual differences has the issue been more hotly debated than in the area of intelligence.

Anastasi (1958) brought an enlightened view to the debate by switching attention from relative cause to an examination of the interaction between the two variables. Recently however the issue has been resurrected following Jensen's (1969) claim that 80% of the variability in intelligence is attributable to heredity and the implication that some racial groups were genetically inferior to others in the area of intelligence. Whilst most eminent theorists in the field reacted strongly to Jensen's view, the controversy is obviously far from dead. A generally acceptable, albeit simplistic view is that heredity determines the limits of performance but environment determines

the degree to which those limits are approached. In this context education should play an important role in providing the environment that best helps an individual reach the level of his capacity. The value of education, particularly for children with special needs depends on the view that performance is to a large extent shaped by the environment. If this were not so, little case could be made for the education of children whose difficulties were genetically determined.

Modern education is, or should be, committed to the recognition of, and provisions for, individual differences among our children. Educational practices under the influence of various schools of psychology are being geared more and more to provide for differential levels of achievement within the classroom. Schools, like other institutions, have undergone considerable change over the past 20 years : class sizes have decreased; classroom design reflects a concern with more flexible teaching; grouping patterns are varied; commercially made materials have flourished and become more available. These changes and others have all made the contemporary teacher's role significantly different from that of her predecessors. Nowhere has the change been more dramatic than in the need for teachers to cater for individual differences in their classrooms. The growing awareness that children in the same grade learn at different rates, employ different strategies for solving problems, have widely disparate levels of performance in mathematics, spelling, reading and general information, has led to the need for teachers to cater for differential levels of performance within their classroom. These developments, bolstered by a developing public awareness of educational issues and a consensus of psychological opinion on the value of the uniqueness of the individual, have all put pressures on teachers to acknowledge and cater for the differential needs of children in their care.

The old system of streaming and grading children according to ability levels has given way to classes of mixed ability in which the full range of physical, behavioural and intellectual differences are manifest. The inappropriateness of the teaching philosophy that emphasises sameness of performance and teaching directed at the "average" member is illustrated by the following allegories:

Procrustes, the cruel robber of Greek Mythology, offered the

same bed to travellers who sought shelter with him for the night. If they were too short for it he stretched them until they fitted; if they were too tall he trimmed their limbs. In this way his guests were made equally long and short, and equally dead.

For another example of an unsympathetic attitude to individual differences, there is the account of a school run by the animals.

In their school they adopted an activity curriculum consisting of running, swimming, and flying. To make it easier to administer the curriculum, all the animals took all the subjects.

The duck was excellent in swimming, in fact better than his instructor; but he made only passing grades in flying and was very poor in running. Since he was slow in running he had to stay after school, and also to drop swimming, in order to practice running. This was kept up until his web feet were badly worn and he was only average in swimming. But average was acceptable in school so nobody worried about this except the duck.

The rabbit started at the top of the class in running, but had a nervous breakdown because of so much make-up work in swimming.

The squirrel was excellent in climbing until he developed frustration in the flying class where his teacher made him start from the ground up instead of from the treetop down. He also developed "charlie horses" from over-exertion, and then got an E in climbing and a D in running.

The eagle was a problem child, and was disciplined severely. In the climbing class he beat all the others to the top of the tree, but insisted on using his own way to get there.

At the end of the year, an abnormal eel that could swim exceedingly well, and also run, climb, and fly a little had the highest average, and was top.

The "homogeneity" of the old streamed class was always a myth, but because of class sizes and a lack of pedagogical theory on differential instruction the class tended to be taught at a single level and this level represented the common denominator of the class ability.

The contemporary mixed ability class is currently having its range of individual differences extended by the implementation of the general policy of integrating mildly handicapped children into the regular stream. Thus the primary school teacher can expect a greater range of ability and performance in her class than in previous years (Fig. 2.1).

| | |
|---------------------------------------|------------------------|
| IQ Range | =75 - 135 ⁺ |
| Reading Age Range | =7 years - 14 years |
| Spelling Age Range | =7 years - 14 years |
| Mathematics Grade Equivalent | =Year 3 - Year 8 |
| Language Development Grade Equivalent | =Year 4 - Year 8 |
| Social Maturity Age Range | =8 years - 13 years |

Fig. 2.1 Showing a typical range of performance levels in a representative Grade 6 class.

Different or Deviant?

In the study of children, one cannot fail to be amazed at the *commonality* of their behaviour and development on the one hand and their manifest *individuality* on the other (Safford, 1978). Children throughout the world, in a wide range of social and physical environments tend to progress through the same stages of development at roughly the same rate and to roughly the same level. Each child however has his own specific cultural and genetic inheritance, acts upon, and is in turn influenced by his environment, which all contribute to the development of his own uniqueness across the broad spectrum of human behaviour. He is at the one time both the same as all other children of his age and uniquely different from each of them.

Most children whilst retaining their individuality remain members of the common or "normal" group and their differences are tolerated because they fall within "normal" limits. The determination of normality is rather arbitrary and often differs from one culture to another. Deviance or exceptionality seems to be considered as the possession of some characteristic that falls outside "normal" limits, but definition of those limits is basically impossible and attempts at doing so lead to negative labelling and categorisation and an often irrational separation of the stigmatised from the rest. Differences across any trait or dimension of the human condition can best be thought of as existing on a continuum from very mild to very severe and the dich-

otomy between normal and deviant is not so easily made. Wyne and O'Connor (1979) talk of a continuum of degree and suggest that such a concept "implies that no discernible point on this imaginary line divides normal variations in intellectual, physical and emotional behaviour from variations that might be considered exceptional" (p. 9). One of the major implications of thinking of differences as being represented across a continuum of degree is that each child will vary across the different characteristics. A crippled child may be seen as having a severe physical handicap but manifest strengths in the intellectual and/or affective domains. Effective teaching of children with special needs depends upon the acceptance of each child as an individual with relative strengths and weaknesses, and not as a handicapped individual whose weakness defines his identity.

Kirk (1972) makes an interesting distinction between *inter* (between) and *intra* (within) individual differences. The former description refers to the differences that exist between individual children or between groups of children, whilst the latter refers to the differences that exist within a child's own performance. Figure 2.2 illustrates the distinction by presenting the profiles of two children - Jane, a child who has a specific learning problem in spelling and Tom who has a general learning difficulty across all areas. The marked difference between the

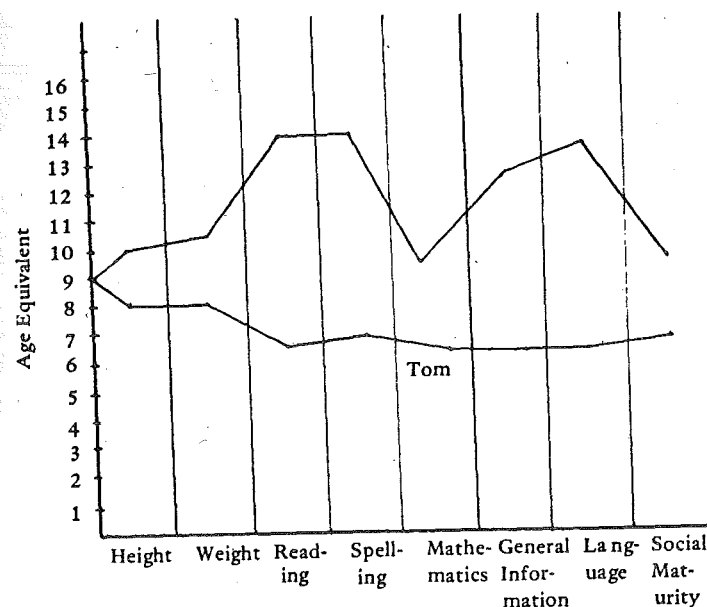


Fig. 2.2 Profiles of two students showing marked *inter* and *intra* individual differences across age equivalents.

two profiles represents inter-individual differences, (the children are markedly different in their levels of attainment). Jane's profile reveals significant peaks and troughs indicating much variability of performance and obvious intra-individual differences. Tom's profile is less variable (low achievement across the board) indicating less significant intra-individual differences.

In teaching children with special needs, we are concerned with both types of difference. We need to be aware of and take into account, differences between children in our classes, but also we must understand and utilise the individual strengths and weaknesses of each child to effectively cater for his special difficulties. Of primary importance to the committed teacher, is the attempt to redress the imbalance of negative attention given to a child's area of weakness by emphasising and reinforcing his strengths and competencies. Every child has some relative strengths even though they may fall far short of the strengths of others in the group, and it is the effective use of these intra-individual differences that is crucial for the teaching of children with special needs.

Wolfensberger (1972) has presented a very articulate case for the normalisation of the lives of handicapped people. The concept involves a much wider acceptance of individual differences and a tolerance of conditions and performance that fall outside some arbitrarily determined "normal" limits. To examine the difficulties and ramifications of normalising the educational lives of children with special needs we will discuss the individual differences of children across the cognitive, behavioural and physical domains and hopefully come to some conclusions how we as educators can develop in our children a more generous conception of "normality" and a tolerance of a wide range of individual differences in our classrooms.

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CHAPTER 3

CHILDREN WITH GENERAL LEARNING DIFFICULTIES

* NOMENCLATURE

Nowhere in the field of special education has the controversy over labels and categorisation been more obvious and resistant to effective solution as in the area of intellectual handicap. Intellectual incompetence, it seems, is universally denigrated, but as societies become more enlightened and compassionate they seek descriptors and labels that are less derogatory than those previously used. Dunn (1973) illustrates the changes in nomenclature in the United States of America, United Kingdom and Western Europe over the past 200 years. Descriptors such as "moron", "imbecile", "idiot", "mentally retarded", "mentally deficient", "mentally subnormal" and others have been used to describe people who demonstrate intellectual inadequacies. Each new label on its inception seems more appropriate and less stigmatising than its predecessor, only to be superseded by another which is more appropriate and less stigmatising. Such labelling varies not only historically but geographically — "subnormal" is a label currently accepted in some areas of the world, but generally considered derogatory in Western Australia. It is testimony to the negative effects of labels that many of the terms used previously to describe conditions of retardation ("moron", "imbecile", etc.) have now been incorporated into the vernacular as terms of derision and devaluation.

In Western Australia the term "intellectually handicapped" is currently used to describe people whose intellectual performance falls below normally accepted limits. The Mental Deficiency Division of the W.A. Mental Health Services recently (1978) changed its name to the Division for Intellectually Handicapped, and the Special Education Branch of the Education Department provides for the education of children with intellectual handicaps. The private organisation providing services for such children is called "The Slow Learning Childrens' Group".

The question of labels and appropriateness of descriptions will be with us for a long time, if for no other reason than the constraints of an imperfect language. The present disaffection with the use of dis-

ability labels has led to more functional and behavioural descriptions of children with special needs. "Children with General Learning Difficulties" (GLD) with its emphasis on the educational environment will be used in this book to refer to those children who, through specific or non specific causes demonstrate a generalised low level of intellectual performance and consequent difficulty with formal learning. GLD can be considered to occur in a continuum of degree in which the distinctions between levels of intellectual deficit become blurred (Wyne and O'Connor, 1979).

CAUSES OF INTELLECTUAL HANDICAP

It is possible to distinguish between two broad categories of causation for intellectual handicap:

Organic causes: These include inherited metabolic disorders; chromosome abnormalities; pre-natal infections, peri-natal complications; post-natal infections and trauma; other disabling conditions.

Inherited metabolic disorders — these refer to the inability of a child at birth to metabolise certain substances. Phenylketonuria (PKU) is the most common disorder of this kind and it results from an inability to process an amino acid. This condition can now be detected at birth and its effect on intellectual performance can often be minimised by placing the child on a special diet. This condition used to account for about 1/700 intellectually handicapped children and untreated, it results in severe retardation.

Chromosome abnormalities — the most prevalent and visible condition of this type is Down's Syndrome (inaccurately popularised as "mongolism") which results from an extra chromosome. Children with this condition have distinctive stubby fingers, large tongue, slanting eyes, and impaired intellectual functioning. Whilst many Down's Syndrome children are severely intellectually handicapped there is considerable variability in their performances. Some children have never learned to talk, others develop functional literacy and numeracy skills, a few are currently attending normal schools. The autobiography of such a child makes interesting reading (Hunt, 1967). The incidence of Down's Syndrome is apparently related in some way to the age of the mother,

being much more prevalent in late pregnancies.

Pre-Natal infections — a number of micro organisms can affect the developing embryo or foetus, the most notable of which is rubella (German Measles) if contracted in the first trimester of pregnancy. This may result in not only intellectual handicap, but many other disabling conditions, such as vision and hearing loss and cerebral palsy. There is growing concern over the possible effects of other debilitating forces on the pre-natal environment — drug addiction, malnutrition, alcoholism and an excess or radiation in the mother are other likely causes of intellectual handicap in the child. The incidence of rubella, and its associated effects, has dropped considerably since mass immunization of teenage girls was initiated in 1970.

Peri-Natal complications — the birth process itself can cause complications which result in brain damage and consequent intellectual impairment. Oxygen starvation to the brain (anoxia) and mechanical insult to brain tissue are common causes.

Post-Natal infections and trauma — both diseases affecting the central nervous system (notably meningitis and encephalitis) and induced brain trauma (accidents, child abuse) can result in intellectual handicap.

Other disabling conditions — other organic causes might include: poisonings, hyperthyroidism, severe malnutrition and in some cases, extreme prematurity.

The group of children affected by such organic causes tend, on the whole, to be of very low measured intelligence; to be frequently institutionalised with full custodial care, to be evenly distributed across all levels of society and to account for considerably less than 50% of the population considered to have intellectual difficulties (Ingalls, 1978).

Functional (non-organic) causes: For the majority of children having general learning difficulties, there is no demonstrable organic cause for their low intellectual performance. There is often no one specific factor that seems to be associated with their low performance but often a constellation of concomitant factors are present —

(a) depressed and often impoverished environment, (b) different linguistic background, (c) lower than average intellectual performance of parents, and (d) limited learning experiences. It is the co-existence of some or all of these factors with general learning difficulties that has prompted some authorities to label these children as “cultural/familial retardates”.

While it is unclear what the precise roles of socio-economic environment, familial factors and language differences play in the development of adequate learning, it is clear that many children with GLD's are not retarded in the sense that they have an organically imposed limit on their performance. As Dunn (1968) has clearly demonstrated, a disproportionate percentage of children placed in special classes for “mildly mentally retarded” in the USA have come from ethnic minority backgrounds and that their difficulty is not one of mental retardation or intellectual handicap, but one of linguistic and cultural disadvantage within the education system. A significant feature of these children is their lack of difference in physical appearance from other children of their own age. As they look no different from other children, have no organic disability associated with their learning difficulty and indeed are not so labelled outside of the world of education, a disability label such as “mentally retarded” is inappropriate and stigmatising. (Fig. 3.1 illustrates the general distribution of IQ scores for — (a) the general population of school children, (b) children with organic cause for their intellectual handicap, and (c) children without organic cause).

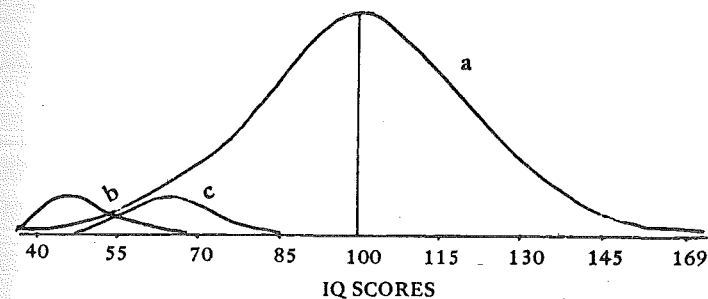


Fig. 3.1 Hypothetical distribution of (a) general population of school children, (b) children with organic cause for their intellectual handicap, and (c) children without organic cause for their intellectual handicap.

IDENTIFICATION AND ASSESSMENT

Traditionally, children with GLD have been classified and categorised according to levels of achievement in standardised intelligence tests. Children falling below particular IQ levels were then considered mildly, moderately, or severely retarded, and educational placement was provided, according to the designated category. The Western Australian experience reflected this trend with the first special class for "mentally defective" children being established on the basis of Stanford-Binet IQ Scores. Whilst the individual IQ test is clearly useful in providing a broad indication of the severity of intellectual handicap, recent questioning of the validity of such a test as the sole determinant of retardation has had a significant effect on limiting its role in identifying children with intellectual handicaps. The claim that an intelligence test actually assesses potential is impossible to demonstrate precisely — at best such a test provides a very rough guide, at worst it places on the child restrictive capability levels that inhibit his optimum education. Currently, the significant advances being made in the education of children with intellectual handicaps are being made by those who reject this "upper limit" concept and assume that assessment indicates what a child can and cannot do, not what he is ultimately capable of achieving.

Dunn (1973) has pointed out the inequities of a system that relies almost totally on the use of norm-referenced standardised tests after examining the populations of special classes in California over the 1969-1971 period. He found that children from ethnic backgrounds different from that of the dominant, white, Anglo-Saxon group, were grossly over-represented in the special classes. Well over 50% of the special class population were Negro or Spanish-American, although these groups represented only 25% of the total school population. The blame for this over-representation he places on the method of assessment used. For none of the children tested was there any consideration given to the effect of language and cultural differences on their scores on intelligence and other standardised achievement tests. Because these tests had been normed on the total heterogeneous population, and could not be considered culture-free, the children's scores were necessarily deflated. To prevent the iniquitous equation of language and cultural differences with mental retardation, he urged a number of reforms, notably the use of specific norms of the particular ethnic group to determine the relative level of achievement.

Dunn and others (Mercer, 1973) are not denying that children who are disadvantaged in coping with the general school curriculum because of this different cultural heritage do, in fact, require help, but that it is invalid to categorise them as mentally retarded on the basis of intelligence and other standardised tests that fail to take their different linguistic and cultural background into account.

Emanating from and sometimes preceeding such evidence as Dunn's was a rash of litigation in the USA. Court actions were taken by parent and professional advocacy groups against country school boards and districts for inaccurate diagnosis and placement of children outside the mainstream of general education. The court decisions generally favoured the litigants, and children were withdrawn from the special classes.

As a result of these developments, the identification and assessment of children suspected of having intellectual handicaps is now much broader based and more comprehensive. Emphasis is generally placed on adaptive functioning (motor, social, language and emotional development) as well as intellectual performance. The multi disciplinary team, with its various sources of input and communication with the parents, is now the most usual model of assessment.

In Western Australia, children suspected of having intellectual handicap are referred to "Irrabeena", the assessment section of the Division for the Intellectually Handicapped — a department of the Mental Health Services. After initial screening to ensure that the child has not been inappropriately referred, he is examined from the medical, psychological, social, and, if of appropriate age, educational perspective. Evidence from this multi disciplinary input is collated and recommendations are made. Children are generally referred from Princess Margaret Hospital, general practitioners, or the Guidance Branch of the Education Department. "Irrabeena" Centre has its origins in an assessment centre established by the Slow Learning Children's Group in 1953, and staffed by voluntary professionals. The centre expanded to provide, not only assessment facilities, but also the co-ordination of all services provided for intellectually handicapped persons, and was taken over by the State Government in 1964, being incorporated into the newly formed Mental Deficiency Division of the Mental Health Services (subsequently re-titled the Division for the Intellectually Handicapped). One significant role of Irrabeena is the

referral of children to the Education Department for educational placement, this may be in a special school or special class, depending on the individual needs of the child. A teacher who suspects that a child in her class has an intellectual handicap, must first refer him, through the principal, to the guidance officer responsible for the school. If the child's performance warrants further investigation the child will likely be referred to Irrabeena for more comprehensive assessment.

HISTORICAL OVERVIEW OF EDUCATION

Historically, reference to intellectually handicapped people has been found as far back as the tablets of Rome (circa 449B.C.). An inscription on the tablets reads "if a person is a fool let his goods be under the protection of the family or parental relatives". Occasional references are also made in early Roman literature to the keeping of fools by the gentry presumably for entertainment. There is very little documentation on the incidence, care or education of intellectually handicapped people until the 18th century, although isolated references to fools, idiots, and "those without reason" are made in earlier writings. (Ingalls, 1978).

It is likely that little or no distinction between intellectual handicap and the various forms of mental illness was made, and the persecution of witches and deranged people in medieval times almost certainly included retardates. Court jesters, by their descriptions, would seem to have been recruited from the ranks of intellectually handicapped persons, and the village idiot archetype certainly described such people. There is inconsistent evidence of rather drastic measures taken to eliminate mental retardation in early times with abandonment at an early age and infanticide being practised in certain societies. (Gearhart and Weishahn, 1976).

In the late 18th and early 19th centuries a slowly developing but significant humanitarian movement was beginning in Western Europe with reformers focussing on the plight of the slaves, the insane and the retarded. From the efforts of Wilberforce (1759-1833) and his supporters, the Abolition Act of 1833 was enacted and led the way to the eventual outlawing of slavery throughout the Western world. Shaftesbury (1801-1885) in England and Pissel (1745-1826) and

Esquirol (1772-1840) in France, were notable activists and reformers in the treatment of the insane. As a result of their efforts, institutions and asylums became more humane and positive in providing for mentally ill patients. In the field of intellectual handicap, the work of individual European reformers Itard (1774-1838), Seguin (1812-1880) and Montessori (1870-1952) has had a major impact on the education of children and adults.

Jean Itard was a French surgeon who avidly championed the theory of the English empiricist philosopher, John Locke, who believed that a child is born as a "tabula rasa" (blank slate) and what he is to become is solely a function of the environment to which he is exposed. Thus heredity is seen to be of minimal, if any consequence in determining one's achievement. One's capacity is basically infinite and the differential levels of achievement within the society were the results of different environments. Itard was provided with the opportunity to demonstrate the practical success of his "environmentalist" theory when a feral child was found in the forest of Aveyron. This "wild boy of Aveyron" (Victor), displayed none of the socialised, essentially human behaviours of normal children. He wore no clothes, spoke no language, crawled on all fours, ate nuts and wild berries, and generally gave the impression of a humanoid raised by animals in the wild. (Itard, 1962). The boy had been diagnosed as totally defective and thus was an excellent subject for Itard to use in substantiation of his theoretical position. He undertook to educate Victor in 5 main areas: social competence; sensory discrimination; speech; memory; cognitive skills (reading, etc.). Itard stuck to his task for 5 years with very limited results. He had some success in socialising Victor and in developing sensory discrimination and memory skills. However, he produced no significant language in Victor, nor did the boy acquire sufficient skills to become totally independent. Unfortunately, after the 5 years training Victor was institutionalised and Itard considered his work a failure.

One of Itard's pupils, Edouard Seguin (1812-1880) took up where Itard left off. He undertook the education of an "idiot" boy with considerable success. He developed formal education programmes for the intellectually handicapped and demonstrated that many of them were capable of learning much more than was previously thought. He developed a hierarchy of instructional procedures that began with muscle and sense training and led to more and more complex aspects

of learning. He did much to demonstrate that with attention and education many retarded children could achieve a significant level of independence.

Maria Montessori the first female Italian M.D. was concerned initially about the lack of differentiation between mentally retarded and mentally deranged people. She developed a school for the education of mentally defective children and it is from her work with intellectually handicapped children that many of her educational practices, accepted nowadays in general education, had their origins. Like Seguin, she placed emphasis on muscle and sensory training, and she believed that you could not teach children anything, but could only provide them with the environment and activities that enable them to learn.

Through the work of these pioneers and others, notably Samuel Howe in the USA, a slow but steady improvement in the educational opportunities of intellectually handicapped children was effected. Unfortunately, the impetus for change was checked by the general acceptance of social Darwinism late in the 19th century. It was the application of Darwin's concepts of survival of the fittest and natural selection to current western society that prompted many to see the upgrading of educational opportunity for the retarded as an interference in this natural developing process.

Darwin himself strongly exhorted against such improvement. "With savages, the weak in body or mind are soon eliminated; and those that survive commonly exhibit a vigorous state of health. We civilised men on the other hand do our utmost to check the process of elimination; we build our asylums for the imbecile, the maimed and the sick; we institute poor laws; and our medical men exert their utmost skill to save the life of everyone to the last moment. Thus the weak members of civilised societies propagate their own kind. No one who has attended to the breeding of domestic animals will doubt that this must be highly injurious to the race of man". Darwin (1874, p. 149).

The prevailing attitude to the education of the handicapped during the early 20th century was much influenced by this point of view and the value of education for retarded children was seriously questioned. The impact of the wars and the depression however, tended to impress

on people the need for governments to care more for their disadvantaged, and over the past thirty years a number of factors have accelerated the improvement in the education of the intellectually handicapped:

- (a) significant medical research has pinpointed causes and has sometimes led to the eradication of certain types of conditions leading to retardation;
- (b) improved understanding of the intellectual and educational prospects of many of the population designated retarded;
- (c) improved societal attitudes to the provision for handicapped people in our community. Most people now would not accept the institutionalisation of a vast number of handicapped people. Their individual rights to an education and "as normal" a life-style as possible are generally accepted.

As a result of these forces and pressures from private welfare organisations, churches, and citizen advocacy groups, access to education is a realistic prospect for all but the most seriously retarded in the community. As the implications of the American All Handicapped Children's Act of 1975 become evident, it is likely that even this severely intellectually handicapped group will, in future, have access to public education.

In Western Australia the development of educational provisions for the intellectually handicapped was broadly outlined in Chapter 1. "Before 1920 little provision for the education of intellectually handicapped children was made in Western Australia". (Jecks, 1979, p. 18). The first special class was actually established in 1910 only to be almost immediately disbanded. 1920 saw the first special class at North Fremantle school, with the student population being determined by the scores on the Binet test of IQ. Between the wars some of the larger schools had "opportunity classes" and, whilst they were ostensibly designed for intellectually handicapped children, they tended to become dumping grounds for children whom teachers found disruptive or too difficult to teach. Severely intellectually handicapped children were, until the establishment of Pyrtton Training Centre in 1965, cared for at Claremont Hospital, an institution for the mentally ill.

In 1952 the compulsory education of mentally defective children was

included in the Education Act, and the Guidance Branch established a number of special classes. At about this time the Slow Learning Children's Group became very active in providing personnel and centres for the education of retarded children. By a sharing of the expenses and resources with the Education Department, occupation centres were set up, and eventually the Department took full responsibility for the establishment of new training centres (special schools) and the staffing and equipping of such schools. Recently with the growth of the integration movement and the encouragement wherever possible for children to be educated in normal classes, the development of special classes has been restricted although the Department remains committed to providing for children whose intellectual difficulties are such that they require segregated education.

EDUCATIONAL PLACEMENT OPTIONS FOR CHILDREN WITH GENERAL LEARNING DIFFICULTIES

Typically children with general learning difficulties are educated in one of three alternative settings: special schools; special classes; ordinary classes and are placed in the most appropriate facility on the basis of educational and psychological assessment. Throughout the United States of America, Britain and the various states of Australia, these broad options exist, although the names may vary (e.g., "opportunity" classes and schools are common in some eastern states of Australia). Universally the policy adopted by the Education authorities should be, and invariably is, one of placing the child in the "least restrictive environment", i.e. as close to the general classroom education as possible. Deno (1972) has outlined his "cascade" system as a model for representing educational placement of children with general learning difficulties. It represents the available educational options as levels ranging from ordinary class placement through to homebound or institutionalisation with the dynamic pressures always being applied upward towards the most normal setting. The central questions concerning appropriate educational placement is "Where within the existing resources . . . can the individual educational plan required by each retarded child (based on valid and reliable data) best be provided at the present time?" (Smith, 1974, p. 113).

THE WESTERN AUSTRALIAN SCENE

In Western Australia, the Education Department, through the Special

Education Branch, provides for children with general learning difficulties in both special schools and classes. Whilst committed to the principle of integration wherever possible, the Department recognises the need for specialised settings for some children and has a policy of "maximum useful association" between children in such special settings and those in ordinary classes (Special Education Branch, 1980). For those children whose intellectual handicap is such that at the moment they could not benefit from formal education, day activity schools are run by the Slow Learning Children's Group. These activity schools provide independent programmes for the handicapped children in basic motor co-ordination, sensory awareness and independence skills.

Special Schools. Because of the difficulty and controversy associated with classification systems for levels of intellectual handicap, it is impossible to precisely describe the population of children who are educated in our special schools. In terms of IQ, they tend to be within the range of 30-60, but at the extremes of this range they tend to overlap considerably with children in the day activity centres on the one hand and with those in special classes at the other. They tend to be significantly behind their peers in language, emotional and social development although there is a considerable range within each school on each of these variables. With the current pressure to provide education for as many handicapped children as possible and to integrate the more competent into normal classes, the special schools are being expected to cater for a progressively lower level of handicap. On the continuum of degree referred to in Chapter 2 children in these schools fall in the middle range of intellectual handicap, having a "moderate to severe" learning difficulty as compared to a "profound" (custodial care) or "mild" (special class or regular class). The children of the special schools have mixed aetiologies for their learning problems — some organic, many non-organic. Some children are physically distinctive (e.g., those with Down Syndrome) many are basically indistinguishable from the regular school population.

Because of their significant intellectual difficulties, children in special schools have a different curriculum from their more competent peers in either a special or normal class. The emphasis of the schools vary with the age and/or performance level of the children but the curriculum broadly covers the following areas: self-help skills; motor skills; communication skills; socialisation skills; functional academic

skills; vocational and recreational skills. The primary objective of a special school curriculum is the development in the children of independence and competence in coping with their social and physical environment. In many of the curriculum areas outlined, skills that more competent children learn naturally by observation and general social interaction, have to be formally taught to children with intellectual handicaps.

Self-help skills. Depending on the age and intellectual level of the children, these would include tasks in the areas of toileting, grooming, health, eating and safety, the main aim of which would be to establish in the child socially acceptable levels of performance so that he becomes self-reliant in his general environment.

Motor skills. Many children who have intellectual difficulties have associated motor and perceptual/motor problems which limit their capacity for independent movement and often restrict their involvement in social and recreational activities. As a result physical education, visual motor and spatial awareness activities as well as team and individual game skills play a significant role in the programme of special schools.

Communication skills. Because of the organic disability of some children, and the significantly disadvantaged background of many others, a considerable number have associated speech difficulties. For many of the children, the help of a speech therapist is enlisted but for many others help from the teacher in developing clarity, intonation and expression is necessary to produce competent and inconspicuous speech. General language development is also a primary component of special school programmes. Learning what to say and when and how to say it is a central component of independence training as effective communication seems to be almost a pre-requisite for full acceptance in our society.

Functional academic skills. Emphasis on literacy and numeracy in special schools varies but in general children who demonstrate sufficient intellectual competence are encouraged in these academic areas. There is a functional or practical emphasis in that most of the reading and numeration activities are directed to real life experiences, literacy skills, for example, incorporate not only elementary reading, spell-

ing and writing activities but also the acquisition of a functional vocabulary of words that the children tend to meet in every life (e.g. "exit", "entrance", "toilet", "ladies"). Immediate recognition of such words and symbols serves two purposes, (a) enables the child to negotiate the environment with more facility and independence, and (b) limits the conspicuous and inappropriate behaviours that draw negative attention to the intellectually handicapped child. Functional maths are also emphasised with experience in the practical handling of money, buying and selling, counting and seriation tasks being undertaken whenever possible in the community, (paying bus fares, shopping at the local supermarket, etc.).

Vocational and recreational skills. One of the important functions of the special school is to equip the children to cope in the post school environment and in particular to provide them with pre-vocational and leisure skills that will make them acceptable for employment (either open or sheltered) and for general leisure pursuits. The schools often have to become involved in the broader "preparation for independent living" than do ordinary schools that are basically academic in orientation. As the children enter their teenage years, a greater emphasis on this aspect of their education is provided so that they are as well equipped as possible to cope with their imminent discharge from the school.

Many of the special schools have pre-school centres attached so that basic independence training, with significant parent involvement can be introduced at as early an age as possible. Currently the general thrust in special education is towards early intervention and parent/school co-operation, the special pre-schools exemplify this trend. In addition to the special schools pre-school programmes, the Division for Intellectually Handicapped run pre-schools in both integrated and segregated settings.

Teaching in the special schools for the intellectually handicapped is often based on a highly structured approach to instruction. Each curriculum area is broken down into sub-skills which in turn are broken down further into a hierarchy of specific tasks, each of which must be mastered before progressing to the succeeding task. This "task - analytic" approach, based upon specific objectives, evaluations and step by step teaching is generally considered most effective for teaching intellectually handicapped children. (Although its use in general educa-

tion is espoused by some and vigorously opposed by others). Some special schools develop their own curriculum, task analysing the skills and developing their own form of evaluation and monitoring of progress. Others adopt a comprehensive commercially developed curriculum that covers the broad skill areas listed above, and provide established objectives, suggested instructional practices and evaluation strategies. (Bender, Valetutti and Bender, 1976). The reasons for the emphasis on this structured task analytic approach to the teaching of intellectually handicapped children are many, with perhaps the main ones being: (a) the well meaning but usually ineffective "busy work" emphasis in the early years of the special schools, (b) a developing appreciation that more could be achieved by intellectually handicapped children than was previously thought, (c) the results of efficacy studies which clearly demonstrated the superiority of structured learning over more nebulous and less formal teaching techniques for such children, and (d) the growing accountability placed on teachers in special settings.

An example of an analysis of the task "Writing one's own name":

- (a) copies first name from a written model;
- (b) recognises first name from a set of alternatives;
- (c) writes first name without a model;
- (d) copies surname from a written model;
- (e) recognises surname from a set of alternatives;
- (f) writes surname without a model;
- (g) copies full name from a written model;
- (h) writes full name without a model.

In Western Australia special schools for children with general learning difficulties have been established in the metropolitan and country areas. (Appendix A). These schools vary in structure, educational philosophy and educational emphasis, however they tend to adopt a structured approach to teaching (outlined above) and encourage the interactions of parents, students and interested others with the children in the school. Some of the schools are developing innovative projects that are being examined with considerable interest. White Gum Valley Special School for instance, has a computerised evalu-

ation system by which each students' performance level on a comprehensive range of skills can be immediately recalled for profile analysis or programme modification. This has facilitated the constant monitoring of all the children's progress, and enables immediate readjustment of objectives if necessary. Millen Special School, through the agency of resident teachers, has developed a reading programme "bridge reading" that is being examined enthusiastically by many people involved in the teaching of children with special needs. This school places emphasis on the acquisition of literacy and numeracy skills. Balga Special School, using its considerable resources, encourages the development of social, recreational and vocational skills designed to enhance the independent living of the students. Other schools similarly have their particular areas of interest and innovation which provide for diversity within the special school system. Whilst the special schools are usually segregated facilities, the policy of "maximum useful association" with the regular district schools is actively promoted. Because of the problem of isolation, new special schools in the country tend to cater for children with a wider range of special difficulties than do those in the city, and in some cases they provide itinerant special advisory service for schools in the district.

One universal feature of all special schools for the intellectually handicapped is that they are catering for more severely handicapped children than they were in the past. During 1981 particularly, there has been a significant extension of the Education Department's responsibility for the education of children previously considered too retarded to benefit from formal schooling. White Gum Valley Special School has recently received fourteen children from Devonleigh Hostel, who, although they are generally in their teens, are attending school for the first time in their lives. A further large number of institutionalised children from Pyrtton Training Centre, many of them multiply handicapped, are now receiving special education in McGillvray House in West Perth.

The Division for Intellectually Handicapped, through the support of a Schools Commission grant, has established its own special school, Prospect School, for severely multiply handicapped retarded children. This school is a pilot project and is staffed by people trained through the Mental Health Services. The learning programme is highly structured and based on prescriptive behavioural checklists of orderly

sequences of skills in the three broad areas of hand/eye co-ordination, language development and gross motor skills.

From these recent initiatives of both the Education Department and the Division for Intellectually Handicapped it is clear that considerable progress is being made towards providing access to education for *all* intellectually handicapped children.

Special Classes. Special classes attached to regular schools have been established in selected schools for children with mild to moderate general learning difficulties, who at present are unable to benefit from regular class placement (Appendix A). The curriculum for these classes is a more academic one than that of the special schools, although tailored specifically to the individual learning needs of the children. The issues of whether or not such classes can be justified was addressed in Chapter 1, and the current general policy is to have as many children as possible catered for in the normal classes. As a result there is a constant effort to "promote" the children back into the regular room, and as much integrated activity as possible is encouraged. Some children, however, seem to need the more protective environment of their special home room, and as long as positive attitudes are engendered throughout the school toward individual differences in general, and children in the special class in particular, some form of special class should always be a viable alternative within the system.

Ordinary Classes. The majority of children who have general learning difficulties are found in regular classes and are, to varying degrees, having their educational and emotional needs catered for by the regular classroom teachers with no specialist assistance. The success or otherwise of these childrens' schooling depends on a wide range of factors — not the least of which are: (a) the teachers' attitude towards individual differences within her class, (b) the degree of competitiveness existing among the children, and (c) the range of resources and materials available for individual programming. The arguments for integrating the children into regular classes have been outlined in Chapter 1. Since it can be expected that most primary school teachers will have classes of increasing heterogeneity, at least across the intellectual domain, an understanding of the needs, characteristics and behaviours of children with general learning difficulties is very important for their adequate education in the mainstream.

EDUCATIONAL CHARACTERISTICS OF CHILDREN WITH MILD GENERAL LEARNING DIFFICULTIES AND THE IMPLICATIONS FOR TEACHERS

General Academic Achievement. The academic profile is marked by a significant weakness across all or most areas of learning. (Fig. 3.2). Thus the popular notion that the slower child compensates for his academic difficulties with a higher than average ability in other areas (e.g., art or sport) is really a misconception. Whilst the general profile shows decrements across all areas, there may be some relative strengths that can be utilised by the teacher to boost the child's sense of achievement. The teacher must be always conscious with this child more than others, of the need to help him compensate for his weaknesses by drawing attention to his relative strengths.

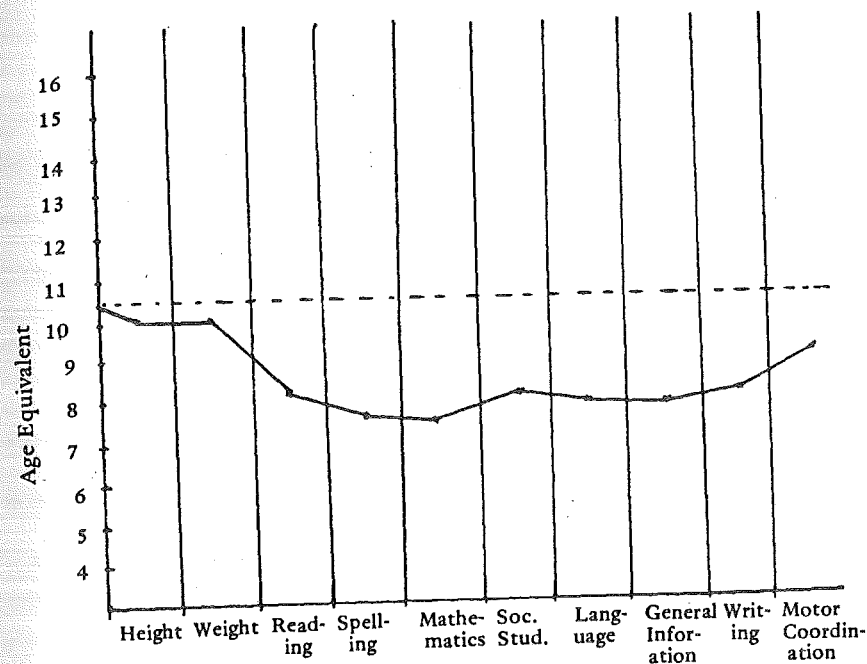


Fig. 3.2 Profile of a child with mild general learning difficulties.

Sensory Motor Development. A review of pertinent studies indicates that in this area children with GLD more closely approximate the levels of their age peers than in any other area of development (Dunn, 1973), however, the general level of achievement is lower than average and should be tackled by the teacher. Sensory motor difficulties usually take the form of delayed development, so that the children may not be motorically ready for a particular academic task (e.g., handwriting). They may also be manifest in general all round incompetence in motor activities and games, an improvement in which could lead to an enhanced self concept and feeling of well being. Structured motor co-ordination activities such as throwing and catching, balancing and skipping, have proved effective in developing all round improvement in motor performance (Cratty, 1971) and even some marginal gains in measured intelligence (Soloman and Pangle, 1967).

Speech and Language Difficulties. There is a higher relative incidence of speech difficulties among children with GLD than among the general school population (articulation problems being the most prevalent). Because many children come from disadvantaged environments, language development is often delayed and immature. An extensive "compensatory" language development programme is required so that the child's language experiences are broadened and he can develop a sound basis for not only oral language but also for the related skills of reading, spelling and written expression.

A Slower Rate of Learning. Children with GLD learn more slowly than do their age peers. They seem to progress through the same developmental stages in intellectual development (Piaget, 1952) but take considerably longer at each stage. Thus the teacher needs to spend more time in working through ideas and tasks with these children and she may need to give many more examples to illustrate concepts. It is providing for this feature that requires considerable organisation and time on the part of the regular class teacher.

Problems of Attention. In both coming to attention and maintaining attention to task, children with GLD are notoriously deficient. This difficulty is no doubt exacerbated in many cases by the child having been continually exposed to work that is too difficult for him. Attention is a pre-requisite of learning and as every teacher knows, the lack of attention to task is often the most inhibiting factor in a child's

learning. The teacher must utilise the various characteristics of stimuli that arouse attention — novelty, contrast and anticipation of reinforcement to make the children's tasks interesting and attention attracting. For children with GLD short, discrete tasks, followed by immediate reinforcement are far more effective than longer vague tasks that promise no reinforcement until their completion. Of course a pre-requisite condition of gaining attention and interest in the children is to provide them with meaningful activities that are appropriate to their current level of attainment and not that of the more competent members of the class.

Problems in Grasping Abstract Concepts. Because of their difficulties with abstract thought, children with GLD require extensive work with concrete materials and encouragement to learn by doing. The problems encountered in generalising from specific examples may require the application of more and varied examples before the underlying concept is understood. A continual source of frustration for the children is their persistent exposure to concepts and ideas that are too difficult for them to understand. Small easily digested pieces, and many of them, are more appropriate than large, comprehensive chunks.

Memory Problems. Both short and long term memory difficulties are common and they seem to be related to a need for more time to rehearse and store information (Dunn, 1973). It seems that the children require help in developing rehearsing and storing skills that will enable them to retain and utilise more of what is presented. A more prolonged exposure to the information to be learned and some "overlearning" may be required to facilitate immediate recall. Drill and repetition may enhance the acquisition and retention of essential information.

SOCIAL AND EMOTIONAL CHARACTERISTICS

Self Concept. Exposure to consistent failure has a debilitating effect on one's self-concept. We all need a fair share of success to balance our failures if we are to continue to feel positive about ourselves. The child with GLD has his self-concept under constant threat. Because of his general low level of achievement and his perception of his inferiority among his peers, he becomes vulnerable to feelings of self-denigration and worthlessness. Studies are equivocal in the appraisal of how special or regular class placement affects self-esteem (Gardner, 1976; Gottlieb, Campbell and Budhoff, 1975). Irrespective of the

setting, the child is naturally at risk because of his low achievement and unless he is in the care of a sensitive and competent teacher, he can develop serious emotional and behavioural difficulties. Two factors seem to be pre-eminent in the establishment of a positive self-concept – acceptance and success. If the child perceives that the teacher and other children in the class accept his difference as part of the rich diversity within the class he will not feel threatened and if the teacher is able to develop a learning programme that enables him to succeed at most of his tasks, a confidence and security in his own performances will be established.

Low Frustration Tolerance. Because of constant failure experienced by children with GLD, they often seem intolerant of frustration in situations in which others are quite comfortable. The sense of frustration coupled with the often resultant aggression is usually the result of accumulated failure which tends to make any new learning experience threatening and fraught with negative expectations. Coupled with the negative reaction of peers to the child's efforts, this expectation of failure can induce hostile and socially unacceptable reactions. The teacher must be sensitive to the child's needs, provide him with frequent opportunities for success and shield him, at least in part, from unnecessarily threatening situations.

Tendency To Play With Younger Children. Either because of rejection from peers or through a lack of competence and understanding of older games, the slower child may seek out the company of younger children and enjoy their less mature games and social contact. This may cause social problems if the younger children do not demonstrate reciprocal interest. There is little a teacher can do to help in this area although appreciation of recognition of the specific difficulty may lead to a solution. The getting of significant peers "on side" to help the child fit into class games may be possible as might the modification of some games to allow a wider level of participation.

In conclusion, the child with GLD in a regular class is going to have a difficult time of it unless certain conditions prevail. The teacher must be committed to differential levels of instruction within her class so that the child's learning programme is not in distinct contrast to that of the rest of the children. An atmosphere of acceptance and understanding of individual differences within the class is absolutely necessary as is a non-competitive learning environment. (Non-competitive

in the sense that improvement of individual performance is encouraged, but the comparative striving of children against each other is not). In a fiercely competitive classroom, the children with GLD are destined to be "at the bottom of the heap" in all areas. The teacher should aim to provide successful learning experiences for the weaker children by teaching at the level of their competence, and by adjusting her techniques and expectations according to the varying attainment levels of the children. Ideally, each school should have a resource teacher who can help the classroom teacher to diagnose learning difficulties, assess functioning levels of attainment and programme learning activities for those children with special needs. As this is seldom the case in our schools, the class teacher must develop teaching strategies that enable the slower children to receive individual attention without detracting from the effectiveness of her overall class teaching.

Peer or cross age tutoring is a technique of teaching that might enable the children with general learning difficulties to gain the individual success and attention they require. As the name suggests, such tutoring involves the children being taught on a one to one basis, by peers, or in a multi-grade class, by older children. It enables a number of children to have individual attention given to their special needs without placing impossible demands on the teacher. For such a system to be effective a number of conditions must be satisfied:

- (a) it must be a structured situation in terms of task time and materials;
- (b) the tutors must be trained by the teacher, by being given clear instructions on content, skills, rapport building, reinforcement and evaluation;
- (c) the teacher acts as a central overseer providing feedback for both tutor and tutee;
- (d) both the tutor and the tutee are reinforced for improvement in the latter;
- (e) the tutor must be selected carefully on his ability to interact with a particular tutee;
- (f) the tutor must be prestigious in the eyes of the tutee;
- (g) tutors should be volunteers.

Individualising instructions for children with general learning diffi-

culties is often difficult, but necessary if they are to succeed in the normal classroom. Expecting all children in a heterogeneous class to cope with the same level of work is to reject the value of individual differences, and return teaching to an era in which the slow child was simply "minded" during his years at school.

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CHAPTER 4

CHILDREN WITH SPECIFIC LEARNING DIFFICULTIES

DEFINITION AND HISTORICAL DEVELOPMENT

Intellectual handicap, sensory impairment, disadvantaged environment and severe emotional distress are well recognised causes of learning difficulties. There are, however, some children, whose learning problems do not seem to develop from such obvious sources. Because the problems are localised in one or two primary learning areas it seems appropriate to identify them as specific learning difficulties to distinguish them from the general learning difficulties discussed in the previous chapter.

The development of the learning disabilities as a field of study in its own right is usually traced back to the work of Strauss and Lehtinen and the publication of their book, *The Psychopathology and Education of the Brain Injured Child*. Precursory work had however been carried out as far back as the late 19th century when it was discovered that lesions to particular parts of the brain could cause impairment to specific organic functions. (Gearheart, 1973). In the late 19th century, James Hinshelwood, a Scottish ophthalmologist, documented cases of children with normal intelligence, whom he said suffered from "congenital word blindness". Dr. Samuel Orton, an American psychiatrist, became involved with children who despite apparently normal intelligence, had not been able to read and in the 1920's he undertook a thorough examination of such children in an attempt to link possible neurological dysfunction with reading disability. He coined the term "strephosymbolia" to describe the problem of letter and word reversals so common in children with specific reading difficulties. At about the same time Grace Fernald established her learning clinics for children who were of average or above intelligence but had specific learning difficulties. She adopted a multi-sensory approach to instruction and her techniques have withstood the test of time and are commonly used in current remedial programmes. (Fernald, 1943).

It was however, the work of Strauss and Lehtinen (1947) that provided the catalyst for the development of interest and research in the area of learning difficulties. In his study of children with recorded brain damage, who had been variously classified as disturbed, retarded

and aphasic, Strauss found a pattern of learning and behavioural characteristics, which he concluded constituted a brain damage syndrome. These characteristics included: *perceptual disorders*, seeing parts instead of whole, trouble with figure/ground separation; *perseveration*, unrealistic repetition of a task, long after it has ceased to be appropriate; *conceptual disorders*, problems of organisation of materials and ideas; *behavioural disorders*, hyperactivity, erratic unpredictable behaviours; *soft neurological signs*, awkwardness of gait, fine motor co-ordination difficulties (Lerner, 1971).

The recognition by Strauss of these behaviours was in one sense a real advance as previously the children's behaviour was explained in terms of wilfulness, lack of self control and perversity. On the basis of his finding that brain injured children demonstrate these constellations of behaviours, he drew the logically invalid conclusion that children who demonstrate such a pattern of behaviours, are necessarily brain damaged. (Because all men are creatures that breathe through lungs is no justification to claim that all creatures who breathe through lungs are men). This confusion over the suggested co-existence of brain damage and learning difficulties has bedevilled studies in the field to this day.

Strauss and Lehtinen's work was at first received enthusiastically, and the connection between learning disability and brain damage seemed to have been established. Before long, however, it became clear to many, that frequently children with demonstrable brain damage did not have a learning disability. (E.g., some children with cerebral palsy are clearly high academic achievers). The growing disaffection with the notion of the "brain injured child" led to a multitude of modified interpretations. Stevens and Birch (1957) suggested the term "Strauss Syndrome" to describe the behaviours outlined by Strauss, and Clements (1966) introduced the term "minimal brain dysfunction". This latter label had the advantage of not requiring observable brain damage *per se* but intimated that a more nebulous breakdown in cerebral functioning was present. Evidence of abnormal brain activity as indicated by an electroencephalograph (EEG) might or might not be found in such a child. To this point, Cruickshank (1966) suggests that the only reason why children with learning disabilities do not always register brain damage on detection instruments is that at present the instruments are not sophisticated enough to detect the minimal breakdown required. This attention to neuro-

logical based causation and descriptions of learning difficulties led to a proliferation of labels that has confused the area and often prohibited meaningful research. A small sample of the descriptors used in the literature would include: "minimal brain dysfunction", "perceptual handicap", "psycholinguistic disability", "strephosymbolia", and "dyslexia".

Over the past 20 years there has been a marked swing away from these medically oriented descriptions towards those more related to learning. Kirk (1963) introduced the term "learning disabled" as a reaction against confusion generated by the neurological deficit conceptions represented above. These labels were seen to produce connotations of irremediability and mystery such that teachers might feel some justification in not being able to teach a child with brain damage. Kirk's new emphasis gained popularity with educators for two related reasons:

- (a) it placed emphasis on learning and behaviour rather than presumed cause, and
- (b) it embraced children with learning problems, irrespective of whether demonstrable brain damage was present or not.

The term "learning disability" does not escape the criticism levelled at the earlier neurologically oriented descriptions as it still connotes incapacity and to a certain extent irremediability by its emphasis on a "condition" or lack of ability in the child. A more appropriate term would seem to be "learning difficulty" which does not suffer the restriction of implying lack of capacity and emphasises more the problem of the child's interaction with his learning environment. Specific learning difficulty is used in this book to distinguish between the real difference in learning profiles between children who have significant learning problems in one or two areas only and those who have general learning difficulties. It is often argued that the use of the modifier "specific" is inappropriate because children who are intellectually handicapped may in fact be functioning significantly below expected level in one area but at expected levels in others. Whilst this is perfectly true, the learning problems of such children do appear to be linked to their general learning decrement and as such are usually different in kind from the problems of children who are otherwise intellectually competent. Although disagreement over this point is

prevalent in the literature there is popular agreement to be found on the following defining characteristics of specific learning difficulty:

- (a) there must be a significant educational discrepancy between expected level and actual level of performance;
- (b) the problem is related to one of the significant learning areas (e.g., reading, spelling, mathematics, etc.);
- (c) it is not a result of generalised intellectual handicap, cultural disadvantage, sensory deficits or severe emotional disorder.

Thus the picture that emerges is one of a normally intelligent child who has a frustrating low level of performance in one of the critical learning areas. (Fig. 4.1). The existence or otherwise of observable brain damage is not critical to the description although a number of such children will have clearly defined neurological deficits. A tentative definition of a child with specific learning difficulties, for the purposes of the following discussion might be:

one who, contrary to expectations based on his general level of performance, demonstrates significant educational difficulties in one or more of the crucial learning areas, and does not suffer from generalised intellectual handicap, sensory deficit or severe emotional problems.

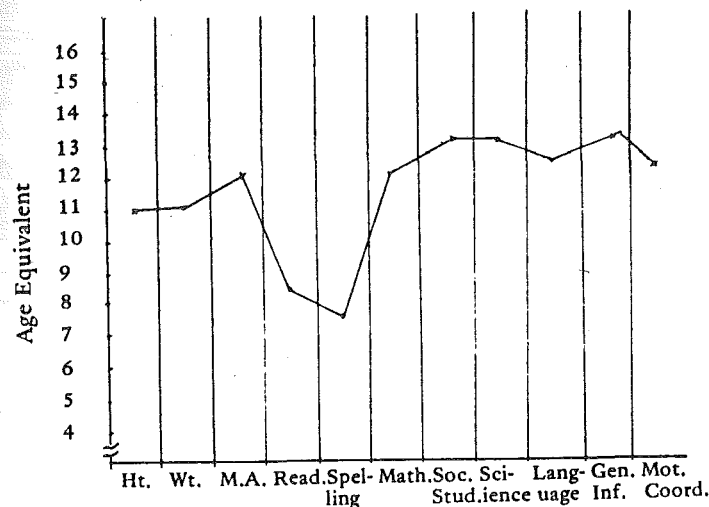


Fig. 4.1 A profile of a child with a specific learning difficulty.

INCIDENCE OF SPECIFIC LEARNING DIFFICULTIES

It is particularly difficult to establish incidence figures of children with specific learning difficulties mainly because of the lack of precision and agreement in defining the group concerned. It is quite a simple matter to establish numbers attending remedial classes, but quite impossible to determine who needs such help but does not receive it. In the authoritative report on "Learning Difficulties in Children and Adults" (Cadman, 1976), estimates ranging from .02% to 50% of the school population were recorded. Similar imprecision and variability exists in the USA estimates where figures ranging from 1% to 30% of school population have been quoted. (Hallahan and Kauffman, 1978). Federal funding for learning difficulty programmes in the USA is based upon a figure of 3%. The comprehensive Isle of Wight study (Rutter, Tizard and Whitmore, 1970) indicated an incidence of 3.7% of children with SLD.

The Cadman Report concluded that:

- (a) Apart from information from the A.C.E.R. survey there was not available any reliable national data on the overall incidence of learning difficulties or particular learning difficulties for either children or adults in Australia.
- (b) The A.C.E.R. survey although confined to 10 and 14 year old students confirmed that there was a considerable problem in Australian schools and a significant number of children failing to reach adequate levels of literacy and numeracy. (Cadman, 1976, p. 22).

SUGGESTED CAUSES OF SPECIFIC LEARNING DIFFICULTIES

Organic breakdown. The once strongly held belief that brain damage was the cause of all learning difficulties has already been examined and it is indubitably true that many children who have such difficulties do have some neurological impairment. It is in no way proven however that all such children have neurological breakdown, nor is it particularly necessary for a teacher to know of this cause. In fact, knowledge of brain damage may be counter-productive if the teacher feels incompetent to help a child with such a sinister and complicated condition.

Interest is also currently centering on defective nutrition, both pre-natal and post-natal, and its possible relationship with learning difficulties. Feingold (1975) has postulated that artificial food additives play a significant role in the development of "hyperactive" behaviour in children with learning difficulties. A review of the literature on such theories provides only anecdotal evidence of such causal connections. (Hallahan and Heins, 1976).

Maturation lag. Children vary considerably in the rate of central nervous system development, some "lag" behind others significantly in some areas and not others, thus demonstrating uneven levels of maturation. This lag has been postulated as a possible cause of learning difficulties and is often used in attempts to explain the higher incidence of boys with such problems and the fact that some children grow out of their difficulties. Boys appear to be more vulnerable in many areas as they significantly outnumber girls across the whole spectrum of special needs not only in specific learning difficulties. It is true that some children do grow out of their learning problems, but as many do not, this developmental lag cannot be held to explain comprehensively the existence of specific learning difficulties as they occur across the different ages.

Genetic factors. It has been demonstrated that some examples of learning difficulties run in families. One student known personally to the author had three brothers, a father, grandfather and an uncle who could not read yet had demonstrated general intellectual competence across a wide range of skills. Such examples, of course do not prove genetic involvement because of the difficulty in separating hereditary and environmental factors. (Perhaps having illiterate parents produces an environment in which it is more difficult to establish literacy). Nor are such cases the norm as many isolated individuals in otherwise literate and numerate families have acute learning problems.

Poor teaching. Inadequate teaching or interrupted learning experiences in the early school years are held by many to be the prime if not only reason for specific learning difficulties. (Bruner, 1971; O'Connor, Goyen and Maggs, 1973). It is argued that with appropriate and sensitive teaching strategies, learning difficulties among intelligent children will not occur. It is a very difficult argument to counter as all the theories of causality would hold suitable teaching strategies as the

sine qua non of effective remediation. Just what constitutes appropriate teaching strategies is then the source of contention and whilst poor teaching can obviously account for many learning problems, there are numerous instances of children failing to learn in classes in which the other children progress admirably and in which, by all accounts, the teaching is of a high standard.

On the whole then it can be seen that there is little agreement on the etiology of specific learning difficulties, nor is the establishment of cause particularly useful to the concerned teacher. What is important is the determination of what it is that the child can and cannot do and the development of an appropriate learning programme to suit his special needs.

ASSOCIATED CHARACTERISTICS OF SPECIAL LEARNING DIFFICULTIES

A feature of the academic and behavioural profiles of children with specific learning difficulties is their individuality. This is manifest in both the degree of difficulty experienced and the range of learning areas affected. Although the intra individual differences are very noticeable, many more children with SLD have associated behavioural and cognitive problems than do their peers. These associated characteristics include problems of motor activity, visual and auditory perception, attention, memory and emotional lability.

Problems of Motor Activity

As was noted by the pioneers in the field, co-ordination, balance and general motor skills were often inferior in children with learning difficulties. This is not to say that all children with poor motor co-ordination will have SLD nor that all children with learning difficulties necessarily have poor co-ordination. The motor difficulty may manifest itself in slower development of throwing and catching skills, general clumsiness in negotiating the environment and lack of spatial awareness. Fine motor skills required in handwriting, drawing and other school related tasks may also be affected.

Problems of Visual and Auditory Perception

Perceptual difficulties were noted by Strauss and they do seem to be

very prevalent in children with special learning difficulties. Perception relates to the interpretation of sensory information, thus the child may have perfect sensory acuity but have difficulty in interpreting the received information. Typically, the children with visual perception difficulties have trouble: perceiving differences between like shapes, letters or symbols; detecting figure from background; accurately copying letter words and numbers. Reversals of letters, words and figures ("d" for "b", "no" for "on", "3" for "5") are common in most children of pre and early school age, however, they tend to persist with older children who have specific learning difficulties.

Auditory perception difficulties may be demonstrated by imprecise distinction of like sounds; inaccurate reproduction of orally presented sequences of letters, words or numbers or the incorrect processing of instructions. It is quite easy to see how associated difficulties in these areas would exacerbate the child's learning problem, particularly in the areas of spelling and oral reading.

Problems in Attention and Concentration

A major inhibiting factor in learning is inattention to task. In fact it could be claimed that without attention most formal learning is impossible. Many of the children have difficulty in coming to attention and maintaining attention to task as well as a tendency to fidget, get out of their seats and be impulsive in their behaviour. The combination of these interfering behaviours makes the acquisition of new knowledge and skills very hard for the child as well as being highly distracting for the teacher and the rest of the class. These particular problems are more obvious in children with demonstrable brain damage but may occur to varying degrees in other children with learning difficulties.

Problems of Memory

Considerable research has recently been directed to the memory problems of children with SLD. The general conclusion is that such children demonstrate weaknesses in both visual and/or auditory memory and although evidence on specific memory process breakdown is equivocal, it seems that the children have difficulty in grouping and clustering information into conceptual categories (Hallahan and Kauffman, 1978). Farnham-Diggory (1978) examined some research in this area of memory and dyslexic children and suggested that dyslexic

children were less efficient at acting on the content of memory so that it becomes more permanent and accessible.

Problems of Emotional Lability

A marked variability in mood is another common characteristic of children with SLD. Whilst one of the defining features of SLD was its existence in the absence of serious emotional disorders it is nevertheless clear that learning and behaviour problems are mutually interactive. The frustration emanating from consistently below average performance tends to lead to emotional difficulties.

Given this litany of commonly associated problems, it is not hard to understand how the children have trouble learning in formal situations. A cautionary note must be sounded here. Correlation does not imply causation. The fact that these outlined problems occur frequently in association with specific learning difficulties is not to say that they are singly or collectively the cause of them. Further, it is important to understand that not all these features consistently coexist with learning weaknesses, all that can be said is that they are prevalent with this group of children.

THE EDUCATION OF CHILDREN WITH SPECIFIC LEARNING DIFFICULTIES

A variety of methods and teaching strategies based on different theories have been developed and applied over the past 40 years. They may be conveniently divided into:

- (a) perceptual-motor approach
- (b) multi-sensory approach
- (c) environmental control approach
- (d) task analytic approach
- (e) total language approach

Perceptual-Motor Approach

Perceptual-motor theorists, influenced by Piaget's stage theory of intellectual development and Strauss' emphasis on perceptual/motor

problems in brain damaged children, generally believe that children pass through a series of developmental stages with the mastery of each succeeding stage dependent upon the adequate completion of the stages before. More precisely the approach suggests that problems in cognitive skills (reading, mathematics, etc.) are a direct result of undeveloped skills in the underlying motor and perceptual areas. These theorists suggest that the associated motor and perceptual difficulties of children are not just correlates of the learning problem but are in fact causes or at least symptoms of causes. As a result, the perceptual-motor approaches to remediation of learning difficulties usually involve the child in motor and perceptual activities rather than in reading and mathematics activities *per se*. There are a number of variations on the general theme. Delacato's (1963) neurological organisation theory for instance stresses the importance of cerebral dominance as a prerequisite for learning competence. In his programmes, the children undergo a series of developmental activities aimed at developing cerebral dominance and the consequent preference for either right or left hand, foot and eye in motor activities. Frostig (1967) on the other hand emphasises the role of visual perception and visual motor skills in the development of learning competence.

Kephart (1971) is probably the most representative theorist in the area and his theory of perceptual motor learning is very thoroughly developed. Leaning heavily on Piaget (1952) he postulates three stages in learning: the practical or motor learning stage; the subjective or perceptual motor stage; and the objective or conceptual stage. Competence in each of the first two stages is necessary for competence in the third. Thus reading or mathematics difficulties (third stage) have their origins in breakdowns in one or both of the preceding stages. A key concept in his theory is the perceptual/motor match, a process by which we match perceptual input with existing motor generalisations to verify our interpretations of the environment. Kephart claims that children with SLD have difficulty in accurately developing this match. His remedial programme is more a collection of activities rather than a sequentially developed programme but its emphasis is on tasks which develop competence in underlying motor and perceptual skills. Motor activities would include – balance practice, trampolining, skipping, hopping, etc. whilst perceptual-motor activities would include – throwing and catching, gross and fine motor activities, tracing, copying shapes, peg board activities, jigsaw puzzles,

etc. The implication in this type of remedial approach is that by attending to these "causal" areas the learning difficulty will almost right itself.

In a comprehensive review of the literature on the perceptual motor approach, Myers and Hammill (1976) found little to support the efficacy of such programmes. The studies reviewed were not universally critical and some did demonstrate positive gains in the pupils' achievement. Whilst it can be said that there is little empirical support from controlled studies, much individual and anecdotal evidence, given by adherents to the principles, is very positive and the approach seems to work with children with particular learning and behaviour profiles.

Multi Sensory Approach

Alternatively known as the stimulus bombardment approach, this method of tackling learning difficulties focuses on the utilisation of as many sensory input channels as possible. There is certainly a *prima facie* case for the notion that a multi sensory input should reduce the chance of a learning difficulty developing. Unfortunately, there is a paucity of research on the efficacy of the multi sensory systems and little or no empirical evidence for its success or failure. As much formal learning is either visual or aural in origin, that is children tend to learn by either watching or listening, the proponents of this approach contend that by utilising more than one channel the chance of information being lost or not processed is reduced.

Fernald (1943) is the most significant person in this field and as she began her reading and spelling clinics in 1921 and her methods are still being used today, it is reasonable to suggest that she has provided the model for later variations. Her V.A.K.T. (Visual auditory kinesthetic and tactile) approach is the most popular multi sensory method used. She was one of the earliest researchers to recognise that (a) a child needs successful learning experiences for satisfactory adjustment, and (b) children with average or above average ability can have learning difficulties. Her remedial reading technique was divided into 4 stages.

Stage 1 – child selects the word *he wants* to learn, the word is written for him in large writing on a card. The child traces the word with his finger saying the word so that he can hear it as he traces. He continues this until the word is known and he writes

it into his story. The story is then typed and the child reads the whole story to the teacher. He keeps his newly learned words in a word file. Important features are (a) child is reading words he wishes to learn, (b) contact and movement is important in the tracing, (c) the word is not broken down into its component parts but is learned as a whole, (d) the words are always read in a meaningful context, and (e) a number of new words can be learned at a time.

Stage 2 – the child no longer traces but continues to vocalise when learning new words. In every other respect it is the same as Stage 1.

Stage 3 – the child learns directly from the printed page without requiring tracing or vocalising.

Stage 4 – the child can learn new words by generalising from words previously learned.

Modifications to Fernald's basic method have been developed but essentially her method contains the most important elements of any multi sensory system. Whilst hard empirical evidence is scarce, anecdotal evidence for the success of the method with particular types of learning difficulties is common and well substantiated.

Environmental Control Approach

This approach developed from the work of Strauss and Lehtinen who, in addition to publishing their book (1947), established classes to implement their ideas on remediation for learning disabilities. Cruickshank, Bentzen, Ratzeburg and Tannhauser (1961) refined the method and provide the best example of the environmental control approach. They consider that this approach is most suited to those children that have suffered brain damage or who demonstrate behavioural characteristics (outlined earlier) consistent with possible minimal brain damage. The suggested educational approach is based on four essential principles -

- (a) The reduction of unessential visual and auditory environmental stimuli.
- (b) The reduction of environmental space.

- (c) The establishment of a highly structured daily programme.
- (d) The increase of the stimulus value of the instructional materials themselves. (Myers and Hammill, 1976, p. 306).

Cruickshank and others believe that the average classroom with its emphasis on environmental stimulation, colour and the accumulation of motivating materials, is in fact too distracting for the learning disabled child as he is unable to adapt to the peripheral stimuli which therefore interfere with his attention to the learning task at hand. As a result, the best remedial environment would be a stark room equipped with carrels or partitioned areas where students could work in uninterrupted solitude. The windows would be of opaque glass and the furniture would blend in with the colour of the floor. Extraneous noise should be minimised either by acoustically modifying the room or equipping each child with ear muffs.

As well as minimising extraneous and interfering stimuli, Cruickshank recommends small learning spaces rather than open extended learning areas. This method borrows from the ideas of Montessori especially in the need for structured materials. If the problem is one of attending to task, then the task and the materials used in it should be as attractive and motivating as possible. The learning activity then would be seen in stark contrast to the sterile general environment.

Once again the evidence on the success of this type of programme is inconclusive, although the principles outlined above do seem to be very appropriate for the impulsive distractible child with learning difficulties.

Task Analytic Approach

Task analysis refers to the process of breaking down, into the smallest possible steps, a particular learning task. The approach has as its prerequisite an accurate assessment of just what a child can and cannot do in a particular learning area. The content of a particular task (e.g., writing one's own name, multiplying 2 digit by 2 digit numbers, copying geometric shapes, etc.) is broken down into a hierarchically ordered pattern of smaller tasks. Each task is operationally defined in terms of what the child is expected to do to demonstrate competence and to what criteria he is expected to perform to achieve mastery. An example of task analysis can be seen in Chapter 3.

The child's failure to learn is seen very much as a problem in interaction with his learning environment and the attainment of any particular learning skill is considered to be the accumulation of the presumed prerequisite components of the skill. The approach is very popular with programmes for the intellectually handicapped and efficacy studies are very encouraging in its use for learning problems of all kinds. The perceptual-motor theorists (Kephart, et al.), who are oriented towards underlying "processes" or "abilities", see this task-oriented approach as tackling only symptoms and not the underlying cause of the learning problems. To many educators, particularly those with a Piagetian view of the learning process, this assumption that a skill is just the sum of its parts, is anathema. They contend that it is impossible to breakdown any but the most trivial mechanical tasks into a discrete set of sub-tasks. The task analytic method of teaching is usually used in conjunction with behaviour modification techniques which require the structured and informed use of reinforcement.

Total Language Approach

A relatively new approach to tackling learning difficulties (especially those in reading and the associated language arts areas) is that of working through the child's existing language. It contends that the learner makes a significant contribution to the learning task by bringing to it his knowledge of language and his interpretation of the outside world. The emphasis is on gaining meaning from the task and not on the acquisition of "splinter" skills such as word calling and phonic analysis competence (Latham and Sloan, 1978). The basic theory underpinning such an approach is that reading is only partly a visual activity and it is not only what the learner receives from the printed page that matters, but also what he brings to its interpretation as a result of his existing language and knowledge of the environment. Proponents of this approach do not see reading as the accumulation of a hierarchy of mechanical sub-skills as suggested by the task analytic model. Learning difficulty in the language arts area would be seen as some interference, either physical or psychoeducational, in the gaining of meaning from the printed page (usually by inappropriate emphasis on phonic analysis to the exclusion of reading for meaning, when learning to read). Remediation procedures would emphasise the development of meaning-making skills of guessing, predicting and confirming using oral and written language activities.

THE WESTERN AUSTRALIAN SCENE

In Western Australia, a range of special facilities provide for children diagnosed as having specific learning difficulties. (Appendix A). At each regional centre is located a Resource Centre which provides not only materials of written and audio-visual kind, but also information and help for teachers trying to help children with learning difficulties in their classes. These centres are reasonably accessible to teachers in the metropolitan area and those in the country centres in which the facility is located, but basically inaccessible to those in outlying schools.

Short term remedial instruction is available at specially developed intensive reading clinics where children attend for an hour a day for a period of (5 or 6 weeks). These clinics tend to cater more for children whose learning difficulties result from broken or interrupted schooling than for those who have entrenched problems. Remedial centres are located in a number of selected schools and it is to these centres that children from nearby schools are referred for specialist help on a withdrawal basis (i.e., children attend the regular class for much of the day, but attend the remedial class for an hour or so for intensive help in the area of difficulty). Some of the remedial centres follow one of the specific remedial approaches outlined earlier, but most adopt an eclectic approach, endeavouring to tailor a programme to suit the individual needs of the child.

Of particular concern in this State is the provision of remedial help for children in the country and remote isolated areas. For many rural children with learning difficulties, access to resource centres, remedial clinics and centres is impossible because of the lack of population and distance. Chidley Education Centre in Mosman Park is a short-term residential facility where children with learning difficulties can live in and receive expert assessment and remedial help in the areas of difficulty. After assessment by the multi-disciplinary team, the children attend special remedial classes where they are taught intensively, and programmes of remediation are devised to be taken back to the home schools.

Rural and isolated children are further served by the Rural Children's Special Education Unit which provides itinerant backup support for such children with learning difficulties. The unit operates in conjunction with the School of the Air and Chidley Education Centre by

following up children identified by these services, and providing a point of referral to children not already identified.

Many teachers would argue that such provisions as outlined above are inadequate and many more places in remedial classes should be made available for children struggling in regular classes. With the current emphasis on integration of children with special needs into ordinary classes, and the realisation that if the regular class is the place in which the learning problem is being manifest, then it is also the best place for its remediation, such a move to dramatically extend withdrawal of special class facilities is unlikely. Perhaps the ideal situation would be for all schools of reasonable size to have on staff a "resource" teacher trained in remedial and special education whose role it would be to diagnose learning difficulties, plan individualised programmes for the children, and help general class teachers to accommodate such specialised help in their own classes. The activities of such a person would not necessarily be restricted to working with children with SLD, but would encompass all children with special needs. To a certain extent, the development of the Learning Assistance Teachers (LATS) helps to fill this need, but at the moment not enough such personnel are employed, nor is their training as extensive as it might be.

CONSIDERATIONS FOR THE REGULAR CLASSROOM TEACHER

Flexibility

From the very brief overview of specialist remedial methods, it is clear that there is no universally "right" method of tackling learning difficulties in the classroom. Because of the variability of profiles among children with special learning difficulties and the presence and/or degree of any or all of the associated characteristics, it is impossible to think of "the method". As a result of this fact, a competent teacher in a mixed ability class must be *flexible* in teaching style so that she can adjust her methods to suit the individual needs of the child with learning difficulties. If she finds that a particular remedial orientation is not successful then she must be prepared to try another, rather than "give up" and conclude that the child cannot improve. Each of the remedial approaches has demonstrated success with particular children and it may be that for many children with specific learning difficulties a combination of strategies would be required. For example, it is patently true that many children with learning

problems are highly distractible and impulsive in their learning behaviour and, for such children, a learning environment in which extraneous stimuli are controlled would be necessary for developing attention to task. (All classrooms, especially open planned rooms, should have restricted learning areas built in). Within this modified environment, multi-sensory or task analytic procedures could clearly be used effectively. A child with a noticeably low level of performance in perceptual-motor tasks would, no doubt, benefit from a structured programme developed on the lines suggested by Kephart, but he might also require a total language approach to his reading and written expression difficulties. The combinations are numerous and the most effective teacher is the one who can adjust the programme to suit the individual needs of the child.

Diagnosis

Comprehensive and accurate information about the child's strengths and weaknesses is essential for the development of appropriate remedial programmes. Such information about what a child can and cannot do may come from a variety of sources: norm-referenced tests, informal teacher made tests, behavioural check lists, classroom observation, etc. The more comprehensive the information the more appropriately the teacher can develop her learning programme. The emphasis should not be on trying to find out what's wrong with the child, but determining just what he can and cannot currently do.

Utilisation of the Child's Strengths

Because children with SLD have marked intra individual differences, the teacher is able to use areas of strengths to complement weaknesses. This is particularly important in the affective area where the maintenance of a positive self concept is seen as necessary for optimum learning. A child who is constantly having attention drawn to his weakness is very vulnerable to feelings of inferiority and worthlessness. The children with SLD, because of their general level of intelligence, are often very sensitive about their specific weakness and need attention to strengths as well to balance their perceptions of themselves as learners.

Utilisation of the Child's Interests

Irrespective of the teaching techniques used, utilisation of the child's

interest is an absolute prerequisite in establishing an interesting and satisfying programme. The child's interests can be incorporated into both the content and reinforcement components of his programme as well as provide him with an opportunity to reveal superior knowledge to his peers and teacher (often a very important consideration for children who perceive themselves as failures). An example of the use of the child's interests can be seen in the following vignette.

John S. was an older than average Grade 7 boy who over the years had become a "switched off" reader. His reading performance in standardised reading tests indicated a functioning level of 3-4 years below his chronological peers. He not only did not read for pleasure, but actively disliked any reading or related activity. His preoccupying interest was motor cycles and it was this interest that was seized upon by a teacher planning an individual reading programme with John. Discussing motor cycles, with John being the informant, was effective in developing rapport and the teacher established a sound working basis from this interest. She diligently sought out reading material relating to motor cycles, initially high on illustration, low on written content. Gradually, with increasing involvement by John, the teacher was able to extend the reading to other related but not exclusively motor bike material. In addition to its focal role in the content of the reading material, interest in motor cycles was also used as the source of positive reinforcement for improved reading performance. (A visit to a major motor cycle dealer's premises during a lunch hour provided maximum reinforcement for John). That John's reading performance improved was important but no less important was his growing realisation that reading could be interesting. (N.B. Full marks to the teacher who got fully involved in the topic of motor cycles, even though she had a natural antipathy towards the machines).

This example illustrates clearly the need for teachers to become involved in the children's interest so that maximum value can be gained from the learning programme developed.

Just as in the case of the child with general learning difficulties,

a child with a specific problem requires an understanding and competent teacher who is flexible enough in her classroom organisation to allow the child to work on individualised material without feeling that his "difference" sets him apart from the other children. His learning difficulty should be seen as one of a wide range of special needs existing in a heterogeneous class and not as a problem different in kind and degree from the rest of the class.

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CHAPTER 5

CHILDREN WITH SUPERIOR COGNITIVE ABILITIES

Children with superior cognitive abilities or gifted children, as they are more commonly referred to, are not always seen as fitting comfortably into the domain of special education. If special education is considered to be concerned only with handicapped children, then it is inappropriate to include the more able in its ranks; on the other hand, if it is concerned with the education of children with special needs, then these children are quite legitimately an area of interest. As Kirk (1972, p. 3) suggests, the guiding philosophy should be: "educational opportunity — the right of each child to receive help in learning to the limits of his capacity, whether that capacity be small or great". Given this fundamental principle, the gifted child is clearly in need of help in achieving his considerable capacity.

DEFINITION

Who then are the gifted children in our schools? This is a question over which there is still considerable disagreement. For many, the gifted are those who score highly on an IQ test, this being the traditional method of determining intellectual capacity. Terman, (1925), for example, in his important longitudinal study, used an IQ of 140 as his criterion of giftedness. More recently, as a result of studies by Getzels and Jackson (1962) and the impact of Guilford's (1967) structure of the intellect model, the importance of the notion of creativity has been stressed. A further dimension to the concept of giftedness is that of special talent — artistic, mechanical, motor. Thus it is difficult to find consensus in the literature because "gifted" seems at one time to be used synonymously with "high IQ" and at another as a generic term subsuming superior, all round ability, creativity and special talent. It seems profitable then to talk of children with "superior cognitive abilities", as the term can include those who demonstrate superior ability in logical deductive intellectual tasks, as in IQ tests, as well as those who are more divergent and creative in their thinking. Given the difficulty of developing an all embracing definition, the comprehensive inclusion of a wide variety of superior skills should represent the population of children with superior cognitive abilities. Such a population would include those who "are capable of high performance in one or more of the following areas: (a) general in-

tellectual ability, (b) specific academic aptitude, (c) creative or productive thinking ability, (d) leadership ability, (e) ability in the visual or performing arts, and (f) psychomotor ability," Martinson (1973, p. 193).

PREVALENCE

As definition of the concept of superior cognitive ability is so imprecise, it is particularly difficult to estimate with any accuracy the number of such children in our schools. One of the advantages of using an IQ cut off point as the criterion for giftedness is that it gives a precise estimate of numbers based on the normal curve of intelligence distribution. (Figure 5.1). For example, an IQ of 115+ represents about 16% of the population, whilst those above 130 represent about 2.5%. Using multiple criteria, however, with the attendant vagueness and imprecision, it becomes impossible to determine the number of children in our schools who could be considered to have superior cognitive abilities. Martinson (1973) reports that the United States Commission of Education estimated 3–5% of the school population were gifted based on the areas of high performance outlined above.

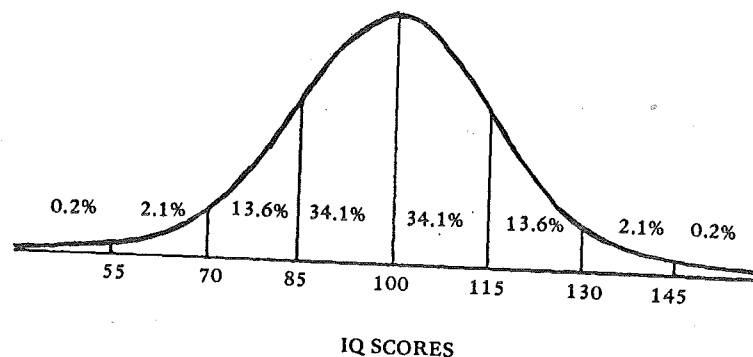


Fig. 5.1 Theoretical distribution of intelligence quotients among the school population with percentage incidence at varying scores.

IDENTIFICATION

The identification of children with superior cognitive abilities is no less difficult than is their definition. Methods of recognition can be grouped into four broad categories: (a) general ability tests, (b) academic achievement assessment, (c) teacher observation and recommendation, and (d) creativity tests.

General Ability Tests. As has been previously mentioned, the IQ score is the traditional method of defining and identifying gifted children. There has been considerable doubt expressed over the use of the IQ test as the sole indicator of superior cognitive development for a number of well founded reasons. The criticisms outlined below apply more to the general, group, paper and pencil IQ tests that are available for teacher use than they do to the more sophisticated individual IQ tests (e.g., W.I.S.C. or Stanford-Binet) available for use only by trained psychologists. Even the individual tests are inadequate as the sole determinants if for no other reason than that they identify only those children whose giftedness is manifest by the type of thinking necessary for scoring highly on IQ tests (i.e., a logical deductive or convergent intellectual style).

The validity of IQ tests (i.e., the unequivocal demonstration that the test actually measures intellectual ability and not something different) is notoriously difficult to establish. This difficulty is demonstrated in many of the group tests that require the student to be a competent and fast reader. The poor reader, in fact, registers a low IQ score, which raises the question 'Is the test one of IQ or of reading?'. Many people with demonstrably high intelligence are poor readers (refer Chapter 4). It is also often argued that IQ tests (especially the group verbal tests) are tests of knowledge rather than ability, as post-test instruction in the areas of failure would in most cases lead to an improved IQ score if the test were taken again.

IQ tests, like other standardised tests, are not culture free in item or task content, thus children from minority and underprivileged groups are likely to be disadvantaged. Dunn (1973) points out the inequities resulting from the use of such tests for placing children into special classes for the mildly retarded. In an interesting study with aboriginal children Taylor and De Lacey (1973) found that whilst there were significant differences between white and aborig-

inal children on the Peabody Picture Vocabulary Intelligence Test, no such differences existed on open ended tests of divergent thinking - Rorschach and Torrance's Unusual Uses Test.

Situation specific factors (location, temperature, etc.) and personal specific factors (health, emotional state, etc.) can also significantly affect a child's performance on such tests. A test taken by an emotionally upset child in a hot, unpleasant environment is likely to result in an appreciably lower score than the same test taken in ideal conditions by the child when he is happy with his world.

Academic Achievement. It would seem, superficially at least, that the highest academic achievers in the class would be, almost by definition, the brightest children but, whilst there is a strong positive correlation between academic performance and giftedness, as a method of identification, school achievement is not very efficient. Firstly, ability is not the only factor in high achievement. Children of average ability can achieve high academic results by diligence and single-minded application to task. Secondly, some high ability children fail to achieve levels remotely equated to their ability because of boredom, capitulation to peer pressure or any of a number of other reasons. Finally, bright children from disadvantaged backgrounds may also achieve significantly below their potential for a variety of reasons allied to their general environment. On the whole, then, academic achievement is a reasonable but by no means foolproof method of identifying the ablest children. (It is interesting to note that Perth Modern School was for years a secondary school for gifted children who were identified by their academic achievement in their final primary year).

Teacher Observation and Recommendation. This is another method that falls far short of its apparent promise. It has been demonstrated that teachers have considerable difficulty in accurately detecting gifted children (Pegnato and Birch, 1959). They often miss children who are in fact gifted and select many who are not (with about a 50% success rate). Bright children whom teachers do not select are likely to be lacking in motivation or manifest their competence in ways that do not fit the teacher's individual conception of giftedness. Teachers, like anyone else, have their biases which may interfere with their judgement. Neatness, diligence, co-operation and factual accuracy may be the traits considered pertinent by the teacher and, whilst these may be associated characteristics of some gifted children, they do not define superior cognitive ability *per se*.

Creativity Tests. Emanating from Guilford's structure of the intellect model (Guilford, 1967) in which a divergent thinking operation is identified as a significant part of overall intellectual functioning, interest in creativity tests has grown. A creativity test for many seems to be a contradiction in terms, for if a response is truly creative there are no yardsticks against which it may be measured, (exactly how much creativity is there in the *Pieta*?). Nevertheless tests of the open ended variety (i.e., with no correct yes/no answer) have been developed to assess this divergent thinking. Torrance (1974), in particular, has been active in this field and items such as the unusual uses test are claimed to discriminate the divergent thinker from his less creative peers. Just as the IQ test favours the logical "converger", so these tests favour the lateral "diverger" but they do add an extra dimension to the assessment of superior cognitive abilities.

Although none of the outlined procedures singly is very effective, a combination of them all should prove more satisfactory in identifying the ablest students in our schools. Renzulli and Smith (1977) advocate the use of the case study format in which information from a wide range of elaborate sources is examined as the most effective way of identifying gifted children. This approach is time consuming but, if we are serious about accurately identifying superior cognitive ability, then comprehensive assessment is the best course of action.

GENERAL CHARACTERISTICS

One of the monuments in the history of research into the nature of giftedness is the longitudinal study undertaken by L. Terman beginning in 1920 and continuing until his death in 1956. During this time he wrote a series of five books entitled *Genetic Studies in Genius* (1925-1959) in which he documents his ongoing observations and conclusions. He selected children in the public school system of California and used as his criterion of superior cognitive ability an IQ score of 140 or more on the Stanford-Binet Intelligence Test. On the basis of this criterion, he established a population of more than 1500 children and followed the progress of most of them for the best part of 36 years, making four comprehensive examinations of the subjects in that time. It is to this foundational study that we turn to most for empirical evidence on the characteristics of gifted children.

Socio-Economic Status. In Terman's study most of the children came from higher socio-economic environments and from families in which the parents were significantly better educated than the average.

Physical Characteristics. Contrary to the popular stereotype of the gifted child as being an under-nourished, bespectacled, pseudo-professorial weakling who is uncomfortable and incompetent in any pursuits other than academic, Terman found his subjects to be of overall physical superiority, taller and stronger and with less than average incidence of sensory and physical defects. Their developmental milestones (crawling, walking, etc.) were generally achieved earlier than those of their peers and this physical superiority, tended to be maintained into adulthood. Laycock and Caylor (1964) recommend caution in interpreting these results too rigidly as when they compared the physical characteristics of gifted children with those of less able peers from the same socio-economic background, they found the differences significantly reduced, suggesting perhaps that the social and economic background of the children may be just as much a significant concomitant of physical superiority as the superior intellectual ability *per se*. Nevertheless, the general picture of the gifted child is one of physical superiority and a reduced susceptibility to poor health.

Academic Achievement. As would be expected, children with superior cognitive ability demonstrate superior academic achievement, the mean scores for many gifted students being equivalent to those of children in higher grades. Terman and his associates (1925) found that this advanced learning achievement was consistently evident in his sample. Martinson (1961) found that the mean scores of fourth and fifth grade gifted children approximated the mean average of ninth graders. The general trend of these conclusions was replicated by Hermanson (1973) in a study of gifted high school students.

This is not to say that some very able students do not have learning difficulties and that many do not achieve to the level of their potential. Many gifted children "underachieve" and although the individual causes are numerous they tend to be related to boredom or peer pressure. Even the ablest child will have difficulty achieving if the stimulation to learn is lacking. Frequently the brighter child runs the risk of putting peers offside by his consistently superior performance, and peer rejection is in some cases too high a price to pay. The result may be a self-imposed re-adjustment of the level of achievement so that

peer acceptance is gained. Despite this, the gifted child is generally one who achieves academically at a significantly higher level than that of his age peers.

Emotional and Social Adjustment. In each assessment of the selected population, Terman and his associates found the subjects to be better emotionally adjusted, more self-sufficient and less neurotic. Although this is a general conclusion and not a statement about individuals it does seem to dispel the misconception that "genius is akin to madness". Perhaps the nature of Terman's population goes a long way to explaining the discrepancy between the empirical data and the popularly held belief. His "geniuses" were of the convergent, high IQ variety and not necessarily creative or divergent in their behaviour. Perhaps it is the creative genius that has most difficulty with his adjustment because of his apparently bizarre and unconventional behaviour. The gifted subjects of Terman's study demonstrated less adjustment difficulties than their peers because their superior cognitive skills equipped them better to cope with everyday problems and their high level of achievement generally freed them from the limitations of poverty and financial insecurity, a significant factor in many breakdowns.

Adjustment difficulties faced by some very bright children may emanate from a conflict of expectations. A gifted child is often expected to be modest and at the same time do his best, if he performs outstandingly he may be rejected by peers, if he performs below his expected standard he may be criticised by parents and teachers. The resolution of these conflicts may take the form of a lowered performance, or voluntary isolation from peers — either way it is unlikely to be altogether satisfying.

The majority of gifted children are popular with peers and held by them in high esteem. Far from being the isolate who lacks social interaction skills, the bright child is more often the leader and the one most socially competent. It is interesting that whilst empirical evidence (Terman's included) has substantiated the reality that the more able child is better adjusted; more popular and generally more outgoing than his less competent peers, notions of isolation and unpopularity persist. Gilbert and Jones (1972) in a study of undergraduate and teacher attitudes to the gifted found that they were perceived as being physically inferior, arrogant, bossy, distant and morose.

This may be a reflection of the untenable "compensation" thesis, which basically holds that children who are bright intellectually are not very good at non-academic pursuits (sport, social activity, etc.). This thesis does not hold up under empirical scrutiny and even though it might offend our egalitarian sensibilities, the children with superior cognitive abilities are usually competent "all rounders" in the physical, intellectual and affective domains.

Interests. Terman found, as might be expected, that gifted children had a wider range of interests than their peers. Whilst their interests encompassed a broad spectrum of activities, physical, intellectual and artistic pursuits, they tended to be more involved in those more abstract areas such as music, debating, literature and less involved in social and sporting clubs. Terman also found that they tended to persist at their tasks longer and with a greater single-mindedness than their peers.

A greater concern for the welfare of humanity is often displayed by the bright child and hence involvement in welfare groups and projects to aid the disadvantaged, is very common. This concern for the less fortunate is a very positive side of the often highly individualistic nature of such children. In general then, Terman's and other supporting studies paint a picture of the typical gifted child as being a physically superior, healthy, emotionally stable and interesting individual who is concerned and involved in the world around him. Because of the disproportionate incidence of identified children with superior abilities in the higher socio-economic groups, however, it is often very difficult to separate the effects of the environment from those of the superior ability in explaining the differences between gifted children and their age peers.

THE DISADVANTAGED GIFTED CHILD

Superior cognitive ability is not the exclusive province of children from high socio-economic backgrounds although many studies including Terman's point to a much higher incidence within this group. Unrecognised and unfulfilled potential especially among disadvantaged groups is a growing concern among educators. If we assume that ability is evenly distributed throughout the population and that recognition and development of talent in disadvantaged children is really a product of the inhibiting environment and not of an inherent limitation, then

every effort ought to be made to provide all children with the opportunity of developing their latent skills. The issue of unfulfilled potential has never been more eloquently expressed, than by Thomas Gray in his *Elegy Written in a Country Churchyard*.

*Perhaps in this neglected spot is laid
Some heart once pregnant with celestial fire
Hands that the rod of empire might have swayed
Or waked to ecstasy the living lyre.*

*But knowledge to their eyes her ample page
Rich with the spoils of time did ne'er unroll
Chill Penury repress'd their noble rage
And froze the genial current of the soul.* (Starr, 1968, p. 10)

Appropriate provision for gifted children depends upon accurate recognition and as so many writers (Dunn, 1968, 1973; Gowan and Torrance, 1971; Torrance, 1966) have pointed out, the identification methods examined earlier in this chapter are biased against the child from outside the dominant white, middle class culture. Dunn, in referring to the disproportionate incidence of children from disadvantaged backgrounds in special classes for the mentally retarded, suggests that

A psychometric battery, at best consisting of individual tests of intelligence achievement and social and personal adjustment . . . in large measure has resulted in digging the educational graves of many racially and/or economically disadvantaged children . . . (Dunn, 1968, p. 9)

Both Gowan and Torrance (1971) contend forcefully that the traditional instruments for identification of ability and performance produce not only an over-representation in groups of children labelled "mentally retarded" but an under-representation in groups labelled "gifted". The factors underpinning the problem of identification are the same in both areas — the tests favour the children from verbally competent, education oriented, backgrounds. They require of the children, a competence in logical deductive reasoning (often the questions have right/wrong answers and are timed) but they very seldom look at other aspects of superior cognitive performance outlined earlier in this chapter. On the basis of his published studies (Torrance, 1964) and on many unpublished studies and observations, Torrance

(1971) claims to have identified a number of creative abilities prevalent in disadvantaged groups, that are not recognised by traditional IQ or achievement tests, but are indicative of superior cognitive ability. He found that disadvantaged children had "creative positives" in the following areas:

- (a) non-verbal fluency and originality. This quality has been demonstrated by superior performance on creativity tests that involve completing figures in imaginative ways. (e.g., representing a blank circle as a meaningful object;
- (b) high creative productivity in small groups. Children seem less inhibited and more creative in problem solving activities in this structure;
- (c) higher creativity in artistic, movement, dance and other physical activities.

Torrance's conclusions have been based on large American inner-city groups which are comprised mainly of Negro and Puerto Rican children and although extrapolation to the Australian scene may not be totally justified, there is sufficient evidence to suggest that we have similar difficulties in recognising our disadvantaged capable children and that we should be looking for more creative and flexible indication of superior ability in these children. Taylor and De Lacey's study of aboriginal children (1973) seems to support Torrance's general conclusion, as the performance of their subjects on the more creative tasks was significantly better than that on the more traditional tests.

In Western Australia there is currently (1981) research being undertaken by the Research Branch of the Education Department into the problem of unrecognised and unfulfilled potential among children. This Priority Exceptional Students Study (PRESS) is developing special identification procedures for disadvantaged students.

The more able disadvantaged children often have to face pressures that do not really affect their more affluent peers. Firstly, the sheer economic burden on a large family of the bright child remaining at school beyond the minimum leaving age may be so great that he is prevented from achieving the educational level of which he is capable. Pre-occupation with economic survival within the family is not condu-

cive to a learning environment that fosters maximum achievement. Secondly, the back up facilities for secondary and tertiary education are simply not available. Reference books, study facilities and parental expertise are all luxuries that very few poor families possess. Thirdly, there is more frequently a lack of peer support for academic excellence and both overt and covert pressures are applied to the child not to become too academic. Vernon (1969) describes some American Indians withdrawing into apathy and "learning to be unintelligent".

Unfortunately our education system is not geared to maximising the potential of gifted disadvantaged children, in fact in many cases it seems to inhibit development. An interesting study carried out in Britain prior to the dismantling of the 11+ examinations revealed that the level of achievement of poor children declined rapidly over their primary school years. A sample of 8 year old children from what was termed lower class backgrounds (unskilled labourers, etc.) was matched in ability with children from middle class families, by the use of intelligence tests. When the children sat for their 11+ examinations (after 4 years of primary school) only 15% of the former group were eligible for grammar school, whereas 57% of the latter group were. Average decrements of up to 20 IQ points have been recorded with black American children as they pass through the grades. (Passow and Elliot, 1967). This educational inhibition of talent among disadvantaged children in Britain and USA may not accurately reflect the situation in W.A. schools in the 1980's, but it is demonstrably true that comparatively few children of poor families reach positions of high professional or academic standing. With our priority schools projects (in which disadvantaged children benefit from compensatory educational provisions), an increasing trend to meaningful school based curriculum development, and an increasing awareness of the educational needs of poor and ethnically different children, the lot of the disadvantaged bright child is steadily improving. Much still needs to be done, however in the areas of identification and meaningful educational planning to compensate for the inhibiting educational effect of depressed social and economic circumstances.

EDUCATIONAL PROVISIONS

To identify gifted children is one thing, to provide adequately for them in our education system, as many teachers are painfully

aware, is quite another and at least as difficult a problem. Various models of educational provisions have been recommended and utilised with variable success and generally they fall within the following categories: special schools; special classes; accelerated progress; enrichment programmes in the normal class. When considering these alternatives, the guidelines in our evaluation should be (a) which most adequately provides the child the opportunity to best realise his full potential — intellectual, emotional, social and physical? and (b) which will be the most effective in developing the child, skills and talents that enrich our society?

Special Schools. A special school for gifted children is an educational analogue of the special school for intellectually handicapped children referred to in Chapter 3. It is a totally segregated institution designed to educate the more competent children in a situation free from the inhibiting pressure of their less able peers. Children may be selected on any one or all of the identification methods outlined earlier and the school may cater for children with one single talent or those with general superiority in all academic areas.

In principle and in practice the special school provides the more able children the opportunity to progress at an uninhibited rate, to benefit from intellectual and creative interaction with their equally or more competent peers, and to receive highly specialised teaching from a staff selected for their outstanding ability. Despite these obvious benefits, such special schools have not flourished within the education systems of western countries. The reasons for this are numerous and not always educational. First, there is the fear that the elitism produced by such a school contradicts the ideals of an education system based on equal opportunity. The children have so much going for them already, that specialised advantaged education seems an unfair luxury when so many are having difficulty learning in our schools. Second, the unnatural homogeneity of the school may not be the best social group to equip the individual for living in the heterogeneous world of work and post school recreation. Third, the less talented peers are robbed of the opportunity of interactions with and learning from the more competent children. Observational learning and modelling are powerful learning mechanisms that can be successfully utilised in integrated programmes.

Two rather interesting examples of special schools are the Yehudi

Menuhin for musically talented children in England and the Lincoln school for disadvantaged gifted children in Kentucky, USA. The Yehudi Menuhin school provides an opportunity for the country's best young musicians to develop their talents to the full. The children undergo regular education compressed into a somewhat shorter working week, in addition to a highly intensified music programme developed and taught by gifted musicians and teachers. The Lincoln school on the other hand, has been established with very different goals in view, that is the provisions of a special education for children of superior potential who come from disadvantaged backgrounds in the state of Kentucky. Rural whites from the Appalachian mountains, blacks from the ghettos of Louisville and children from remote Kentucky hamlets comprise the heterogeneous population of the school with the one common characteristic — apparent potential to be high achievers, given an advantaged rather than disadvantaged educational programme. Schools like these are not all that common in either the USA or Britain nor do they seem to be acceptable models for similar schools in Australia, however they do represent one alternative for the adequate educational provision for children of superior cognitive abilities.

Special Classes. The special class is a self-contained unit within a normal school where children selected on the basis of their superior ability are educated in an advanced and intensified curriculum to enhance their achievement. The model has the advantage over the special school in that the children interact with their age peers in general school activities — sport, informal play, outings, etc. However, this interaction is often more imagined than real as the children in the special class often tend to stick together and can become rejected by the rest of the school population. The benefits of the special class are much the same as those of the special school — greater opportunity to be intellectually challenged, more stimulation and motivation and less rejection by peers.

One of the persistent problems bedevilling the authorities who establish special schools or classes is that of selection of the clientele and the justification of the selection to the parents and teachers of those not selected. No one wants his or her child assessed as intellectually handicapped so that he can be placed into a special school but many parents would like their child to be considered gifted and given special educational benefits. Any programme that requires a restricted number of gifted children to be identified for special educational

placement frequently invites resentment and concern from those whose children are not selected and criticism from those who see the establishment of a meritocracy as unjustifiable in a system espousing equal opportunity for all.

Accelerated Progress. Acceleration can take two forms — early entry into school and promotion through the grades. Both variations seem to have merit as long as the judgement as to who should be accelerated and when, is made on the basis of a wide range of variables and not just intellectual competence. Whilst many gifted children are not only intellectually, but also physically and socially more mature than their peers (Terman et al 1925), this is not universally the case. For the smaller, immature bright child, acceleration to a higher grade may mean social and physical dislocation which would hamper not only his adjustment but his academic progress as well. Early school entry, telescoping of grades or grade skipping should be recommended where it is considered that the child will not suffer physically, emotionally or socially by being placed with a group of older children.

Enrichment Within The Normal Classroom. Enrichment refers to the extension of the more able children to higher areas of learning and creativity by adjusting the curriculum, providing them with activities that challenge and motivate and by allowing them the freedom to pursue areas of interest. For the teacher this involves considerable work, time and organisation if the interests of the other children in the class are not to be neglected. Enrichment does not mean "giving them more of the same" as a "reward" for completing assignments early or accurately, it means enabling the competent children to stretch their minds with interesting and relevant experiences. Successful enrichment, like the provision for individual differences of any kind can be most effectively developed in a classroom where the teacher is committed to differential levels of learning, and where children are encouraged to learn at their individual rates without feeling inferior or superior to their classmates.

Enrichment in the normal classroom seems to offer the most acceptable options for educating children with superior cognitive abilities. It is democratic, avoids the criticism of elitism levelled at segregated facilities, and does not have the problems of social dislocation inherent

in accelerated programmes. The less able children in the class benefit from the presence of the gifted children, whilst the gifted children learn to interact with peers of all intellectual levels.

Like all of the best alternatives, enrichment requires the greatest effort from the teacher. In fact, the reason why many educators advocate segregated classes and even schools is that they consider that the gifted child is neglected in the heterogeneous classroom. To help teachers to cope more adequately, backup resources must be available. Well stocked libraries and resource centres, community facilities and a wide range of supplementary curriculum materials are necessary. Class sizes, the range of individual differences in the normal class and the physical constraints of the room are other factors affecting a teachers competence to develop adequate learning programmes for the gifted children in her class. That competent teachers can and do provide very well for not only the bright children, but the less competent in the same classroom, is a testimony to their understanding of the special needs of children and their general teaching competence and organisation.

THE WESTERN AUSTRALIAN SCENE

In Western Australia, a renewed interest in the education of children with superior cognitive abilities has been generated in recent years. In February 1980, the Gifted and Talented Childrens' Programme Project group was established under the direction of an Education Department superintendent. The role of the group was to co-ordinate programmes for gifted and talented children throughout the government schools, monitor the success or failure of particular programmes and recommend directions for programme development in the future. Regional areas have established their own programmes and these vary in philosophy and structure from full time special classes, through limited withdrawal situations, to individualised enrichment programmes within the normal class (Ainsworth, 1980). It is Departmental policy to provide: school based programmes at pre and junior primary levels for approximately 5 percent of the age group; partial withdrawal for 3 percent of children in years 4-5; full withdrawal programmes for 2 percent in years 6 and 7 and special placement for accelerated progress for 1 percent of the Year 8 high school group.

The identification of children for these programmes, is a complicated and necessarily evolving process with the inherent problems of imprecision and bias in assessment procedures, difficult to solve. The Education Department has however embarked on a comprehensive identification programme for both secondary and primary children. Whilst the screening and identification of children for the high school programmes is standardised across the state, regional centres operate their own independent procedures for the primary level children in their districts. This diversity of identification of approaches, causes many problems and it is the aim of the Department to eventually standardise procedures at the primary levels. The high school selection programme involves a three-tiered system of screening and testing Grade 7 children: (a) nomination by teachers, parents and peers, (b) assessment on four objective instruments — a verbal and non-verbal general ability test, a mathematical reasoning test and a reading comprehension test, (c) individual ability testing by guidance officers. This comprehensive system is expected to be refined and streamlined after initial evaluation.

Western Australia has no special schools for gifted children, although children with special talents may attend particular regional secondary schools for an enriched programme in their area of strength. (Appendix A). Perth Modern School until 1964 was a secondary school whose intake was determined by success in a scholarship examination taken in Grade 7 primary school students. The changed status of the school from that of a special school for gifted children, based on the criterion of academic achievement, to that of a normal regional high school with no restriction on intake, illustrates the rejection, by educators specifically and the community generally, of the concept of totally segregated education for the intellectually able.

Some schools still stream their children into A B and C classes, thus effectively segregating the gifted (again in terms of high academic achievement) into special classes. This infrequent practice and current regional initiatives — notwithstanding, it is still generally the lot of the regular class teacher to cope with the brighter children in her class, usually without the benefit of ancillary help.

CONSIDERATIONS FOR THE REGULAR CLASS TEACHER

As the majority of children with superior cognitive abilities are

currently being educated in the regular classroom, it is the responsibility of the ordinary class teachers to cater adequately for their educational, emotional and social needs. This, as most teachers will confirm, is no easy task, for these children often find the general learning activities of the class limiting and restrictive. A selected overview of some common intellectual and behavioural characteristics and their implications for the regular classroom are presented below.

The Child Learns More Quickly Than His Less Able Peers

Gifted children can in many ways be considered the mirror image of children with general learning difficulties, and just as considerations must be made for the latter's slower rate of learning, so ought they be made for the former who tend to learn more quickly than the rest of the class. The bright child usually finished assignments early, catches on to newly taught concepts immediately and frequently embarrasses the unprepared teacher by having "nothing to do". Repetitious learning, drill and the provision of endless sets of questions and tasks that require nothing more than rote memory are demoralising for the more able children, as is the extra set of examples given as a "reward" for early completion of an assignment.

For a child to remain motivated, he must be guaranteed that finishing tasks quickly and accurately will lead to opportunities to extend his knowledge and understanding in the particular curriculum area or in a field of his own specific interest. Lesson preparation is the crucial concern of the teacher, as adequate planning for such contingencies as children finishing tasks at different times, is paramount in maintaining a healthy learning climate. The extent to which the classroom teacher can expand the curriculum in both breadth and depth will determine to what extent the rapid learner will be catered for. A comprehensive set of creative and stimulating supplementary activities should be established by teachers from the beginning of their training and be regularly added to over the succeeding years. In this way the gifted child can be challenged and motivated by extra work and not have his enthusiasm for learning stultified by the meaningless, repetition of previously mastered knowledge and skills.

A Greater Reasoning Ability

Typically the child with superior abilities is more able to generalise

from specific situations, to analyse and evaluate issues and to reason through what others might accept as articles of faith. This tendency to seek meaning from information presented can be threatening to the insecure teacher who feels that her authority and position of respect are being constantly challenged. The defensive teacher, who attempts to inhibit this desire to reason through information, may build resentment and overt or covert scorn on the part of the children. The respect of the children is not gained by a teacher's shallow pretence of omniscience, but rather by an honest recognition that there are many things she does not know and by a willingness to help enquiring minds to find the explanations they seek. It is presumptuous for teachers to think that they know more about everything than each of their children, (even with Year 1 this would be a difficult claim to establish).

Bright children will respond well to a teacher who emphasises underlying principles and ideas rather than facts alone. Repetitious presentations of specific instances of an underlying principle to demonstrate its generalisability (so important for the child with general learning difficulties) are unnecessary and often boring for the more competent child. In many cases supplementary work for the brighter child should be directed towards investigating broader applications of the general principle being studied.

An Unusually Large Vocabulary

Because so many children are well read and verbally fluent, their vocabulary and mode of expression may be significantly different from and superior to that of the rest of the class. A dilemma often faced by the teacher is how, on the one hand, to provide for the child's needs to express himself in speech and print and on the other, to prevent the other children from feeling inferior and reluctant to express themselves. Group discussion can be often stifled by the feeling of inadequacy of the less fluent peers, to the extent that the more competent child dominates the verbal interaction in the class. This problem needs sensitive handling by the teacher who must be aware of the needs of all the class. Perhaps one way of allowing the more fluent children opportunity to express themselves is for the teacher to go out of her way to have personal discussions with them on a wide range of sophisticated topics without full class involvement. The superior verbal skills can have a positive effect if the child is a respected class member, in that they provide a model of expression that the less competent peers can copy.

An Insatiable Curiosity

Children who are naturally curious about their world are educationally short-changed by teachers when this spirit of enquiry is blocked either inadvertently or deliberately by the forcing of the child to fit a mediocre class mould. Questioning techniques skilfully used in the classroom can help the bright child to find satisfaction in classroom activities. Questions can be asked at different levels on the same topic or theme to cater for differing levels of performance within the class. They can range from the simple sampling of factual knowledge (often assessing no more than short term memory) to those requiring analysis and evaluation. Nash (1980) illustrates this range in a number of questions relating to the West Australian social studies curriculum:

- (a) Who founded the colony of W.A. and in what year?
- (b) Compare the early settlements of Perth and Sydney.
- (c) If you were setting up a new colony, how would you go about it?
- (d) Would it have been better for W.A. if convicts had been brought to the colony with the first settlers?

Many gifted children respond to the flexible open-ended type of question, which enables them to be creative in their responses, an option not open to them in the closed right/wrong type of question. Sanders (1966) has written a very useful book, *Classroom Questions-What Kind*, that provides practical examples of different question types.

The curiosity of the children can be further developed by the teacher encouraging them to develop skills of library research, interviewing and observation. A well designed programme then enables the brighter children to develop their interests by teachers or self-directed research will further enhance, not only their performance, but also skills that will be invaluable in higher education.

Broad Fund of Information

The wealth of information possessed by many gifted children may

be either a source of frustration and intimidation for the teacher or a valuable resource to be used for the benefit of the whole class. Teachers may find that without sensitive handling, the well-informed child may dominate classroom discussion to the exclusion and resentment of his peers. Skilful organisation of groups, selective questioning and the fostering of individual extension work should help all children to make satisfying contributions to the classroom activities.

Peer and cross age tutoring is a teaching technique that can effectively utilise the skills and knowledge of the gifted child to the benefit of his less able peers. When carefully matched with compatible partners, the more capable children are able to provide individual tuition at times when the teacher is unable to do so.

More Creative

Given the more generous concept of superior cognitive abilities outlined earlier, highly creative and divergent behaviour can be expected in many children. This behaviour may take the form of unconventional responses to problems, innovative and seemingly bizarre ideas and in some cases a lack of concern for precision and accuracy. Encouraging and even tolerating this type of behaviour can be very difficult for many teachers, especially those who expect a high level of conformity from the children and in a style more suited to the logical, convergent thinker than the one who is creative and divergent.

To continually block the creative initiative of a child, is to deny their individuality and to assert that in all aspects of learning there is a right and wrong way, an acceptable or unacceptable answer. Divergent thinkers look at alternatives to the obvious, the mundane and the expected. This is a positive characteristic that needs to be fostered by the teacher encouraging individual differences and engendering in the children a tolerance and appreciation of effort that does not seem to conform to the usual. De Bono (1976) claims that since Aristotle's time we have been locked into a logical deductive system of thinking that is clear, precise, and, he would claim, not always effective. The vital classroom is one in which both deductive formal and divergent creative forms of thinking are fostered so that the individuals efforts are accepted as valuable in their own right and are not always measured against the yardstick of conformity.

As can be seen in the foregoing discussion, providing adequately for the children with superior cognitive abilities in the regular classroom can be very difficult and challenging. Satisfying their needs as well as those of the other children is a formidable task, but tackled with an appreciation of the rich diversity of individual differences it can, with considerable preparation and effort, be a most rewarding one.

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CHAPTER 6

CHILDREN WITH BEHAVIOURAL DIFFICULTIES

DESCRIPTION AND CLASSIFICATION

For many teachers, coping with behaviour problems is one of the most distressing and difficult aspects of their job and for some it provides the most rewarding challenge. Deviant behaviour in children ranges from the mild, irritating excitability of a child in a formal lesson in the ordinary classroom to the self-mutilating behaviours of a seriously psychotic child in a hospital ward. Apart from the small number of genuine psychotic and severely disturbed behaviours exhibited by isolated individuals, behavioural difficulties can be viewed as interactive social phenomena which result from a conflict between the child and some aspect of his environment.

Labels such as "emotionally disturbed", "maladjusted" or any of the many disability oriented descriptors outlined by Smith and Neisworth (1975, p. 147) connote irremediability and induce the problems outlined in Chapter 1. They are based on the disease model of description and imply the existence of a "condition" satisfying a discrete set of diagnostic symptoms and carried around by the unfortunate child into his many social and learning situations. Excluding the severe psychotic conditions, most behaviour problems are situation and/or person specific, i.e., they are more manifestations of a child's inability to adequately cope with some aspect of his environment, than they are evidence of a "disturbed" personality. "Children in conflict", a term used by Rienert (1976), seems a most apt and accurate description. It is not merely a euphemism, as it focusses on the child's interaction with his environment — his inaccurate or unpleasant perception of a situation or person and the resultant conflict evidenced in his behaviour. For the school age child this conflict can result from an unsatisfactory relationship with parents, siblings, teachers, peers and commonly, the educational programme to which he is exposed. Conceptualising behavioural difficulties in this way removes to a significant degree the stigma attached to the labels "emotionally disturbed", "maladjusted", etc.

The disturbing effect of the label "emotionally disturbed" on the attitudes of teachers has been demonstrated in a study by Casey (1978)

in which teachers were asked to respond on a series of bi-polar adjective scales to a number of disability labels. The results indicated a significantly more negative evaluation of children labelled "emotionally disturbed" than of children with other disability labels (Fig. 6.1). Other evidence suggests that teachers' attitudes to children, formed on the basis of behavioural descriptions or observations, are better than those based on disability labels (Foster, Schmidt and Sabatino, 1976). Thus, emphasis on the child's actual behaviours — what he *does* and how he does it — is more fruitful than an emphasis on what he is thought to *be*.

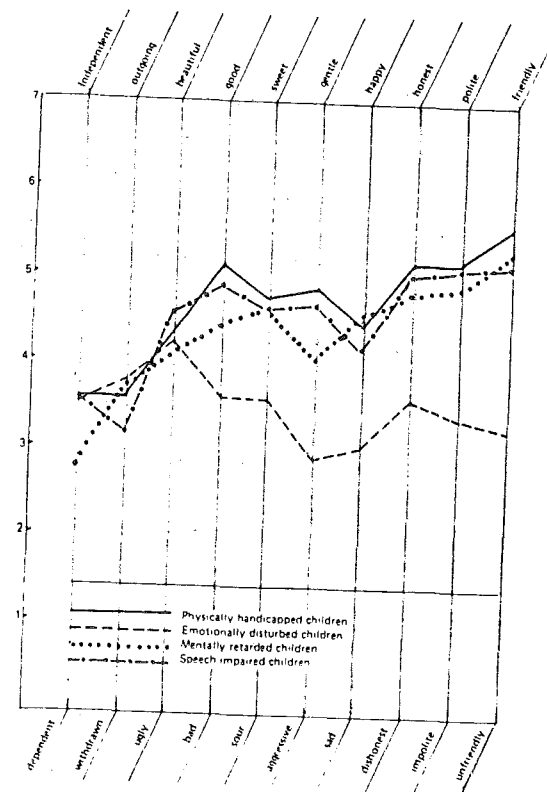


Fig. 6.1 Differences between Mean teacher rating scores on Physically Handicapped Children, Emotionally Disturbed Children, Mentally Retarded Children and Speech Impaired Children.

Throughout the literature can be found various classification systems which attempt to pigeonhole behaviours into sub-categories. They vary from the medical-psychiatric system emphasising physiological and obscure psychogenic causes to those which relate to the child's actual behaviour in certain environmental settings. Coleman (1972), for example, outlines a typical medico-psychological model for describing behaviour disorders. He includes the following categories in his taxonomy: acute brain disorders, chronic brain disorders, transient situational disturbance, neuroses, functional psychoses, personality disorders, and psychosomatic disorders. Stott et al. (1975), in a comprehensive study of 2,500 children, described five behavioural syndromes to which children could belong: unforthcomingness; depression and withdrawal (syndromes of underreaction); and hostility and in consequence (syndromes of overreaction).

One of the commonly cited classification systems is that of Quay (1969) who believed that if you classified children accurately you could achieve best results by educating them with others of their own kind. He suggested four groups of behaviour problems:

- (a) conduct disorders (i.e., overt attention seeking, aggressive, ill-mannered);
- (b) anxious-withdrawn (i.e., hypersensitive, timid, shy, isolated);
- (c) inadequate immature (i.e., disinterested, regressive);
- (d) socialised delinquent (member of anti-social groups).

A major problem of all of these and other classification systems is that the social sciences, unlike the pure sciences, are using imprecise instruments to study imprecise, complicated phenomena not amenable to exact assessment and, as a result, many behaviours do not fit snugly into any categories and children can demonstrate behaviour across a number of areas. On the whole, though, behavioural difficulties typically displayed in the school environment fall broadly into two categories — aggressive attention-seeking or withdrawn, supersensitive. For all teachers the former behaviour is obvious because of its disruptive effect but the latter is less obvious, more insidious and, in some cases, potentially more dangerous for the child.

When, then, does a behaviour become a problem? Kirk (1972) sees three main conditions that relate to a behavioural problem. It is

essentially (a) age inappropriate, (b) interfering in the learning and adjustment of the child, and (c) interfering with the lives of others. A fourth consideration may be that it draws criticism and negative attention to the child who is manifesting the behaviour. Hewett (1968) considers deviant behaviour a problem of socialisation.

At each level (infancy to adulthood) certain behaviours, capabilities, knowledge, beliefs, and customs must be acquired if successful adaptation to the environment is to occur. As an individual's behaviour deviates from what is expected for his age, sex and status, it is maladaptive and he may experience serious difficulties in getting along. (p. 3)

Thus, when examining behavioural difficulties in children, we are concerned with inappropriate unsocialised behaviour that sets a child apart from his peers and interferes with his and/or their learning and adjustment.

CAUSES OF BEHAVIOUR PROBLEMS

Problems in children's behaviour can emanate from a number of different causes broadly distinguished as *organic* or *environmental*. As the environment encompasses all of the child's life experiences it is more appropriate to examine its influence in terms of family relationships, socio-economic factors and educational factors.

Organic Factors. Some of the more severe behavioural disorders appear to be related to constitutional pathology, especially of the central nervous system. In childhood psychoses, including autism, there is a strong suggestion of neurological dysfunction precipitating the behaviour or at least predisposing the child toward such behaviour. Toxic agents — lead and mercury particularly — have also been linked with behavioural disorders. Brain trauma is increasingly a source of unpredictable behaviour and some modern theories are suggesting chemical imbalance as a cause for hyperactive behaviour (Feingold, 1975). Although this particular connection has not been empirically substantiated, modified diets are used by some parents to tackle their children's hyperactive behaviour. Many people are looking to medicine as a source of cure for behaviour problems.

Familial Factors. Psychologists and educationists of all theoretical persuasions agree on the importance of the first five years of a child's life in not only his physical and cognitive development but also on his affective development. It is during this crucial period that interactions within the family milieu play a vital part in determining a child's behavioural adjustment. The child's need for love, security and success are to a large extent provided for by members of his family and the degree to which these needs are satisfied determine, largely, how he will cope with his environment outside the home.

Consistent, loving care and a secure environment provide the base from which the child can venture into independent behaviour. Baumrind (1967) found that the "authoritative" parents (as opposed to "authoritarian") who were controlling and demanding yet also warm and receptive to the child's ideas were the most effective in developing self-reliance, self-control and contentment in their children. He contends that this type of parenting induced in the children a responsible conformity to social standards without loss of independence. Cooper-smith (1967), in examining the self-esteem of school children, found that children with high self-esteem had parents who were more accepting and positive towards their children but who also set fairly strict and clear limits for the children's behaviour.

Many theorists influenced by the work of Freud give the nature of parent child relationships a pre-eminent role in explaining deviant behaviour. Bettelheim (1967) places the blame for severe emotional problems on early mother-child interaction (the "refrigerator" mother). Whilst this view has not been generally accepted, the initial effect of inconsistency, rejection, or indifference on the part of the parents may have serious effects on the behaviour of the child.

Consistent demonstration of socially acceptable or unacceptable behaviour by parents seems to lead to the adoption of such behaviour in children. Aggressive behaviour is particularly vulnerable to the influence of modelling and imitative learning. Bandura and Walters (1963) have documented studies that illustrate the way in which aggressive behaviour is facilitated by observation of a model being aggressive. Aggressive fathers tend to produce aggressive sons. A wide range of acceptable and unacceptable behaviours are susceptible to effective imitation and, because of this, the behaviour of parents and other caregivers is a crucial variable in the young child's development.

Socio-Economic Factors. The many and varied facets of the social and economic environment play important roles in children's overall adjustment. The child of impoverished parents, preoccupied with economic problems, is very vulnerable to emotional stress and neglect. Poverty frequently causes tensions in family relationships, poor nutrition for its members, and a dearth of enriching experiences for the school age child, all of which can have detrimental effects on his physical, cognitive and behavioural development. Graubard (1973), from a review of selected literature, points out a connection between economic disadvantage and delinquency. Poor children have their life options restricted by the impoverished status and deviant behaviour is sometimes a way of expressing the frustration caused by such a restriction.

There is continual debate over the relative incidence of behaviour problems in one generation as compared with another. Obviously, aspects of any particular period put certain members of the society at risk. In modern western societies, concern is often voiced over the apparent increase in deviant child behaviour and, whilst this increase is often difficult to substantiate empirically, the higher increase in juvenile crime does seem to support such a concern. It is particularly difficult to enumerate the societal factors responsible for this apparent increase as people tend to give individual, subjective interpretations of such causes. Peer pressure against traditional values, the heterogeneity of modern religious and ethical beliefs, the mobility of modern families, the pervasive influence of the mass media in providing anti social models, are examples of often cited forces acting on the young child. Whilst it is extremely difficult to be definitive about causal relationships in the area of behavioural difficulties, it is nevertheless clear that aspects of a child's economic and social environment contribute significantly to his behaviour.

Educational Factors. Although some children enter school with behavioural difficulties resulting from factors outside the school setting, many others develop problems as a direct result of their conflict with the educational environment itself. Almost all children begin school with an eagerness and enthusiasm for learning. For some, the connection between learning difficulty and behaviour problems begins almost immediately when they see their peers achieving at highly valued tasks such as reading and counting and they themselves are not. This disillusionment gains momentum as the difficulties accu-

multate and the learning gap between the peers and such children widens. The nexus between learning and behaviour problems has been effectively demonstrated (Fernald, 1943) and must be broken if improvement on either variable is to be gained. The cycle of interaction shown on Fig. 6.2 illustrates the reciprocal relationship between learning difficulties and behavioural problems. The key concepts in this relationship are *frustration* and *security* — success brings security, persistent failure brings insecurity and frustration. A child experiencing consistent failure in learning at school begins to see himself as a failure in everything and behaves accordingly. This behavioural reaction, whether it be one of aggression, withdrawal, or total disinterest, in turn makes it even harder for him to attend to his learning. Thus the more it is perpetuated and the longer it has been established the harder is the nexus to break.

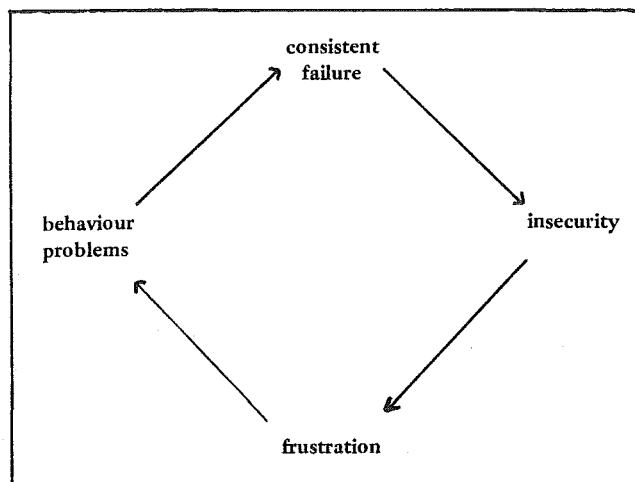


Fig. 6.2 The circular connection between learning difficulties and behaviour problems.

Interpersonal relationships with peers and/or teachers may also be a source of maladjusted behaviour among children. Insensitivity on the part of the teacher or classmates, sarcasm, overt or covert rejection can often induce in a child an anti-social behaviour that reinforces his rejection. An accepting classroom climate where understanding and a willingness to help children cope with their conflicts will go a long way to easing tensions and reducing behaviour problems.

CONCEPTUAL MODELS OF BEHAVIOUR PROBLEMS

It is impossible to develop an all-inclusive list of discrete and separate conceptual models for explaining deviant behaviour, as "variations on a theme" abound and many overlap in aspects of explanation and application. Four primary models from which permutations and combinations have been made can, however, be identified. The medical, psychoanalytic, humanistic and behaviourist interpretations seem to underpin other models. Coleman (1972) and Hallahan and Kauffman (1978) provide useful overviews of the prevailing positions.

The Medical Model. A basic tenet of this model is that all human problems, physical and behavioural, have a physical cause, a discrete set of symptoms, and, in all but the most serious cases, prospect of a medical cure. The fact that very few behavioural problems have been found to have unequivocal constitutional causes does not deter the hard-nosed proponents of this point of view. They accept this fact and suggest that medical science is the only profitable line of research and that in time the connection between behavioural symptoms and constitutional pathology will be established. They point out that when theorists of a more psycho-social persuasion claim such a cause as "maternal deprivation" for the development of deviant child behaviour, they obscure the real causal antecedents with a euphemism. The actual causes they would suggest would be organic — malnutrition, physical trauma, etc., and it is the effect of these physical forces on the bodily metabolism that precipitates unsocialised behaviour.

Educationally, the implications of this approach are limited — a teacher may have a child in her class who is on a medically prescribed drug regime. Drug therapy is a remedial extension of this model, and, although the benefits derived in the treatment of functional psychoses and other mental disorders are indisputable, the increasing use of tranquilising and energising drugs for the control of children's behaviour is a source of considerable concern to both parents and teachers. Calming the "hyperactive" child or stimulating the "withdrawn" child by the use of drugs may lead to side effects such as drowsiness and loss of affect that could interfere with the child's learning. In addition to these functional considerations, the ethics of changing a child's behaviour by drugs must be seriously questioned in all but the extreme cases that are demonstrably resistant to modification by other means.

The Psychoanalytic Model. This approach has resulted directly from the work of Sigmund Freud and his psychoanalytic school, and has had a profound influence in the study of mental illness and deviant behaviour. A rather negative view of human behaviour is taken, in which the unconscious plays a significant part in determining our behaviour. Thus the child is not always aware of the cause of his behaviour problem and hence has little chance of controlling it. In the psychoanalytic view, the child who demonstrates deviant behaviour has not adequately coped with the intra-psychic conflicts which arise during his development. Such conflicts, mainly between the forces of immediate gratification of needs (id) and the forces of rational self-interest (ego) and conscience (super ego) are suppressed into the unconscious and tend to emerge in unacceptable behaviours which, on the face of it, have little or no relationship to the original cause. The psychoanalyst puts great store on the establishment of cause; treating the behaviour without determining the source is considered to be simply tackling symptoms which, when controlled allow the problem to break out again in another form. A child's aggression in class may be reduced or even eliminated but, unless the underlying cause of such behaviour is found and tackled, he will likely transfer his aggression to another person in another situation.

Because of the inherent need to determine causes that are presumed to be deeply embedded in the child's past and blocked from consciousness, the model has little practical relevance to the classrooms. If such highly specialised probing of a child's psychological past is required, then the esoteric skills of a psychiatrist must be involved in diagnosis and remediation. The recommendation that a child "acts out" his inhibitions or aggression to improve his adjustment is encouraged by some teachers, but more recent evidence, especially in the area of aggression (Bandura, 1973), suggests that such an approach is counter-productive and possibly exacerbates the difficulty. The psychoanalytic view has been indirectly involved in the development of role playing, puppetry, drama, etc., as therapeutic measures for deviant behaviour but on the whole it offers little to the teacher struggling with overt and covert behaviour problems in her classroom.

The Humanistic Model. The humanistic approach to the understanding of behaviour problems grew out of the work of psychologists such as Maslow (1962) and Rogers (1969) who, whilst influenced by the psychoanalytic school, presented a more positive view of the individual.

This model does not dwell on the deterministic antecedents of behaviour, but is more concerned with existing factors that inhibit the child's creative self-fulfilment. Hallahan and Kauffman suggest that this model considers disturbed children to be "out of touch with their own feelings and cannot find meaning and self-fulfilment in traditional education settings" (1978, p. 206). Humanistic psychologists and educators are concerned with the development of the affective domain and view traditional educational practices, with their teacher centred emphasis on cognitive development, as unbalanced and ineffective in producing only intellectual "half-men" whose emotional development is almost totally ignored (Lyon, 1971).

Humanistic psychology has had significant effects on educational practices, especially for children with behavioural difficulties, by focussing on the child centred learning, individualisation of instruction, emphasis on emotional growth, and by changing the role of the teacher from that of an authority figure distributing information to one of a supportive learning "facilitator" helping the child to achieve personal satisfaction in school. Children displaying deviant behaviour should be shown understanding and acceptance and the sources of conflict (usually the limitations of the structured educational environment) should be removed. Encouragement of individuality in performance and creativity are fostered. Externally imposed discipline is not encouraged.

The Behaviouristic Model. Originating in the seminal works of Watson (1920) and Skinner (1953), behaviourism has had a far-reaching effect on education in general and on the education of children with behaviour problems in particular. The theory has led to the development of a number of systematic instructional techniques which can be used in increasing, changing, maintaining and eliminating behaviours. The behaviourist model, beginning initially as a reaction to the vagueness of introspection and psychoanalytic theories, attempts to make the analysis of human behaviour an exercise in precision and, as such, it is based upon an accumulation of empirical data (much of which is derived from animal studies). In the context of behaviour problems, the relevant tenets of this model are:

- (a) all behaviour is learned and, as such, can be unlearned and changed;
- (b) behaviour is affected by its consequences as well as its antecedents

and, in particular, behaviour that is rewarded will be continued or increased, whilst that which is not will be decreased or eliminated;

- (c) all behaviour should be described in observable measurable terms;
- (d) causes are essentially irrelevant — the manifestation of the behaviour *is the problem*, not just a symptom of it;
- (e) the immediate environment is significant in maintaining a behaviour;
- (f) deviant behaviour exists because it is being reinforced.

Behaviour modification principles derived from these basic tenets seek to change behaviour by manipulating the environmental forces (especially rewards) that are affecting it (Sulzer and Mayer, 1972).

This model provides the teacher with a number of clearly described techniques with which she can tackle behaviour problems. Special techniques designed to increase behaviour may be used with the withdrawn non-participating child, whilst the systematic application and/or withdrawal of reinforcements for unsocialised behaviour can be used with the acting out aggressive child.

All of the models have their proponents and opponents and none is able to explain comprehensively deviant behaviour nor provide a panacea of educational techniques for the classroom teacher. Clearly, of the four models outlined, the latter two have had the greatest impact on education and most successful teaching incorporates aspects of either one, or a combination of both. The humanistic position is often criticised by those with a behaviourist leaning as being too "waffly", imprecise in its description of behaviour and lacking in a sound empirically determined conceptual base. Behaviourism, on the other hand, is usually considered by its opponents to be too mechanistic, impersonal and naive in not considering causes of significant importance. Educational practices recommended in the following section will incorporate ideas derived from each of these two models.

THE EDUCATION OF CHILDREN WITH BEHAVIOURAL DIFFICULTIES

As the behaviour problems of children vary in degree from very mild to very severe and in kind from introverted withdrawal to dangerous

physical aggression, a range of educational provisions must be made to cater adequately for their needs (and those of the teachers). In extreme situations, special segregated schools, sometimes of the residential kind, must be provided to tackle behaviours too disruptive for the normal school and too comprehensive for a piecemeal approach. Special classes or centres, developed on the basis of complete or partial withdrawal, cater for children whose problems warrant some highly specialised attention in small group or individualised settings. Some education systems have resource or "crisis" teachers on site in many schools, working with the children on both a withdrawal and in situ basis, and support the class teacher by helping to plan behaviour management programmes. For all but the most serious behaviour problems, the classroom teacher is expected to cope with little or no help from outside agencies apart from educational psychologists who can assess the child and made recommendations for his programme.

In both specialised and regular settings, specific behaviour change programmes, developed from the principles of either the humanistic or behaviouristic models, are in operation. In many cases a realistic combination of ideas from both theoretical positions is the most efficacious formula for effective behaviour management. Each child requires individual consideration and what works effectively for one may be totally ineffective for another. Thus specific behaviour modification programmes may operate within a general classroom climate emphasising support and tolerance for the children's differences. Some schools and classes operate on a full token economy system. Such a system involves the teacher giving tokens (stickers, stamps, ticks, etc.) to the children in return for them meeting clearly defined standards of behaviour. The tokens can be accumulated and "cashed in" for back-up rewards or privileges that have been mutually agreed upon. The system based upon behaviourist principles of reinforcement often involves the children and teacher entering into a contract in which a "tokens for good behaviour" arrangement is formalised.

Bettleheim (1950) developed an educational programme for seriously disturbed children based on the psycho-analytic model but, because the requirements of long term diagnosis and therapy are impractical and of dubious validity, in educational settings, such programmes are not very common. Berkowitz and Rothman (1960) advocate the joint teacher-therapist role for those working with behaviourally disturbed children. "The disturbed child who is aggressive is permitted

to express his aggression without harming himself or others, whilst the withdrawn child is not pressured into socialising but is treated with intelligent neglect" (1960, p. 119).

Hewett (1968) has proposed an educational system based on a developmental sequence of educational goals. He sees this particular approach as applicable not only to children with behavioural problems but also those with learning difficulties. His strategy is based on the thesis that "in order for successful learning to occur the child must pay attention, respond, follow directions, freely and accurately explore the environment and function appropriately in relation to others" (p. 42). He recommends a particular classroom organisation to facilitate the acquisition of skills he sees necessary for success and adjustment. Thus the room should have exploratory, mastery and order centres where particular skills and activities are tackled in a sequential fashion outlined in his theory. This environment he calls the "engineered classroom" because of its concern with structure and sequencing of tasks.

Irrespective of the theoretical bases upon which the various intervention strategies have been founded, they all require highly intensive individual attention to be given to the child and, as a result, education of children with severe behaviour problems is a labour-intensive, personalised exercise.

THE WESTERN AUSTRALIAN SCENE

In Western Australia, teachers who are concerned about the behaviour of children in their classes have access to the services of guidance officers who are trained educational psychologists. Their function is to help teachers cope adequately with children with special needs, both behavioural and intellectual, in the regular classroom. Thus they are involved with the teacher in diagnosis of difficulties, individual programme planning and parent counselling, so that the children can remain in the normal educational stream. For children who do not respond to the normal classroom programme and whose behaviour continues to be totally unacceptable and disruptive of his own or others' education, the Education Department, through the Guidance Branch provides Socio-psychoeducational Resource Centres (SPERCs). Four of these centres have been established in the metropolitan area and are staffed by a guidance officer, teachers and teacher aides. (Appendix A).

The centres attempt to provide an environment in which the child's behaviour will be changed so that he can fit back into a normal class. Each centre runs its own programmes, generally adopting an eclectic approach to behaviour management and they draw from the various models of behaviour to design individual behaviour change programmes. The staff are concerned with the effect of family relationships on the children's behaviour as well as their immediate classroom interaction and, as a result, parent effectiveness training and counselling are usually integral parts of the centres' programmes. As the centres are located adjacent to existing primary schools, maximum integration of the children is encouraged when the staff feel that it is advisable. When a particular child's behaviour has improved sufficiently for some normal class interactions to be considered, he is phased back into the SPERC units' host school for brief periods. These periods are extended as the behaviour improves and the long term aim is to relocate the child completely in his district school.

The Community Welfare Department runs schools for children with severe behavioural problems. Koorana functions as a day centre, whilst the McCall Centre is residential. In addition to these special schools, the Community Welfare provide teachers in its minimum and maximum security centres for teenage offenders. These facilities are generally organised within a behaviour modification framework with a token economy system of rewards and deprivations of privileges operating throughout the day. In the residential settings, behaviour in class is subjected to the same overall system of reinforcement and punishment. The system is usually highly structured and the child understands what behaviour will lead to reward and what will not.

Highly specialised medical, psychological and educational services are provided by the Mental Health Services: The Child Guidance Clinic offers psychological, psychiatric and social work help for parents and children; Stubbs Terrace provides medico-psychological services and accommodation for children suffering acute disorders; the Mildred Creak Autistic Centre runs a school especially designed for autistic children; and educational facilities are provided at Graylands and Swanbourne hospitals.

The Catholic Church and other independent organisations are also involved in the education of disturbed unsocialised children. The Church runs schools at Clontarf and Castledare for boys and Home of

Good Shepherd and Forrest Street Centre for girls. Special psychiatric and psychological services are also available at Princess Margaret Hospital.

CONSIDERATIONS FOR THE TEACHER

Because behaviour problems are such pervading concerns for teachers and because children with special needs are increasingly remaining in regular classes, strategies for helping children with unsocialised behaviour represent an important part of the teacher's set of competencies. As the classroom is the immediate environment in which disruptive or withdrawn behaviour is a problem to the teacher, it is in the classroom that such behaviour must be tackled. There seems little justification for the management of any but the most severe behaviours to be undertaken in a situation withdrawn from the one in which they occur. A child displaying aggressive, attention seeking behaviour in the classroom may be cooperative and pleasant in an intimate segregated setting where individual attention is more freely accessible, but return immediately to his uncooperative ways on return to his class if the environmental variables associated with the behaviour still remain. Teachers are quite capable of assessing and managing most classroom behaviour but, if we accept that they cannot blame outside causes for the maintenance of unacceptable behaviour, it is unreasonable to expect improvement gained in the classroom to be necessarily generalised to out of class situations. Teachers need to accept responsibility for the behaviour in their classes, but not be held responsible for deviant behaviour in other settings.

If it is the case, as is generally accepted, that behaviour problems are frequently linked to learning difficulties (Fig. 6.2), then a remedial strategy designed to alleviate the learning problem will generally improve behaviour as a consequence.

Effective remediation tends to decrease the conduct and personality problems by assisting the child in decreasing the discrepancy between his capacity to perform and the requirements of society. (Kirk, 1972, p. 408)

The primary concern of the teacher in tackling learning problems is, as outlined in Chapters 3 and 4, to provide successful and interesting learning experiences for the child so that the general frustration and

insecurity experienced as a result of failure can be removed and the consequent behaviour improved. The first requirement of a successful remedial programme is the accurate assessment of the child's achievement so that the teacher learns precisely what the child can and cannot do. Such an assessment should provide her with information about the level at which the child ceases to succeed and what fundamentals he might lack for further learning. Having acquired this information the teacher needs to plan and implement an individualised programme of learning in the areas in which the child fails, bearing in mind the need for relevance and interest in the materials and activities presented. She will overcome many of the problems inherent in such a programme by drawing from the child's interests and by making the learning activities sequentially progressive and successful. The cycle of accumulating failure and consequent behavioural reaction must be broken so that the child achieves satisfaction from his work. Utilising his interests, giving positive reinforcement for improvement and, most of all, developing a learning programme tailored to his needs will improve not only his academic achievement but also his concomitant social behaviour.

Whilst this remedial strategy is efficacious in many cases, for some children the interfering behaviour must be tackled directly. The two major components of such a tactic are assessment and management.

Assessment

To adequately tackle behaviour problems, the teacher must first assess the nature and incidence of the particular behaviours as well as the associated situational variables. Whilst it is true that, for some serious behaviour problems, information about home and outside environmental factors is relevant, the prime considerations for the teacher must be her assessment of the classroom variables that, if not actually causing the behaviour, are at least maintaining and supporting it. Parental relationships, peer and sibling conflicts and other outside forces obviously do sometimes cause undesirable classroom behaviour, but there is little the teacher can do about them and there is usually something in the class situation that is maintaining the behaviour. It is interesting to note that good teachers maintain positive, acceptable behavioural standards in their classes even though some children come from homes and general socio-economic environments that other teachers blame for disruptive classroom behaviour.

Hammill and Bartel (1978) outline a comprehensive set of assessment techniques that might help a teacher to accurately pinpoint the nature and incidence of a troublesome behaviour and its precipitating or supporting variables. These devices are broadly grouped under the headings: observation, checklists, and sociometric techniques.

Observation. The controlled observation and recording of classroom behaviour is an important method of determining its type, incidence and duration. Relevant situational variables can also be similarly examined. Observational information can be informally recorded in terms of general statements about the behaviour and anecdotal records on the children or, formally, by means of incidence and duration counts that are graphically represented (Fig. 6.3). The main advantage of the graphic format is one of immediate clarity and ease of interpretation. It requires more precise observation but the condensed information is highly visible and readily accessible. Data so compiled can act as baseline information against which behaviour change can be compared and realistic goals can be determined.

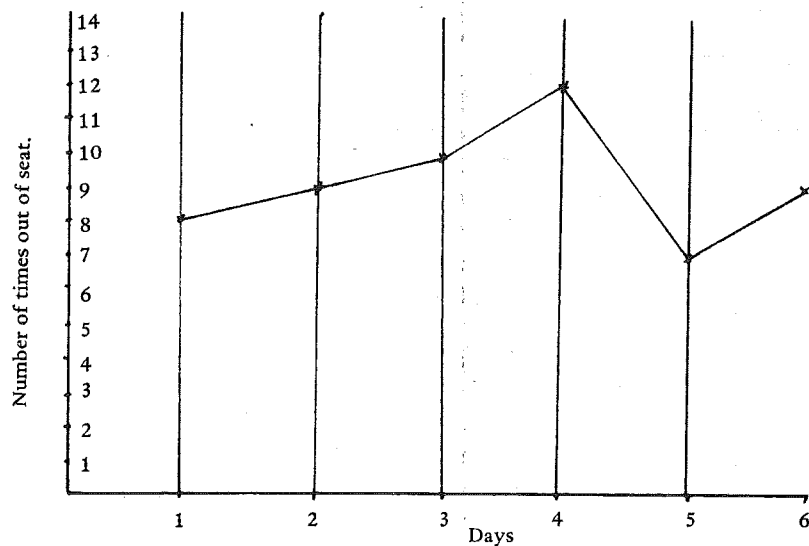


Fig. 6.3 Graph of John's out-of-seat behaviour during period from morning recess to lunchtime on 6 consecutive days.

Behavioural checklists. These are usually lists of problem behaviours that the teacher can respond to in relation to a particular child or children. They can be either commercial or teacher made and responses to the items can be written in the form of a yes/no dichotomy or a difference of degree continuum (Fig. 6.4). Some checklists are so constructed that the child's subjective comments on his own feelings, behaviour and achievement can be analysed.

| | Yes | No | | Never | Seldom | Frequently |
|--|-----|----|----------------------------------|-------|--------|------------|
| Swears in class. | | | Seeks attention. | | | |
| Gives unsolicited advice. | | | Regresses. | | | |
| Hits other children in class. | | | Fights in play-ground. | | | |
| Cheats. | | | Actively seeks group membership. | | | |
| Cries excessively. | | | Lies. | | | |
| Won't answer questions. | | | Attends to task. | | | |
| Reacts violently to frustration—verbally | | | | | | |
| physically | | | | | | |

Fig. 6.4 Examples of behavioural check-list items.

Sociometric techniques. A useful way of examining classroom interaction variables is to use sociometric surveys in which children's choices of peers with whom they wish to sit, play or work are analysed (Moreno, 1953). The results of the children's choices, plotted on a sociogram, will provide information about the informal social structure of the class and the position of particular children within the groups. Information from these sources added to the teacher's own awareness of the effects of the physical environment of the room and the child's academic performance will provide her with useful foundational information upon which to base her behaviour change programme.

Management

In developing strategies for behaviour management within the classroom, the teacher can draw profitably on the techniques and prin-

ciples of behaviour modification based on the behaviourist model outlined earlier. O'Leary and O'Leary (1972) and Sulzer and Mayer (1972) provide comprehensive overviews and classroom organisations and strategies that help teachers implement behaviour change programmes. A behaviour management programme based on such a model has a number of essential requirements:

- (a) a precise description of the behaviour to be changed;
- (b) an accurate assessment of its incidence and/or severity;
- (c) a determination of the reinforcement to be used;
- (d) a clear understanding of the desirable behaviour to be reinforced;
- (e) a contingency plan (i.e., what behaviour is to be reinforced, when and how);
- (f) the application of the programme;
- (g) a continual reassessment of the programme.

This approach, because it considers behaviour as any observable measurable act, requires the teacher to define in behavioural terms the problems to be tackled. Descriptions such as "aggression" or "withdrawal" are far too vague and do not allude to specific behaviours. "Gets out of his seat", "swears", "hits others", or "never answers questions" are examples of much more precise statements of the ways in which a child actually behaves and, as such, describe behaviour much more amenable to direct modification. To allow for reasonable goals to be set, some objective evidence of the nature and instance of the existing behaviour must be made, hence the importance of accurate assessment.

Based on the principle that behaviour is affected by its consequences, this approach requires the teacher to use considerable reinforcement (reward) for desired behaviour. Associated with the application of positive reinforcement for desired behaviour must be the removal of such reinforcement for the undesired behaviour, for this is being maintained by existing reinforcement (e.g., teacher attention, peer appreciation). The most effective rewards are those that are determined by mutual agreement between teacher and child. Unless something is perceived by the *child* as being rewarding, it will be ineffective even if the teacher considers it as reinforcing. Praise for most children, for example, is positively reinforcing – for some children it is aversive

(particularly if it leads to peer ridicule). Physical contact (cuddling, etc.) again is very reinforcing for many children but, for some children, it should be avoided. Reinforcement, once determined, must be consistently administered if it is to be effective. Reinforcing a child on a casual or ad hoc basis will usually have no more effect than no reinforcement at all. Reinforcement should be formalised and structured so that desirable behaviour is consistently rewarded and undesirable behaviour is not.

Because such a reinforcement programme, initially at least, may need to be rich and constant, it must be continually re-appraised to see how the child can be phased out of such a time consuming and individualistic system with the eventual goal being to have him behave in the socially accepted manner of the class and gain his reinforcement from the enjoyment of class activities. Such a transition will usually require a step-by-step reduction in the reinforcement schedule.

Contracts or joint agreements between the student and teacher may be used to formalise the behaviour change programme. The teacher and child mutually agree upon the nature of the behaviour to be displayed and the reinforcement to be given (Fig. 6.5). This agreement is signed by both parties and it enables the student to participate in the arrangement. Contracts can be written for one day, one week, one child, a group of children, or for the whole class. Gearheart and Weishahn (1976) outline in some detail variations on the basic format of contracts.

These behaviour modification techniques do not fit snugly with the theoretical biases of many teachers who view them as far too mechanistic and structured. Play therapy, puppetry, music and art therapy are seen by many as useful media for breaking down tensions and conflicts and establishing the confidence that children with behaviour problems lack. One advantage of these techniques, particularly for the shy, withdrawn child, is that they allow the child to act out anonymously conflicts and inhibitions that might otherwise interfere with his socialised behaviour.

An important aspect of a supportive and well organised classroom is the presence of a clear set of behavioural guidelines beyond which the children know they cannot go. These rules should be few in number,

DATE: 3rd June, 1981

STUDENT: I agree to stay in my seat during Maths lessons unless given permission by Mr. Barker to get out.

Signed: Johnathon

TEACHER: I agree to give Johnathon a stamp for every 10 minutes of a Maths lesson that he remains in his seat. At the end of the week he may cash in his collected stamps for one of the rewards –

4 stamps – 5 minutes early to recess
6 stamps – extra 15 minute art period
8 stamps – sports monitor for the next week.

Signed: Mr. Barker

Fig. 6.5 An example of a contract between pupil and teacher.

unambiguous and known unequivocally by each child. Despite appearances to the contrary, children seek such a definition of behavioural limits and feel secure within them. It is only within such an accepted framework that a teacher can develop her own personal style and implement effective teaching strategies. This only extends into teaching the principles of effective parenting outlined by Baumrind (1967). As a minimum (and near maximum) requirement, these behavioural guidelines should include exactly what a child must do to seek a teacher's attention, how to respond when the teacher wishes to interrupt individual or group activities and address the whole class, and what the children should do when the teacher is occupied.

A relatively quiet environment tends to have a pacifying effect on disruptive children and ironically the child who appears the most unsocialised and attention seeking in the class often responds better to a quiet classroom setting than to the noisy environment in which he is often the most prominent contributor. It is interesting to talk to

children who have previously had learning and behaviour problems who are now located in rooms with more effective, supportive teachers – their usual explanation of their changed behaviour is the quieter, more structured learning situation.

Physical modification of the classroom may also facilitate improved behaviour. Classrooms containing a variety of educational settings catering for creative exploratory work, individual and small group learning activities are best suited to provide for the special needs of children with behaviour problems. Study carrels, relatively free of extraneous stimuli, provide an effective learning situation for children who are easily distracted and inattentive. Hewett's (1967) plan of the engineered classroom has much to offer in terms of a range of learning environments within the one room.

No specific strategy or classroom modification will have any lasting effect on a child's behaviour unless the teacher is supportive, organised and understanding of individual differences within her class.

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CHAPTER 7

CHILDREN WITH SENSORY AND OTHER PHYSICAL DIFFICULTIES

HEARING DIFFICULTIES

Auditory difficulties experienced by children vary widely in both degree and kind. Children may be profoundly deaf, (i.e., no functional hearing) or they may have limited residual hearing; they may hear in one ear and not the other; they may hear some sounds and not others; and the handicap may have been present at birth or acquired later in life. The locus of the impairment may be in the physical and external mechanism of the ear, or it may be related to a dysfunction of the auditory nerve. These variations of type, degree and cause of hearing difficulties indicate that the education of hearing impaired children is necessarily a complex, sometimes contentious, and often frustrating area of special education.

DEFINITION AND CATEGORISATION

Persons with auditory impairment can be broadly classified as either *deaf* or *partially hearing*. Wiley, citing an interpretation of deafness used in America since 1937 considers the deaf to be "those in whom the sense of hearing is non functional for the normal purposes of life." (1971, p. 420). As it is very difficult to establish that any person has absolutely no reception of sound, this definition and others like it stress the functional aspect of hearing. If a child requires a sound to be of the intensity of 95–100 db before he can hear it, then he is functionally deaf even though sound can be heard in extreme circumstances. Other definitions stress the role of hearing impairment in the development of oral communication. McConnell (1973, p. 352) describes the deaf as:

Those whose hearing loss is so severe at birth and in the pre-lingual period (before 2 or 3 years of age) that it precludes the normal, spontaneous development of spoken language.

Two important points emerge from McConnell's definition:

- (a) the crucial effect on spoken language of hearing impairment, and

- (b) the conclusion that deafness acquired adventitiously before the acquisition of speech is effectively the same as congenital deafness.

Deafness of course may also be acquired after the development of language but the effects of such a handicap are often less than that of a congenital defect as the person has a store of auditory and language experiences to build upon. The outdated and inaccurate terms "deaf and dumb" and "deaf mute" implied that deaf people were unable to speak. This implication is invalid because there is no necessary connection between defective hearing and organic restriction on speech development. In fact, many deaf children, even those with a congenital disability, are now learning to speak.

In describing the partially hearing ("hard of hearing" may be used interchangeably), Wiley suggests that it refers to, "those in whom the sense of hearing, although defective is functional, with or without a hearing aid." (1971, p. 420). McConnell again emphasises the connection with oral language development when he defines the partially hearing as, "those whose hearing loss in the pre-lingual period or later is not of sufficient severity to preclude the development of some spoken language, and those who have normal hearing in the pre-lingual period but acquire hearing loss later on." (1973, p. 352).

As with all definitions, those outlined above are limited and for many people, inadequate but they do emphasise the functional nature of hearing and its effect on the spoken language. The debilitating effects of hearing loss are two-fold: restriction of meaningful sensory input from the environment and an interference with the acquisition and utilisation of effective oral communication.

MEASUREMENT OF HEARING LEVELS

Hearing loss is assessed by measuring reception across two dimensions – *frequency* (measured in Hertz or cycles per second) and *intensity* (measured in decibels). Frequency refers to the number of vibrations per second of a given sound wave and determines the pitch (the higher the frequency – the higher the pitch of the sound). Intensity is simply the loudness or volume of a sound. The most common instrument for measuring hearing loss is the pure-tone audiometer, through which the child is presented the full range of frequencies

required for the interpretation of human speech, at varying levels of intensity. Thus the thresholds (or levels at which the sound is detected) of a child's hearing, for each separate frequency, can be plotted on an audiogram (Fig. 7.1). Children whose thresholds of hearing are less than 20 db on each frequency have perfectly adequate hearing for all normal classroom communication.

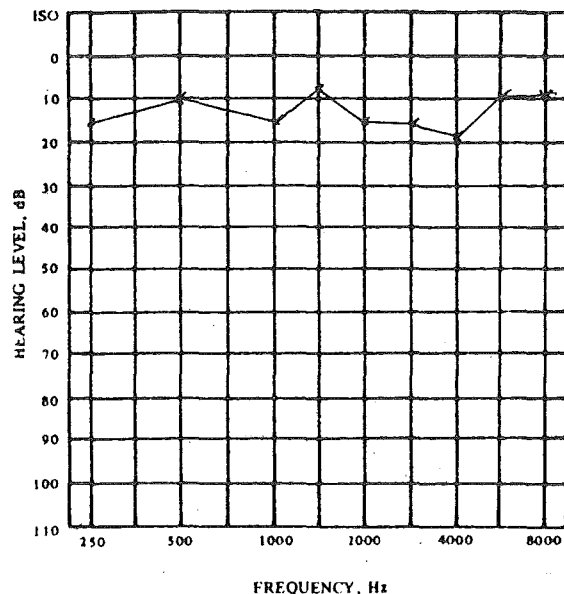


Fig. 7.1 An example of an audiogram, on which a child's hearing has been plotted on frequencies from 250–8000 db.

Silverman (1971) divided hearing loss into five levels:

Level 1 : *Mild* hearing loss occurs when a child cannot hear sounds below 40 db. This only marginally affects his hearing and he may suffer only minor articulation problems in his speech. He can hear clearly speech at 3–5 ft. distance but may miss considerable classroom communication if he cannot see the speaker's lips.

Level 2 : *Moderate* hearing loss is one within the range of 40–55 db and can make the hearing of normal conversation, especially at a distance, quite difficult. The child often has

noticeable irregularities in speech, particularly with the articulation of beginning and ending consonants. Conversation must be loud and in direct line of vision to be heard clearly. The child will have problems joining in classroom discussions.

Level 3 : *Moderate/severe* hearing loss. This loss falls within the range of 55 and 70 db and the child has difficulty in hearing conversations unless they are very close and loud. Not only articulation, but also speech quality will be affected.

Level 4 : *Severe* hearing loss is one of between 70–90 db and with this degree of impairment, the child cannot hear normal conversation, although he might hear isolated words and background noises. His speech will be drastically affected and he will often be unintelligible unless given help.

Level 5 : *Profound* hearing loss exists when the loss exceeds 90 db. The child has no functional hearing and even with intensive training, speech is difficult to establish.

Hearing loss may occur across all frequencies or be most noticeable in the higher frequency range. Most consonants occur in this range and a weakness here may affect the child's accurate reception of word beginnings and endings.

Hearing aids can assist at all of these levels but their effectiveness decreases with the degree of loss and they are maximally effective within a set frequency range.

A hearing difficulty is usually categorised as either a *conductive* or *sensorineural* hearing loss. With conductive loss, the child has an impairment to the physical mechanism of the outer or middle ear that prevents adequate transmission of the sound. It usually results in the blocking of sounds in the decibel range of 0–70 db, because sounds above this intensity can be transmitted by cranial bones and it is frequently caused by childhood infections or trauma. In many cases conductive loss may be treated successfully by surgery or medication and lasting impairment can be averted. If the problem is not detected early and possible corrective surgery not instigated, conductive loss can lead to serious problems in language development and academic progress. Sensori neural loss refers to hearing impairment

arising from damage to the auditory nerve or the workings of the inner ear. This type of loss can be partial or complete and is usually medically irreversible. Some children suffer from mixed loss which is a combination of conductive and sensorineural loss.

CAUSES

The causes of hearing loss cannot always be diagnosed with certainty. Kirk (1972) suggests that in roughly one-third of the cases, the actual cause cannot be precisely determined. Etiologies can be either *endogenous* (having their origins in the genetic structure of the individual) or *exogenous* (having their origins in environmental factors — diseases, accidents, etc.). Bryan and Bryan (1979) claim that about half the cases of hearing impairment have a genetic origin and such impairments may be either present at birth or develop in later years.

Exogenous causes include prenatal infections and poisoning of the mother. Rubella, measles, influenza and other viruses can affect the foetal hearing apparatus. Concern over the effect of some antibiotic drugs on the prenatal development has been recently expressed. Birth insult, anoxia (prolonged oxygen deprivation) and blood group incompatibility can all result in a hearing loss. Postnatal diseases, accidents and infections, account for other hearing problems.

Many of the significant causes of hearing loss so prevalent until recently, (Rubella, post natal diseases and even blood group incompatibility) are becoming less prevalent due to medical advances and there is a consequent drop in the number of young children with hearing problems. On the other hand, concern is being expressed over the increasing incidence of hearing problems being developed in later life and those caused by constant exposure to intense noise. We live in a noisy world and with the increasing "noise pollution" of loud machinery, music and transport, more and more people are being exposed to possible hearing loss.

PREVALENCE

Estimates of the number of children with hearing loss varies. Kirk (1972) in reviewing a number of studies, suggested that 1–3% of children had hearing difficulties sufficient to warrant special intervention with approximately 1 in 1000 being deaf. A factor that might

have significant bearing on the incidence of hearing impairment in future studies is the virtual elimination of rubella as a cause.

SCREENING AND ASSESSMENT OF HEARING IN YOUNG CHILDREN

As is the case with most childhood problems, the earlier a hearing loss is detected the more effective can be the remedial programme. As a result, parents are encouraged to have their children assessed at the earliest possible age. (Preferably within the first year). There are, however, considerable difficulties in accurately assessing the hearing of young children. Infants are notoriously difficult subjects to test — they do not talk, understand instructions or generally respond without distraction, so considerable ingenuity in testing and observation must be used. It may not be until after the babbling stage and the child has failed to develop spontaneous speech that serious hearing loss is diagnosed; even then a lack of aural-oral language may be the result of conditions other than hearing loss.

McConnell (1973) suggests that intellectual handicap, emotional disturbance and aphasia can cause such a language failure. Eliminating these causal alternatives and arriving at an accurate diagnosis often requires considerable skill and ingenuity on the part of the audiologist, child psychologist and observant parent. Once hearing impairment has been accurately diagnosed, an immediate remedial programme, involving both the child and parent(s) is initiated so that maximum time can be devoted to developing residual hearing and language competence.

In Western Australia, a child is generally referred by general practitioners or specialists to the National Acoustics Laboratory where his hearing loss is precisely determined and hearing aids will, if necessary, be prescribed and fitted. After this specific audiological testing, the child is then referred to the Hearing Assessment Centre attached to the Cottesloe School for Partially Hearing Children. Here the children are given a comprehensive educational and psychological assessment and the parents are counselled and assisted with remedial programmes. A kindergarten is available for pre-school children and referral and placement advice for special education intervention is provided at the Centre. The Speech and Hearing Centre provides an alternative place of referral and it also provides comprehensive infant and

pre-school programmes for children referred from the National Acoustics Laboratory.

The emphasis is on early detection and intervention and children as young as 6 months may be referred for help. As a result itinerant parent assistance programmes for very young deaf children play an increasingly important role in helping to minimise the effects of their disabilities.

CHARACTERISTICS OF CHILDREN WITH HEARING IMPAIRMENT

Speech and Language

In both speech (the motoric art of producing meaningful sounds) and language (the comprehension and expression of oral and written symbols) the hearing impaired child is greatly disadvantaged. All children, including the deaf, babble at an early age, experimenting with meaningless sounds, hearing children build their spoken language on this babbling by selective imitation and practice of sounds initially reinforced by parents and siblings. Deaf children and, to a lesser degree, those who are hard of hearing begin their oral communication problems at this point. Being unable to hear the sounds selectively reinforced and matched by others, the children are unable to develop the basic vocabulary upon which to build their formal speech. The degree to which the hearing impaired child acquires speech is dependent upon a number of crucial factors: degree of hearing loss, age of onset, attitude of parents, and time of educational intervention.

Clearly the degree of hearing loss is the most important factor. The hard of hearing child with supplementary assistance from hearing aids may in many cases develop adequate speech not markedly different from his hearing peers. The deaf child, on the other hand, has to be formally taught to speak, having no spontaneous speech, and the process of instruction is very time consuming and not universally successful. It is seldom that a deaf child's speech is not markedly inferior to that of his hearing or partially hearing peers. Frisina (1967) listed slowness, breathiness, inappropriateness of pitch and rhythm, and substitutions of consonants as some of the features of the speech of deaf children.

The age of onset of hearing loss is also crucial in the acquisition

of effective speech. If a child loses all or some hearing after he has acquired an effective oral language then his prognosis for maintaining and building upon this language is much more optimistic than for a congenitally deaf child or one who has acquired hearing loss at a pre-lingual age. The older a child is when he acquires hearing loss, the greater is his existing background of aural experiences and his established oral language. This provides him with existing sensory and cognitive substrata on which to build and consolidate during the remainder of his non-hearing life.

Not only is the child's speech dramatically affected by his lack of hearing but so also are the other aspects of language that depend upon the initial acquisition of vocabulary and the understanding of oral communication. McConnell (1973, p. 376) states:

In the development of language, there is a natural sequence of receiving (input) and expressing (output) and each higher language skill is dependent upon mastery of the one preceding it.

Some mastery of receptive and vocal expressive language is expected before a child can read (i.e., apply meaning to visual symbols) and write (i.e., express meaning through written manipulation of symbols). The hearing impaired child with his inadequate or non-existent oral language is severely disadvantaged in acquiring and developing skills in all the other language arts and language related areas.

Intelligence

Studies on the intelligence of the hearing impaired have produced confusing and equivocal results. Wiley (1971), in evaluating studies on the relationship between intelligence and hearing loss, found that some indicated inferior intelligence, some comparable intelligence and a few superior intelligence among deaf individuals as compared with the normal population. As expected, tests emphasising verbal skills generally produced lower scores than those emphasising performance tasks. As most IQ tests have been developed for a hearing population it is very difficult to draw any firm conclusions from testing programmes of deaf or hearing impaired children. In general it seems that the children with impaired hearing are not intellectually inferior to their normal peers but tests with a mainly verbal orientation are likely to produce significantly depressed results.

General Academic Achievement

It is universally agreed that the academic achievement of hearing impaired children falls far below that of their hearing peers. The primary use of oral communication as the basis of our formal education system and the effect of serious sensory restriction conspire to make high academic achievement for hearing impaired children an almost impossible goal. Bryan and Bryan (1979) cite studies from the Office of Demographic Studies of Gallaudet College* in the USA which examined a population of 17,000 hearing impaired children. One typical finding was that children of 12½ years were found to have a mean reading achievement level of Grade 3 and a mean maths achievement level of Grade 4. These findings have been basically substantiated internationally and Jecks (1976) observed that the Western Australian levels of achievement seemed to show the same levels of decrement as those of other countries and states of Australia.

Lowenbraun, Appleman and Callahan (1980), referring to later studies from the Gallaudet College, examined the relationship between a number of different variables and the low academic achievement of hearing impaired children. The general findings were as follows:

Sex : Females tended to score more highly in all areas than males.

Age of onset : Children whose age of onset was 3 years or later scored much higher than others. Surprisingly those who were congenitally impaired performed better than did those whose age of onset was between birth and 2 years. A suggested cause for this apparent anomaly was that most of the congenitally impaired had genetic defects that were not associated with multiple handicaps.

Causes of hearing loss : Generally subjects whose hearing loss resulted from genetic defects scored higher than those resulting from exogenous causes, mainly because the latter are often associated with multiple handicapping conditions (e.g., rubella can cause hearing impairment, intellectual handicap, visual and physical disabilities).

Degree of hearing loss : As was expected, the greater the hearing

loss the lower the mean achievement score. Other variables, such as minority ethnic background, multiple handicap and negative parental attitudes, also affected the academic performance of the children.

In general then, whilst the intellectual potential of children with hearing difficulties is comparable with that of hearing peers, the actual level of academic achievement is significantly less.

Emotional and Social Adjustment

Because of the pre-eminent role oral communication plays in our social interactions with others, it is not unreasonable to assume that children deprived to varying degrees of this facility will suffer significantly in their social and emotional adjustment. Evidence seems to support this assumption in relation to hearing impaired children. Studies utilising the Vineland Social Maturity Scale (Doll, 1947) indicate consistently that hearing impaired children are less socially mature than their hearing counterparts. Bryan and Bryan (1979) outline a number of factors that might be significant in contributing to this finding. Firstly, the limitations placed by the hearing problem on imagery, fantasy and role playing inhibits the social play of the children. Secondly, the often over-protective and controlling attitude adopted by many parents limits the ability of the hearing impaired child to develop adequate independence. A third and final consideration is the negative attitudes of the non-handicapped peers. Evidence suggests that the children are not very well received by their peers in integrated settings and that such attitudes tend to harden rather than improve with constant contact (Elser, 1959).

The issue of peer attitudes and their effect on the handicapped child's self-concept will be pursued further in Chapter 9 but, in the case of children with marked hearing loss, the problem seems to lie in the breakdown of oral communication and the consequent intolerance of the verbally competent peers. Children become impatient with peers who have to continually have information and instructions repeated before they understand, and whose reciprocal communication is unintelligible. A handicapping condition that interferes with communication is often less well accepted than one that does not.

* One half of the Gallaudet College faculty are deaf.

There is a tendency for deaf and hard of hearing children to be more aggressive in their response to frustration than other children and this often affects their interrelationships with their hearing peers. Hearing children have available to them, both verbal and physical aggression as reactions to extreme frustrations and, whilst the former response is not encouraged, it does not suffer the same social censure as the latter. Verbal aggression is not an alternative open to hearing impaired children and their more frequent physical aggression meets with significant social disapproval. Added to the fact that these children are necessarily exposed to more frustration, the consequent alienation and rejection by hearing peers can be devastating and frequently forces children into segregated social groupings which they perceive as being more secure and less threatening. Because of this trend, the integration of hearing impaired children in education and the normalisation of their life styles in general have specific difficulties that have to be addressed from the earliest years. Pre-school integration programmes and a general improvement in societal understanding and attitudes are the means by which better acceptance and adjustment will be obtained.

THE EDUCATION OF CHILDREN WITH HEARING DIFFICULTIES

Children with hearing difficulties are educated in special schools, special classes, ordinary classes with specialist assistance, or in ordinary classes without specialist assistance depending primarily on the degree of hearing loss. Other factors such as the age of onset of the impairment, the amount of oral communication and the social and emotional adjustment of the child might also be considered in selecting the most efficacious educational placement. The general arguments against segregated placement outlined in Chapter 1 are less potent for children with severe hearing impairments because of the need for specialised teaching techniques outside the scope of the normal class teacher. This is not to say that integrated placement should not be pursued wherever possible, but that it must not be done at the expense of effective specialist instruction. It is only by intensive small group, specialised teaching of the seriously impaired child that the goals of adequate communication and educational achievement, so necessary for a normalised lifestyle, can be achieved. Special schools and classes for deaf and hard of hearing children provide auditory training, lip reading skills and, in many cases, use sophisticated technological equipment to enhance a child's residual hearing and oral com-

munication. For children whose hearing loss is less severe, every effort should be made to have them educated with their hearing peers, providing the teachers receive specialist advisory assistance where necessary.

Methods of Instruction

For many years experts in the field of education of the hearing impaired, have been arguing passionately over the relative virtues and vices of two methods of instruction, commonly called the *manual* and *oral* methods. Currently, variations and combinations of these basic instructional approaches, notably *cued speech* and *total communication* are receiving much attention and application in schools.

Manual mode — Manualism incorporates two basic systems of communication — signing and finger spelling. Signing refers to a standardised system of finger, hand and arm gestures that represent thoughts that would be otherwise expressed by words or phrases. A formalised Australian national sign language has recently (1981) been produced to standardise the format of signing throughout Australia. The general function of such a signing system is to supplement speech reading so that the hearing impaired child receives the same information from the hands and lips of the communicator as the hearing child does aurally. The signs represent not only basic nouns and verbs but also tenses, plurals and possessives. Some common signs are represented in Fig. 7.2. Finger spelling,

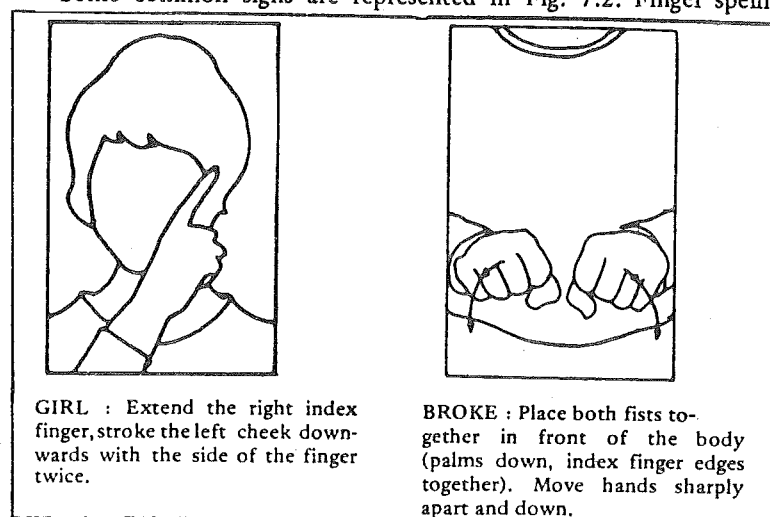


Fig. 7.2 Examples of commonly accepted signs.

the other component of the manual mode is determined by a manual alphabet in which each letter is represented by a fixed position of the fingers. (Fig. 7.3). When they are learned with precision and with the considerable dexterity gained from constant practice, deaf children can often communicate with each other at a rate equal to the normal oral communication of hearing children.

The advantages of the manual system are that it is relatively easy to learn and with assiduous practice, it enables the deaf to communicate comfortably with those who can understand and use the code. Its weakness is obvious, in that, as a mode of effective communication, it is limited to those who are hearing impaired and that small group within the hearing community that work with them. This necessarily restricts the social and recreational environments of the deaf and encourages segregation. Proponents of the manual mode of communication suggest that it is a valid minority language in its own right in the same way as Italian is in Australia, and that if it can be accepted as just one of the many minority languages in our multicultural society then the prejudices and negative attitudes towards its uses would be broken down.



Fig. 7.3 The manual alphabet : the basis of finger spelling for the deaf.

Oral mode – This method uses speech, lip reading and residual hearing to establish communication. It is based on the belief that, as most children even the deaf, have some residual hearing, they can use this in association with visual cues from the speaker's lips to understand oral communication and by intensive speech training they can develop their own personal speech. Effective sound amplification is a vital component of this method as an efficient hearing aid(s) will help a child to recognise and respond to sounds. Proponents of this approach discourage the use of signs and finger spelling on the grounds that they inhibit the development of oral language because they are easier to learn. This method is further advocated because, if successful, it enables the child to more adequately communicate in the normal world of the hearing and consequently it extends his social and recreational environment. Unfortunately, it is a very formidable task for a deaf child to learn to communicate orally with his hearing peers without demonstrating markedly inferior quality in his speech.

Cued speech – Cued speech is a method of communication developed by O. Cornett in 1966, in which eight hand shapes are used in four positions near the face so that the child can distinguish words which, on the lips, look almost the same (Fig. 7.4). The information supplied by the hands is meaningless unless associated with lipreading. The system enables a deaf child of hearing parents to learn to and use English without using signs. The long term aim of the advocates of this system of having the children complete their education either partially or totally in integrated normal classrooms, can be attained by the phasing out of the cueing when the child can read words in context.

| THE VOWELS: | | | |
|------------------|-----------------|----------------|----------------|
| Side position | Throat position | Chin position | Mouth position |
| ar (far) | a (hat) | or (for) | ee (feed) |
| o- (hot) | i (hit) | -e- (get) | i (scut) |
| -u- (but) | oo (good)(put) | oo (too)(flew) | er (her) |
| o-e (note)(boat) | | | |
| | | | |

Fig. 7.4 Hand positions for vowel sounds when using cued speech.

Total Communication — This method incorporates aspects of both oralism and manualism so that auditory training, lip reading, finger spelling and sign language are all used to help the children to communicate. Proponents of the oral method are concerned that children exposed to total communication will use manual techniques to the detriment of their oral language because of their ease of acquisition and the lack of stress in making oneself understood. McConnell (1971) seriously questions the use of this system in the preschool years where he believes that all hearing impaired children should be first given the opportunity to learn through the oral method, especially as integrated education is now the avowed goal of education authorities.

THE WESTERN AUSTRALIAN SCENE

In Western Australia, the first school for the deaf was opened in 1897 and transferred from a house to the present Mosman Park site in 1900. In 1921, it was named "The Western Australian School for Deaf and Dumb Children" and it was not until 1956 that the word "dumb" was removed from the title. Currently (1981) the education of children with hearing difficulties is varied in both degree of and kind of service provided. In addition to the Educational Assessment and Parent Guidance Centre, referred to earlier, special schools, classes and advisors are provided by the Education Department. An independent school at the Speech and Hearing Centre is available for those seeking an alternative education for their children.

The Mosman Park School for Deaf Children caters for seriously hearing impaired children who require full time specialist education. The school utilises the total communication approach where finger spelling and signing supplement the oral work and caters for children of both primary and secondary school ages.

Accommodation is available on site for children who are unable to live at home. Unfortunately the children are isolated from consistent and meaningful contact with hearing children because of the school's location. It is a considerable distance from the nearest primary and secondary schools and as a result the interaction of the children with their hearing peers is limited.

The Cottesloe Primary School for the Partially Hearing caters for

children who require full time specialist education but who retain some functional residual hearing. An oral orientation to instruction is utilised here with emphasis on maximum utilisation of residual hearing. As much beneficial integration with the associated primary school as possible is encouraged, so that the children are not totally segregated. Special classes at both primary and secondary level have been established at selected government schools where maximum integration is again encouraged (Appendix A). In addition to these specialised provisions, visiting advisory teachers have been employed to assist hearing impaired children in regular classes in both metropolitan and country schools. There are currently more than two hundred children in normal classes who wear hearing aids and many more with mild and often, undetected hearing loss, who need special consideration by the teacher. Hearing impaired children with multiple handicaps are placed in educational settings according to the most restricting handicap, thus children with both intellectual and hearing difficulties are often not found in the units outlined above but may be in one of the special units for intellectually handicapped children.

In 1966 a small alternative school for children with serious hearing difficulties was established mainly as a result of efforts of parents who were concerned about the educational provisions being offered by the State Education Department. The Speech and Hearing Centre, as the school is known is now located in Wembley and operates as an independent school partly funded by government grants and partly by private fund raising. Cued speech is the communication method used by the school and the commitment to integrate the children wherever and whenever possible, is effected by interaction with the children of the adjacent Wandarra primary school, the maintenance of an integrated unit at the Servite College, and close liaison with other non-government schools. The school caters for children from the preschool through to upper primary level and employs only trained teachers of the deaf.

With all of these available options and the apparent decline, or at least, stabilisation in the numbers of deaf and hard of hearing children, it appears that children with hearing difficulties are well catered for in Western Australia. A nagging problem for the Education Department is the lack of formal training for teachers of the hearing impaired in Western Australia's tertiary institutions. Because of the limited number of potential students, such a post graduate qualification seems unlikely to be offered in the near future.

CONSIDERATIONS FOR THE REGULAR CLASSROOM TEACHER

One concern of the primary teacher is the detection of a suspected hearing problem in her class. Whilst it is clear that children with severe hearing loss (especially of the sensori neural variety) will have been detected before coming to school, it is quite possible for a child to have a mild difficulty, sufficient to interfere with formal learning, with neither the parents nor the child himself aware of the problem. Nor is a hearing loss necessarily detected by the school nurse on her routine visits, as infections and trauma can occur after her examinations, and because of the difficulties in testing large groups of children, problems are sometimes missed.

It should be a rule of thumb for the remediation of learning difficulties, that before any complex diagnostic examination of the learning process is undertaken, an assessment of the child's visual and auditory acuity should be made. (Can he see and hear effectively?). In a simplified view of the learning process we (a) receive information from the environment through our senses, (b) act upon this input by complex cognitive processes, and (c) express our ideas, knowledge, skills, etc. through written, verbal or manual activity. In the classroom the child receives information primarily through vision and hearing and if either of these modalities is impaired, then the other subsequent dependent aspects of the learning process will be affected. Spelling (both oral and written), oral reading and speech are likely to suffer if hearing is restricted, in fact any task requiring accurate auditory reception will be so affected. It is important therefore to eliminate the possibility of sensory deficit as a cause of learning difficulties, before more extensive academic and psychological assessment is made.

Indicators of possible hearing loss can be either general or specific. General clues might include: excessive inattention to task; tendency to fatigue, apparent dullness, daydreaming and boredom. These behaviours singly, or in concert of course are typical of most children with learning and/or behaviour problems, and this fact simply emphasises the importance of checking the child's hearing before coming to any conclusion that he is lazy, slow or naughty. Specific indications of a hearing problem might include (a) consistent complaints of earache, (b) tilting of the head to one side when listening, (c) consistent errors in spelling and retelling activities, and (d) a lack of interest in generally appealing auditory activities (e.g., story telling).

Confirmation or not of suspected hearing difficulties can be made by using informal hearing tests. One such test might involve speaking from behind the child in a voice of varying intensities and asking him to repeat what you say. By comparing the child's performance on this task, with other children in the class a rough indication of whether or not he is having trouble hearing in class can be made. A suspected hearing problem should be reported to the child's parents with a recommendation for more sophisticated assessment to be made.

With the current thrust of integration of children with special needs into normal classes, the teacher can expect to find, more frequently perhaps than in the past, a child with mild to moderate hearing loss in her class, and be expected to cater for the special educational and emotional needs of such a child. The following set of suggestions, by no means exhaustive, may be of some help in facing such a challenge.

Seat the Child in an Appropriate Position in the Room. A child with a hearing difficulty relies heavily on visual cues to supplement his defective hearing so locating him in a place from which he can best read your lips will greatly assist him. A central and forward position in the room for most teaching situations would be most beneficial not only for effective speech reading but also for the utilisation of his residual hearing. Where possible try to arrange the child's seating so that he is not facing directly into the source of light which might mask the visual lip reading cues. Such specific seating arrangement must be done sensitively so that the child is not embarrassed and unnecessary attention is not drawn to his weakness. Flexibility of grouping and seating will help prevent the child from having his difficulty 'spot-lighted'.

Speak Clearly Rather Than Loudly. Well articulated natural speech, spoken from a clearly visible position in the room will be better received than simply a loud voice. Use natural gestures to complement your speech as any visual cues will aid the child's understanding.

Ensure that the Child has Heard and Understood Instructions. This may be achieved by encouraging the child to ask for clarification of statements if he is not sure of what has been said. Alternatively if the child is embarrassed by constantly making such requests, the enlistment of a "listening helper" to repeat your instructions and explanations inconspicuously may be effective in reducing anxiety. It is very

important that unexplained or misunderstood information be prevented from accumulating and that the child's learning proceed with minimal interference.

Reading and Other Visual Activities Should be Fostered. The information gained from reading and from other visually oriented activities helps to compensate for what may be missed because of hearing loss.

Clarify Look Alike and Sound Alike Words. Some words look alike on the lips and their sounds are almost identical, e.g., "bay" and "pay". If the child experiences confusion, say the words in sentences to illustrate the meanings. The hearing impaired child must be given maximum opportunity to use contextual clues to gain meaning from words or phrases that are ambiguous for him.

Understand the Function and Problems of a Hearing Aid. If a child requires a hearing aid he should be encouraged to wear it at all times so that it becomes a part of his sensory apparatus. The teacher needs to be aware of the limitations of a hearing aid — it is an imperfect amplifier and nothing more — it breaks down, has a limited frequency range and is often perceived as stigmatising by the wearer. A teacher might have to work hard to develop confidence in the child to wear his hearing aid in class (children are notoriously adept at losing, misplacing, breaking or dismantling their aids to avoid social ridicule). An explanation of hearing loss and how the aid works, by the child and the teacher might help to reduce the negative reaction induced by ignorance. By far the most potent force in helping the child feel comfortable with his prosthesis is the teacher's positive attitude and acceptance of individual differences, an attitude that will usually be modelled by the children in the class.

Minimise Unnecessary Background Classroom Noise. A hearing aid amplifies not only the sounds of the teacher's voice but also loud and distracting background noise of the frequency for which it was designed. A noisy classroom is a particularly difficulty learning environment for a hearing impaired child who is required to concentrate intensively on the spoken word because of the imperfect stimuli he receives. Any interference by loud unnecessary peripheral noise makes the child's task doubly difficult. A quiet environment is particularly important when the teacher is explaining or demonstrating to the class, so that the child's undivided attention can be given to the already

difficult task of gaining meaning from an incomplete auditory message that requires significant cognitive restructuring by the child.

The presence of a child with hearing difficulties presents an extra challenge to the classroom teacher, but it is one that, with consideration of the child's strengths, an accepting attitude and effective individual planning, can be met successfully and provide a rewarding experience for both the teacher and the child.

VISUAL DIFFICULTIES

CLASSIFICATION AND DEFINITIONS

Impaired vision may be broadly classified under three headings — *visual acuity*, *field of vision* and *colour vision*, the first category being of pre-eminent importance in the consideration of children with visual difficulties. Visual acuity, usually measured by the Snellen Chart, is expressed quantitatively in the form of a fraction (6/60, 6/6 etc.) in which the denominator represents the distance in metres that a person of normal vision can read the letters of the chart, whilst the numerator indicates the distance from the letters that the individual must be to read them. Thus 6/6 (or 20/20 — measurement in feet) vision represents normal vision, whilst 6/60 (or 20/200) indicates that the person can read letters at 6 metres distance (20 feet) that can be read by a person with normal vision at 60 metres (200 feet), and hence indicates serious visual loss. Field of vision refers to the total area a person can see when the eye is fixated on a point. This field of vision may be limited either peripherally or centrally, i.e., the child may see only the limited area surrounding the point of fixation or there may be a central spot of no vision with some peripheral sight. Colour vision refers to the facility to discriminate the three qualities of colour: hue, saturation and brightness. Some people who are totally colour blind see all things in black, white and shades of grey, although most colour blind individuals confuse only some colours, mainly reds and greens. Colour blindness is not a serious educational handicap.

Visual impairment can be described in either legal or educational terms. A person is classified as legally blind, for instance if he has (a) total lack of vision with no response to light stimulation, (b) residual vision below 6/60 as measured on the Snellen Chart, or (c) the widest diameter of his visual field subtending an angular distance of less than 20° . Partially sighted persons on the other hand are those whose visual acuity is better than 6/60 but less than 6/20. Such objective definitions are of limited value to educators who feel that a quantitative measure of visual acuity gives no indication of how effectively residual sight might be used. Hallahan and Kauffman, for educational purposes define the blind as "those who are so severely impaired that they must be taught to read braille" and the partially sighted as "those who can read print even though they need to use magnifying

devices or books with large print" (1978, p. 337). These descriptions make more sense in special education as they relate the child's disability to his functional academic performance.

PREVALENCE, CAUSES AND AGE OF ONSET

Visual impairment could be described as a "low incidence" handicap. Dunn (1973) estimates that 0.15% of children have visual problems requiring special education services. Of this number, 0.14% are partially sighted and 0.01% are blind. Other estimates vary from these but in general, the incidence of serious visual difficulties among school age children is quite low. Jecks (1978) reported incidence figures for Western Australia for the year 1977 which indicated that only 0.024% of the total school population were receiving special education for the visually handicapped. Comprehensive epidemiological studies are difficult to develop because of identification difficulties and the remoteness of much of the state.

Causes of visual handicaps are numerous and varied with pre-natal factors accounting for over 50% of the cases in the age group 0-18 years. Poisonings, infectious diseases, cancers, cataracts and trauma are the other significant sources of visual loss. As is the case in other areas of exceptionality, the pre-eminence of particular causal factors changes with developments in medical science. For example, the control of rubella by the immunisation of young girls has all but eliminated that infection as a cause, and the recognition in the 1950's, that the excessive oxygenation of premature babies was a major factor in developing retinolental fibroplasia, has reduced the numbers of children suffering from this form of blindness.

Visual handicaps can be either congenital or adventitious and as with hearing difficulties the age of onset of the disability is crucial to the effective utilisation of existing sensory and cognitive information. Research quoted by Lowenfeld (1971) suggests that if a child becomes blind before the age of 5-7 years, then he is effectively as handicapped as a child congenitally blind. Those children blinded after 7 years of age, can fit their their new experiences into their existing visual frame of reference when learning about their environment. Teachers of the blind have suggested a qualitative difference in the way the world is understood can be detected between children congenitally blind and those who have lost their sight as early as 18 months.

CHARACTERISTICS OF CHILDREN WITH VISUAL DIFFICULTIES

Cognitive Functioning

For the seeing person, vision has a unifying role in the perception of the outside world, the other senses contributing in only a fragmentary way to the overall impression. The image of a mountain stream flowing through tree lined banks is made up from the input from many sense modalities: the *sound* of the wind in the trees, the birds chirping and the water gurgling over the rocks; the *feel* of the spray and the warm sunlight; the *smell* of the fragrant wild flowers, but it is the visual modality that provides the holistic impression of the scene. It ties together the related but unitary sensations of the other senses into a meaningful whole, that can then be used in other cognitive activities. The scene can be easily described in oral or written form or even drawn from this visual blueprint. Because access to such an efficient sense modality is, to varying degrees blocked in visually handicapped children, they are forced to rely much more heavily on their remaining senses to acquire information about their world.

Bateman (1967) makes the point that whilst a visual handicap does not necessarily impair a child's ability to process information, it drastically reduces the amount of environmental information available to him. As many aspects of the environment do not provide auditory, olfactory or gustatory sensation, the blind or partially sighted child must rely to a large extent on his sense of touch. As Lowenfeld (1971) observed, the tactual space perception of the blind is significantly different in scope and availability from the visual space perception of the sighted person. Only accessible objects are able to be "observed" tactually, thus impressions of large, remote, microscopic or fragile objects are unattainable. Sight on the other hand can not only take in such variations of size and distance but it is continuously open to stimulation and not reliant upon purposive and selective contact.

The overall effect of this limitation on sensory input and on the opportunity for environmental interaction in many ways inhibits the cognitive development of the visually handicapped child. Harley (1973) cites studies that indicate a below average performance on a number of abstract tasks by such children. Because of this inbuilt difficulty in establishing the experiential base upon which later cognitive development is built, a rich, stimulating environment is required for all visually

handicapped children. Learning programmes stressing concrete and practical activities, with many opportunities for the children to reinforce their shaky perceptions of the outside world, are required to help offset the disadvantage of the sensory loss.

Whilst there is some contention as to whether, or how much, visual impairment affects language, it is clear that a child with such a difficulty is not disadvantaged to anywhere near the same extent as a child with a hearing problem. In a definitive book by Cutsforth (1951) the problem of *verbalism* in the speech of the blind was assessed. Hallahan and Kauffman define verbalism or verbal unreality as "the blind individual's inappropriate reliance on words or phrases that are not consistent with his sensory experiences". (1978, p. 343). Blind children often use words relating to visual descriptions to describe events even when they have no visual experiences on which to base their judgements. It is suggested that the blind use verbalisms in order to gain social approval, i.e., they use descriptions that they have heard their sighted peers use because that is what they believe is expected of them. Research quoted by Hallahan and Kauffman (1978) suggests that the use of such verbalisms does not interfere with the child's cognitive development. In studies comparing the speech of blind and sighted children Lowenfeld (1971) found the evidence to be equivocal and concluded that there was no significant differences in the quality of speech between the two groups.

Intelligence

Conflicting evidence from studies comparing the performance of visually handicapped children and their sighted peers on standardised IQ tests illustrates again how difficult it is to draw firm conclusions about the competencies of sensorially impaired children. The test must be adapted for use by visually handicapped children, hence the validity and reliability is weakened; the samples used in the studies are usually small and highly specific (i.e., often taken from institutions) and therefore are not truly representative of the population of children under investigation. These limitations notwithstanding, a number of interesting anomalies were found in the literature. In a study with partially sighted children an inverse relationship between vision loss and intelligence was found. Another interesting result was that children who had become blind as a result of retinoblastoma (a malignant tumour of the eye) had mean IQ scores higher than average.

On the whole, however there seems little reason to doubt that the intelligence of visually impaired is normally distributed and roughly equivalent to that of the sighted population. Harley draws the following conclusions about intelligence and visual impairment —

- (1) Mental retardation is not a necessary consequence of visual impairment.
- (2) The physical anomalies that impair vision can also affect intelligence.
- (3) The retarded intellectual development of some visually handicapped child can be the result of inadequate opportunities to explore their environment. (1973, p. 425)

Academic Achievement

There are serious methodological problems inherent in attempts to compare the academic achievement of visually impaired and sighted children. The two groups must be treated under markedly different conditions; Braille reading is considerably slower than print reading; blind and partially sighted children have to pack much more into their curriculum than do their sighted peers (learning Braille, typing, mobility training, etc.). For these and other reasons firm conclusions about the relative achievements of the visually handicapped compared with their sighted counterparts are impossible. Of course it is easy to point to shining successes of such as blind professors, Helen Keller, eminent musicians, etc., but individuals do not constitute evidence for a population. Kirk (1972) quoting a study done by Bateman concluded that with partially seeing students the reading achievement level was in general similar to the level of the seeing children. Other studies tend to reveal a lower than average performance among both blind and partially sighted children. Hallahan and Kauffman (1978) conclude that (a) blind and partially seeing are generally behind their seeing peers, and (b) the achievement of such children is not affected as greatly as is that of the hearing impaired children.

In general, then whilst evidence points to a slight decrement of achievement in comparison with sighted children, the difference is not great and visually handicapped children frequently do remarkably well at school despite the severe inhibition of experiences discussed earlier.

Social and Emotional Adjustment

A number of studies designed to discover if there was any increase in emotional and social maladjustment in the visually impaired have failed to make the connection. Where maladjustment has been evident it has generally been concluded that it is not the sensory loss *per se* that has caused the difficulty but rather the individual's perception of social reactions to the disability. Harley (1973) cites a number of studies that show differential levels of adjustment among children with varying levels of visual loss. One study found that of 3 groups studied with mild, moderate and severe visual loss, the severely handicapped were the best accepted and the moderately handicapped were the least accepted. A number of variables are interacting here and these will be explored in more detail in Chapter 9 when the effect of social attitudes on all types of handicapping conditions will be examined.

One particular kind of behaviour that sometimes causes educators of blind children some concern is that of "blindisms". A blindism is a repetitive stereotyped movement such as rocking, rubbing the eyes or waving the hands in front of the face. The term "blindism" is unfortunate, as the behaviour it describes is common to many retarded and disturbed children. This behaviour is considered to result from a lack of sensory stimulation and an attempt by the child to stimulate himself. This type of behaviour interferes not only with the child's cognitive development but also affects his acceptance by others because of the bizarre actions.

In conclusion, then it can be said that there is no necessary connection between the visual impairment and maladjusted behaviour and that by improved social attitudes the problems of the handicap in this affective domain will be lessened.

THE EDUCATION OF CHILDREN WITH VISUAL DIFFICULTIES

Integrating children with visual difficulties into normal education is both desirable and effective for the optimum adjustment and achievement, when such integration occurs in an accepting and understanding environment and when extensive advisory support is available. For many seriously impaired children however, certain competencies and skills need to be acquired before they are able to be successfully placed in normal education. The educational programme for the blind and

seriously visually handicapped must include: "1) adaptations to the general curriculum 2) some additional or specialised content, and 3) specialised materials and equipment." (Kirk, 1972, p. 333). With such requirements full integration is difficult to achieve without a preliminary period of special education of a segregated or semi-segregated nature. Four major considerations requiring necessary curriculum modification are: (1) braille; (2) use of residual sight; (3) development of listening skills; and (4) mobility training.

Braille. This is a system of writing for the blind developed by Louis Braille in the 19th century, which uses patterns of embossed dots to represent letters and words of the language. In this system, based on tactile sensation, the reader receives the stimuli from touching the embossed figures and interprets the meaning in the visual stimuli from a printed page. The code can be very complex, accommodating contractions of words, specialist subject material like that of mathematics and music and even some diagrams (Fig. 7.5).

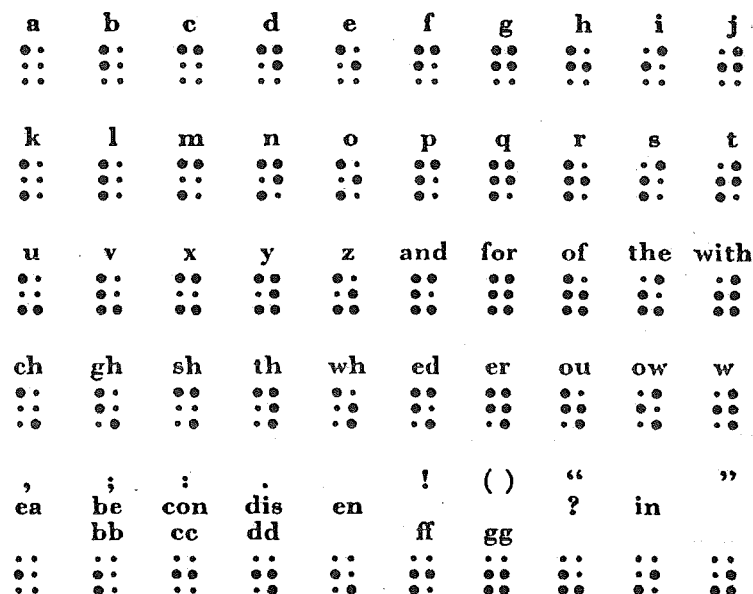


Fig. 7.5 Some characters of the Standard English Braille Grade II.

This touch reading system is used by children whose residual vision is not sufficient for meaningful reading of print. Competence in braille reading is difficult to achieve and studies have shown that even with the most efficient braille readers, their rate of reading is considerably slower than that of print reading by their sighted counterparts. The most commonly used instrument for developing the braille figures on paper is the Perkins Braille, whose typewriter like key-board enables the blind child to reproduce braille in written form.

Large Print Materials and Magnification. For many children who have residual vision, large print materials or regular print books with magnification may be used effectively. Because of the greater range available, many children prefer to read regular print books with magnifying aids rather than use large print materials. Type sizes of large print materials range from just above ordinary type to that approaching 1cm in height (Fig. 7.6). Books with such print are expensive and difficult to reproduce so that whenever possible, magnification of normal print is encouraged.



Fig. 7.6 Samples of large print size used for visually impaired children.

Two important pieces of equipment for making ordinary print-available to visually impaired children are the *visualtek* magnifier and the *optacon*. The *visualtek* is essentially a magnification device that throws an enlarged image of the print onto a T.V. screen. This makes the reading of regular print books available to many children with some residual sight. Even blind children can learn to read print by means of the *optacon* which is a device that converts the visual image of print to a tactile impression on the "reader's" finger. Once the child

has learned to decipher the tactile patterns she has access to any print materials.

Listening Skills. Because of the children's restricted visual input, attention must be given to developing, to the maximum level possible, their listening skills and the sharpening up of the auditory modality to pick up clues that are not really necessary for the sighted child. The auditory-vocal mode of learning is often very profitable for children with visual difficulties especially for those who are slow braille or large print readers. Nolan (1963) found that with children aged 6-10 years, information could be obtained through listening in one third of the braille reading time. Other studies have supported the efficiency of listening comprehension with blind and seriously visually limited children, and demonstrate the need for extensive work on listening activities. To this end, tape recorders and "talking books" are used to supplement the teachers verbal presentation.

Mobility Training. A significant component of the education of children with visual difficulties is that of mobility and orientation training. In striving to become independent, the child must learn to be mobile and efficient in negotiating his environment. Mobility training incorporates the development of co-ordination, spatial awareness, physical fitness, posture, appropriate gait and extra training in the child's effective senses. The overall function of this training is to enable him to interpret his surroundings in relation to himself so that he can negotiate his environment independently.

The net result of these specialist curriculum modifications is the need for individualised programmes for these visually impaired children. Seriously handicapped children differ from each other in degree and kind to the same extent as sighted individuals do and given their special needs, individual instruction becomes an absolute necessity. Integration either partially or completely is a viable option for the blind, when competence and independence has been established in the specialist areas outlined above and when the need for exclusively individual attention has been lessened.

THE WESTERN AUSTRALIAN SCENE

In Western Australia, education for visually handicapped children was begun in 1897 but it was not until 1950 that the Education Depart-

ment became involved. Jecks (1978) points out that after the report by Professor Ida Mann on the education of children with visual difficulties, a special facility for partially sighted children was established at Thomas Street school (1954). This followed the overwhelming overseas evidence that partial sight was not further eroded by use.

Presently, there is a unit for blind and seriously visually impaired children attached to the Sutherland primary school and a preschool centre has recently been attached to this unit. Children attending the Sutherland Centre are given a formal education in the general primary school curriculum, but in addition, learn braille, touch typing, mobility and daily living skills. They remain at the Centre until judged independent enough to function in a regular secondary school. It has been the usual practice, for many years, to place all the children in normal schools for their secondary education, but now the intention is to integrate even the blind children into regular primary schools. The decision on who is ready for such placement and when, is taken on the basis of the child's demonstrated academic, motoric and social competence, and after an initial period of mobility training on the new site. The Centre also co-ordinates an itinerant support service for teachers in normal schools, and the advisory staff assist the regular teachers with programming and adjustment difficulties. Back-up electronic equipment and braille facilities are also made available to the children who are being mainstreamed.

In fact, the numbers at the Centre tend to be decreasing, in part at least because of the thrust towards keeping as many children as possible in regular education with advisory support. A preschool group operates at the Centre and it is significant that almost all the children attending are multiply handicapped. This means of course that there must be a low ratio of staff to pupils so that effective sensory enrichment programmes can be developed. Many of the children in the preschool must have sensory stimulation imposed on them so that they do not lapse into bizarre socially unacceptable self-stimulation.

Blind secondary level students are educated in normal high schools and one school, Morely High School, has a resource teacher who shares her time between the blind children on campus and those in other secondary schools. Special classes for the visually impaired, using modified illumination, magnification aids and large print materials are located in selected primary schools (Appendix A). With each of

the segregated and partially integrated settings, a policy of maximum "useful association" with regular class children, is encouraged.

CONSIDERATIONS FOR THE REGULAR CLASSROOM TEACHER

An undetected visual loss in a child in a regular classroom can lead not only to difficulties in adjustment and in tasks requiring visual acuity, but also in learning. As was noted previously, any major defect in the important input channels of vision or hearing will necessarily hinder formal learning that depends upon accurate representation of the environment. Perceptive observation by the teacher is really the key to the detection of a child's visual difficulties and a number of clues could indicate the presence of a problem. The child might rub his eyes, squint, hold his book close to his face, complain about not being able to see the board or demonstrate a lack of interest in normally appealing visual tasks (watching films, etc.). The effect of a visual loss may be seen in a loss of reading and spelling accuracy, lack of neatness, poor hand-eye co-ordination or a noticeable clumsiness in negotiating the classroom environment. The possibility of poor vision being the cause of any of these problems should be investigated before other conclusions about the child's "remedial" difficulties are reached.

Informal examination of a suspected visual loss can be carried out by the teacher and any confirmation of her suspicions should be reported to the principal and parents with the recommendation for technical assessment. By way of an informal diagnosis, the teacher might place the child in different parts of the classroom and check his reading of a passage on the chalkboard. She may alternatively vary the size of the writing on the board and determine at what level the child fails to read accurately what is written. Finally, she may use a Snellen chart to get a rough estimate of the child's visual acuity. Conclusions drawn from these assessments, in addition to the results of her observations on his reading of normal print, should give the teacher a firm idea of whether or not a visual impairment is present. The solution may be a simple relocation of the child in the room or it may require referral for more sophisticated assessment.

Generally, when children with serious visual handicaps are placed in normal classes, the teacher will have access to the professional assistance of an itinerant advisory teacher who will help her to establish an appropriate learning programme for the child and to make

realistic expectations of the child's classroom activities. As such help for children with less severe problems is not usually available, some commonsense procedures might need to be adopted to facilitate their optimum achievement and adjustment in the class. The child's seating may need to be modified so that he can see the board with maximum efficiency. Illumination in the room must be adequate with glare and reflection from the board minimised. In verbal interaction with the child the teacher should be aware that her normal non-verbal cues (gestures, smiles, frowns, etc.) may not be clearly available to the visually handicapped child, and as a result more elaborate verbal detail may need to be given.

Any embarrassment and inconvenience suffered by the child because of his visual difficulty needs the sensitive and understanding handling of a teacher who is aware of the effect such handicaps can have on a child's adjustment. The temptation to make too many allowances for the handicapped child must be avoided so that his independence is given a chance to develop. Overprotection is a serious problem faced by many visually handicapped children and it tends to inhibit his full realisation of potential if others are constantly and unnecessarily doing things for him. On the other hand, a teacher must be aware when expectations placed upon the child are unrealistic and cause him unnecessary stress and frustration. Commitment to, and acceptance of, the value of individual differences within the class by both teacher and classmates will go a long way to providing a secure and enriching place for the visually handicapped child in the regular classroom.

NEURO-MOTOR AND ORTHOPEDIC DIFFICULTIES

The heterogeneous nature of physical disabilities makes it very difficult to discuss the needs of a group of children with "physical difficulties" and the very diversity of the conditions and their associated educational implications simply reinforce the importance of evaluating and providing for children according to their individual needs and not as a categorical group. Physical difficulties can range from a mild clumsiness and aberration of gait to quadraplegia, and whilst some have marked effects on the children's capacity to learn, others do not interfere at all with their education. Many physically handicapped children require constant medical and para-medical care but others need little or no medical attention after their infant years. Although no clear generalisations can be made about children with physical difficulties, they can be examined in terms of two broad categories: those with neurological impairment and those without.

NEUROLOGICAL IMPAIRMENT

A neurological handicap in this context refers to an incomplete development of or injury to, the central nervous system resulting in problems of physical mobility and general health. The most prominent conditions in this category are: cerebral palsy, epilepsy, and spina bifida.

Cerebral Palsy (C.P.)

By far the largest group of children suffering from neuromotor disorders comprises those with cerebral palsy — "cerebral" (related to the brain), and "palsy" (motor difficulty). Kirk (1972) defines cerebral palsy as a "group of conditions, usually originating in childhood, characterised by paralysis, weakness or any other aberration of motor functioning caused by pathology of the motor centre of the brain" (p. 352). Thus it is not a disease but a set of conditions varying in both degree of severity and physical manifestations. Some individuals suffer only motor impairments (and often only slight) whilst others show a combination of motor, perceptual, cognitive and affective difficulties. Cerebral palsy is generally considered to be a congenital condition or at least one developing in early infancy, so that children who are brain damaged after infancy are not usually considered to have cerebral palsy even if the motoric and behavioural

symptoms are the same. The condition can be classified typologically or topographically.

The main types of cerebral palsy are:

- (a) *spasticity* — (involving the involuntary contraction of muscles resulting in difficulties of varying degrees in voluntary movement);
- (b) *athetosis* — (involving uncontrollable involuntary jerky and writhing movements);
- (c) *ataxia* — (involving awkwardness and problems with balance, co-ordination, fine and gross motor activities).

There are other minor variations which account for less than ten percent of all cases. Described topographically (i.e. according to the limbs involved) cerebral palsy can result in:

- (a) *hemiplegia* — one side of the body affected;
- (b) *diplegia* — legs more than arms affected;
- (c) *quadraplegia* — four limbs affected;
- (d) *paraplegia* — legs only affected;
- (e) *monoplegia* — one limb affected;
- (f) *triplegia* — three limbs affected.

The condition is caused by brain trauma before, during or after birth. Pre-natal causes include maternal infections and poisonings. Brain damage at birth resulting from oxygen deprivation or protracted difficult deliveries is commonly the cause, whilst post-natal diseases or trauma affecting the brain of the developing infant can sometimes lead to the condition.

Because cerebral palsy results from some form of brain damage, there is a high incidence of multiple handicaps associated with the condition. A high proportion of children with cerebral palsy suffer associated sensory, memory, cognitive and speech difficulties as well as motor impairment (Cruikshank, 1966). In terms of intelligence, the average of the population of children with cerebral palsy is significantly lower than that of the general population. This however, *does not* mean a necessary connection between cerebral palsy and

low intelligence, indeed many such children are of average or above average intelligence. (Fig. 7.7). Unfortunately, it is difficult to establish the underlying level of cognitive functioning when the verbal and motor responses are severely limited. The work of Hausserman (1952) has proved extremely useful in attempting to accurately determine capability in the absence of the standardised motoric and verbal competence. It is rather sobering to speculate on the number of intelligent children who, in the past might have been categorised as mentally deficient and institutionalised because they were unable to respond in the standardised manner to tests purporting to demonstrate intelligent behaviour. Christy Brown, in an illuminating autobiography, *My Left Foot*, highlights the seriousness of making capability judgements on the basis of physical restrictions. The problem of associating obvious physical impairment with supposed intellectual impairment, very real to the children with cerebral palsy, will be addressed in more detail in Chapter 9.

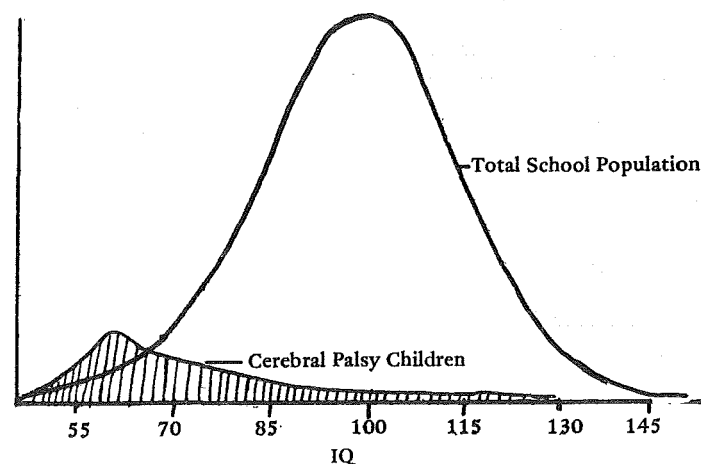


Fig. 7.7 Relative distributions of children with cerebral palsy and total school population on the dimensions of intelligence.

Epilepsy

The condition refers to the abnormal electrical discharge of the brain resulting from physical or chemical damage. This may be brought about by a lack of oxygen, poisoning, birth trauma or tumor. Epilepsy has a number of forms and manifestations all of which are marked by fits or seizures of various degrees of severity and complexity, the major forms being grand mal, petit mal and focal (Jacksonian). A grand mal seizure is manifest by a total lack of consciousness, falling to the ground, thrashing, involuntary muscle contractions, facial contortions and noisy breathing. The attack may last from 1 to 5 minutes and it usually leaves the individual exhausted and disoriented. Some children are given warning of an impending seizure by an "aura" which may give the child time to lie down and find a safe place free from danger. Petit mal seizures are much less severe, but often more frequent and may appear only as a brief day dreaming interlude or lack of attention and may not always be recognised. The child usually "snaps out of it" with no residual after effects. Focal (Jacksonian) seizures usually involve one side of the body with the most common manifestation an uncontrolled tremor in both limbs.

Epilepsy occurs throughout the population and many children who suffer from the condition are found in ordinary schools, however, because of the involvement of brain damage, it is more frequently found in children with other neurological conditions such as cerebral palsy or severe intellectual handicaps. Thus the incidence of seizures is greater in special schools than in ordinary schools. It is nevertheless very important for regular class teachers to be aware of the traumatic effects that a seizure (especially grand mal) can have on the class and be able to cope with the situations with a minimum of fuss. The teacher should simply clear the floor of furniture and breakable objects, make the child as comfortable as possible on his side and place a folded handkerchief between his teeth to prevent him injuring himself. When the seizure has run its course, the child will need considerable rest and should be either taken home or put to bed in the school rest room. Unfortunately, convulsions and seizures of the grand mal type can have a distressing effect on the other children and the teacher must remain calm and reassuring for the benefit of both the affected child and the rest of the children. A clear unemotive explanation to class on the nature of epilepsy as a condition not a contagious disease, and

demonstration of understanding and acceptance of the child, can do much to alleviate the tensions created in such a situation.

Spina Bifida

Hallahan and Kauffman (1978, p. 392) define spina bifida as "a congenital midline defect resulting from failure of the bony spinal column to close completely during foetal development". The anomaly can be located anywhere from the neck to the base of the spine and can vary in severity from the presence of a small clump of hair on the spine with no concomitant neurological or physical damage to complete paraplegia and total incontinence. Unless associated with hydrocephalus, spina bifida does not result in intellectual handicap so many children attend normal schools and achieve levels commensurate with their non handicapped peers.

Other less prevalent childhood neuromotor disorders would include polio (all but eliminated in Western societies) and multiple sclerosis (usually not found in school age children).

Orthopedic and Other Handicapping Conditions

Some children are physically handicapped as a result of muscle or orthopedic problems. The tragic wasting disease of muscular dystrophy is probably the most dramatic of the diseases affecting the muscular system. As yet no cure has been found for this terrible disease, however genetic counselling can be effective in curtailing the numbers of children afflicted. The different forms of arthritis and bone diseases, congenital malformations and the tragically increasing handicaps resulting from road and domestic accidents make up the bulk of orthopedic disabilities with which school children can be afflicted. Apart from the last mentioned group (in which associated head injuries are prevalent) there is no direct connection between the physical handicap and intellectual retardation. Many such children may have difficulty with their school work for a number of reasons but they are not limited intellectually *as a result* of their physical difficulty.

Chronic respiratory conditions and other diseases — complete the overall picture of physically handicapped children. The chronic asthmatics, diabetics and anemics would fit into this group and these conditions whilst not directly linked with intellectual limitations can

interfere drastically with a child's educational performance because of their interference with school attendance, attention and peer interaction.

It is impossible to generalise about the educational and psychological characteristics of physically handicapped children. As we have seen they constitute a widely disparate and heterogeneous group whose only common characteristic is the fact that they suffer a physical handicap. For many children, their education is interrupted by long periods of illness and hospitalisation, hence their achievement will invariably suffer. Other children are frequently moved from one educational setting to another, being unable to fit into either the segregated or integrated classroom and never feeling the security of belonging to a school group.

Emotionally and socially, the physically handicapped child is more vulnerable than his non-handicapped peers and the frustrations he faces in a society oriented towards the mobile and the healthy do not need elaboration. More detail on the emotional and social adjustment difficulties of such children will be presented in Chapter 9.

THE EDUCATION OF CHILDREN WITH PHYSICAL DIFFICULTIES

A wide range of educational provisions are needed for children with physical handicaps. Special schools with associated medical and paramedical services are necessary for many children. Hospital and homebound education is required by children with chronic or acute illnesses whilst large numbers of children can be accommodated in ordinary classes. Deciding between special or normal education can be both crucial and difficult for parents and professionals alike, as an inappropriate choice might have drastic and long lasting educational, emotional and vocational consequences. It is impossible to make hard and fast rules about such decisions as each child's individual situation must be evaluated but some considerations might be:

Integrated schooling when -

- (a) constant medical and/or para-medical support is not required;
- (b) major changes to the curriculum and buildings are not required, and
- (c) the physical handicap is not associated with severe intellectual handicap.

Even when some of these criteria are met and the child is placed permanently in a special school, maximum interaction with his non-handicapped peers should be fostered.

For many physically handicapped children, major modification to buildings, equipment and furniture must be made before they can adequately cope with the educational materials. Special schools for physically handicapped children, usually provide a dazzling array of modified desks, chairs, typewriters, art boards, wheelchairs, all designed to meet the individual needs of the children. The need for such diversity of equipment coupled with the medical requirements, currently makes it difficult for many such children to operate successfully in an ordinary class. It is however, the child's educational needs rather than his medical diagnosis that should determine his educational placement. With the acceptance of the principle of integration and normalisation of the handicapped child's life style, the time has come to look at the architectural, attitudinal and curricular barriers that are preventing children from obtaining education in a normal school. It would not seem to be a difficult or even expensive exercise to have all new schools planned so that access for children in wheelchairs and calipers is available. For many children with physical handicaps, there is no concomitant educational handicap and as a result these children are entitled to the most "normal" education available.

THE WESTERN AUSTRALIAN SCENE

In Western Australia, the wide range of educational provisions outlined above, exists. (Appendix A). Special schools and units, itinerant teaching and normal class placement cater for the wide variety of children with physical handicaps in this State. The Sir James Mitchell School is a part of a day centre owned and operated by the Spastic Welfare Association, a private welfare organisation. The school is staffed and equipped by the Education Department and provides for cerebral palsied children in the 6-18 years age range. Buckland Hill School adjoins the Crippled Childrens' Society hospital-residential complex and provides for children with muscular dystrophy, spina bifida and other crippling conditions. An integrated preschool operates at the school to provide interaction between young crippled children and their non-handicapped peers in the district. An interesting and innovative experiment in integration of seriously handicapped high school students has been in operation since 1977, and involves the

education of children originally from this school, at Hollywood High School. Major structural alterations to the school have enabled wheelchair bound children to attend regular classes. A special school is provided by the Education Department at the Lady Lawley Cottage hospital complex owned by the Red Cross. It caters for children with diverse medical problems, including frail health, post operative recovery, chronic diseases, etc.

As a result of the recommendations in the report of the Council for Special Education on the *Education of Cerebral Palsied Children in Western Australia*, two schools entirely different in structure and administrative philosophy have been established for physically handicapped children. The schools at Koondoola and Willetton have been established adjacent to primary schools which allow maximum interaction between the handicapped and able-bodied children. Willetton in fact has been developed on a new multi-level campus which includes a pre-primary, junior primary, primary, secondary and special school. All of the schools have been designed to allow access to handicapped children so that children can move between the schools with much more freedom than is possible in the usual special school setting. As well as the structural advantages of these new schools they also represent a drastic change in the educational philosophy of physically handicapped children. Whereas the James Mitchell and Buckland Hill schools are essentially attached to medical centres run by a charitable organisation, Willetton and Koondoola are educational institutions with medical and para-medical staff employed by the Education Department but supervised and appointed by the Community and Child Health Department.

Hospital schools operate at both Princess Margaret and Fremantle hospitals and a homebound service (Boordaak School) assists children who are convalescing or attending other hospitals. Older handicapped children are provided for at both Melville and Shenton Park Rehabilitation Centres where students can study at both primary and secondary levels. An advisory service is provided by the Special Education Branch for the physically handicapped children being educated in ordinary schools.

CONSIDERATIONS FOR THE REGULAR CLASSROOM TEACHER

With an increasing number of children with special needs being

educated in regular classrooms the role of the teacher is becoming more complex and multi-faceted. Catering adequately for a physically handicapped child requires extra time and effort by the teacher but provides a challenge which, when accepted, results in an enriching experience for the whole class.

Where special advisory help is available, the teacher should utilise this facility to help ease the adjustment of the child into the class and to provide expertise in developing appropriate learning materials and programmes for the child. Ongoing communication with the child's parents is very important because of the reciprocal assistance and understanding this can generate. It may also be necessary to liaise closely with the child's doctor, physiotherapist or other involved paramedical professionals if effective physical activities are to be developed at school.

As far as is possible, the child must be treated as an independent member of the class with a wide range of shared similarities with his peers. The more independence a child can achieve at school the better is his self concept and his acceptance by his able-bodied peers. Over-protection by the teacher can be a major inhibiting factor in the development of this desired independence and encouragement may need to be given to the child to tackle tasks that are not made impossible by his disability. A crucial aspect of a child's overall educational success in an integrated setting is his adequate social and emotional adjustment. A normal class of able-bodied, competent children can be very threatening to a handicapped child who has spent much time in the company of disabled peers and the degree to which this threat is reduced is very much the responsibility of the teacher. Wilson (1973) claims that both the child and the other pupils can benefit greatly from his presence in the class.

The disabled child can learn to accept his limitations, to compensate for them in many ways and at an early age solve problems of living and competing in a world of unimpaired people. The other pupils can come to realise that the impairment of the disabled child is only a relatively insignificant part of his personality; that he has the same interests, desires and ambitions as they have; and that he has a unique contribution to make to the group. (1973, p. 507)

To achieve this harmonious adjustment, the teacher must be sensitive in her own behaviour to the special needs of all the children in her class, and to acquaint the children with the nature of the disability so that fear and prejudice developed from misconceptions about its nature are dispelled.

Some physical modifications may need to be made to the classroom so that the child might more comfortably function without unnecessary disadvantage. Such things as sloping desks, mobile chairs, typewriters, etc. may be needed to offset the physical limitations imposed by a particular handicap.

As a result of a child's limitations in mobility and access to normal perceptual-motor activities, his cognitive development might have been hindered because of the integral part played in cognitive development by sensori-motor activity. Safford (1978) referring to the work of Piaget and Bruner stress the need for developing structured motor and sensory experiences for the child to compensate for his lack of experiences that are a normal and integral part of the able-bodied child's everyday life. Experiential learning takes on an even greater importance for a handicapped child.

A child whose attendance at school is frequently punctuated by spells in hospital or convalescing at home, may have particular difficulties of readjustment, frustration and lack of energy that can consistently affect his learning and affective relationships. A teacher sensitive to his needs will recognise the importance of adjusting her expectations and modifying her strategies to help ease the child through these difficult post-illness periods. As with all children, a child with a physical handicap should be evaluated in terms of his special educational and emotional needs, his weaknesses and his strengths should be attended to so that he sees himself not specifically as a handicapped child but rather as a child who shares many characteristics with his peers and one whose differences on one dimension of functioning may be greater in degree than theirs.

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CHAPTER 8

CHILDREN WITH SPEECH DIFFICULTIES

DEFINITION AND CLASSIFICATION

Speech can be defined as "the behaviour of forming and sequencing the sounds of oral language" (Hallahan & Kauffman, 1978, p. 224). A child's speech can be considered a handicap and not just a difference when it "(a) interferes with communication, (b) causes the speaker to be maladjusted, and (c) calls attention to the speech rather than to what is being said" (Gearheart & Weishahn, 1976, p. 96). Speech disorders are commonly classified under the following headings: articulation, voice production, fluency and those that emanate from other disabling conditions, e.g., cerebral palsy, intellectual handicap, and hearing impairment. Whilst these groupings are not mutually exclusive, they represent the range of speech problems found in school age children.

Articulation

Defects in articulation account for more than one half of the speech problems in the classroom. They are generally minor in degree and effect and are usually the most amenable to modification. Many articulation problems are developmentally determined and it is not until the majority of his peers have outgrown their mistakes that the persistent misarticulation of a child can be considered a speech difficulty. Thus age inappropriateness is a factor that must be considered when examining the speech of any particular child. "The wed wope" might be a quaint turn of phrase in a 3 year old but might be considered an articulation difficulty in a 10 year old. Articulation problems may be either organic (physical cause) or functional (without physical cause) in origin and it is the latter that is most common in ordinary classes. Such difficulties might be further categorised into: omissions, substitutions, distortions and additions.

Omissions refer to the deletion of particular sounds or letters, such as "cool" for "school" or "ty" for "try".

Substitutions refer to the replacement of a letter with another – typically "w" for "r" – "wun" for "run", "wabbit" for "rabbit".

Distortions are approximations to correct sounds that are noticeably different from the ones intended. The consistent inaccurate representation of "s" in lisping is the most common example of this type of misarticulation – "Thing a thong of thixpence". Many would suggest this is just another example of a substitution.

Additions occur when a syllable or letter is added to the word to produce an extended word, e.g., "pulease" for "please" or "film" for "film".

For most children the causal antecedents of articulation difficulties are hard to establish. In isolated cases organic restrictions of the tongue or dental structure may inhibit accurate speech, but generally the causes are environmental and notoriously difficult to pinpoint. Inadequate modelling, inappropriate reinforcement for incorrect speech by parents or siblings and a generally disadvantaged language environment may be some of the relevant environmental factors.

Problems of Voice Production

Speech which is too high or too low in pitch, monotonous, nasal, hoarse, too loud or too soft tends to draw negative attention to the speaker so can be considered a speech difficulty. These defects of *pitch*, *loudness* and *quality* are considered problems of voice production. Problems of pitch are most evident in adolescence when male and female voices begin to differ markedly. An 18 year old boy whose voice is still at the same high pitch level as it was in his pre-adolescent years will usually experience problems with peer interaction and socialisation. The teenage girl with a particularly deep voice is similarly disadvantaged. If speech variations experienced during the "transition period" by an adolescent boy, extend for an unreasonable time they become an irritant and may inhibit his normal flow of oral language. A voice that is too loud or too soft is annoying to the listener and in inappropriate circumstances is a source of embarrassment to the speaker. The most common difficulties of quality relate to nasality and hoarseness (Hallahan & Kauffman, 1978). Defects of voice quality, like articulation difficulties, are both age and sex specific and are often determined by the dictates of the situation. A rough rasping voice may be desirable, even necessary in certain circumstances but the same voice would be stigmatising in an intimate social situation.

Voice Disfluency

Some of the most serious and complicated speech difficulties are those that, for one reason or another, are marked by a break in the natural flow of speech. Hallahan and Kauffman (1978) suggest that speech flow has five major components – sequence, duration, rate, rhythm and fluency – and that fluency depends upon the adequate control of the other dimensions. They define speech as being disordered when “interruptions in the flow of speech are so frequent or pervasive in a person’s speech that they keep the speaker from being understood or draw extraordinary attention to themselves” (p. 237).

Stuttering is by far the most visible and well known speech disorder of this type. Sometimes referred to as the “disability of a million theories,” its adequate explanation and cure have eluded scientists for centuries. Hull and Hull (1973) divide stuttering into two stages. The early stage is characterised by “excessive prolongations and repetitions of sounds and hesitations in the general speech pattern.” In the more advanced stage the speaker “may be unable to begin talking, because the first sound is abnormally prolonged” (p. 313). Stuttering may be accompanied by facial distortions, bodily gestures and obvious anxiety on the part of the speaker and, more than most other speech defects, induces discomfort and embarrassment on the part of the listener. Stuttering is a highly individualistic phenomenon, with no two stutterers exactly alike and considerable variation from one situation to another and from one day to another. To some children particular words and phrases inevitably cause blocking, for others specific interpersonal situations, such as telephone conversations or interviews, precipitate the disfluency.

Many people have written on the possible origins and explanations of stuttering. Brutten and Shoemaker (1967) describe the etiologies under four main headings: 1) constitutional cause, 2) psychogenic cause, 3) an interaction between organic and psychological factors, 4) learning theory. In general, the organic theorists postulate that some form of neurological damage or dysfunction is involved. These theories suffer from the fact that: a) no such conclusive evidence of brain pathology exists, and b) so many of the children grow out of stuttering by their teenage years. Psychogenic theories stress the role of frustration and stress in the interpersonal relationships, usually

that between the child and parents or other siblings. Interactionist theories consider that there is a predisposition to stuttering probably resulting from some organic cause but that environmental factors activate and develop the condition – they point to the increased incidence of stuttering in high-anxiety situations. The role of learning theory in the development of stuttering hinges on the two concepts of modelling and reinforcement. Bandura (1977) presents a comprehensive rationale for the role of modelling in the learning of children and some of his earlier studies (1963, 1965, 1969) show how effectively children learn from models.

Safford (1978), whilst recognising the conclusions of the modern developmental psychologists that the structure of language is universal and basically innate, points out that the particular language and speech style adopted by a child is largely a function of the language and speech styles of the models to whom he is consistently exposed. In the context of learning theory, any behaviour that is being maintained or increased is being reinforced – thus stuttering may in some way be reinforced.

Each of these theories has its adherents but, as yet, no universally satisfying etiological description of stuttering has emerged and until it does the remediation of this stigmatising disorder will also be less than maximally effective. A significant consideration in relation to stuttering is the fact that over 70% of children grow out of it.

Speech Problems Developed from other Disabling Conditions

Cerebral palsy, which sometimes impairs the control of muscles involved in speech production, is one handicapping condition that frequently leads to associated speech difficulties. Speech anomalies occur in approximately 50% of all cerebral palsied children and they range in degree of impairment from total unintelligibility to minor articulation errors. Hearing impairment, of course, is associated with speech impairment, usually in a direct positive correlation – the greater the hearing loss, the more severe the speech defect. Children with mild hearing loss in the high frequency range may have particular articulation problems with the consonants “s”, “sh”, “f”, “th” and “h”, whilst those with profound hearing loss frequently have unintelligible speech.

Intellectual handicap, especially that resulting from brain damage, is usually associated with speech impairment. A number of studies reported in Hull and Hull (1973) indicate a significantly greater incidence of speech anomalies among children with intellectual handicap than among the general population. Congenital defects such as cleft palate and dental abnormalities can result in defective speech (usually excessive nasality), although nowadays corrective surgery can do much to lessen the impact of such conditions.

Speech difficulties then are wide ranging in degree and kind and whilst many are amenable to remediation by speech pathologists and even parents and teachers, others are seemingly highly resistant to effective improvement.

PREVALENCE

Because of the high incidence of speech defects in children with other handicapping conditions and the lack of precision over what constitutes a speech handicap, as opposed to a speech difference, exact prevalence figures or even estimates are impossible to obtain. Those estimates that are available, however, seem to indicate a relatively high incidence in school age children. In summaries of studies of incidence reported in both Hull et al., (1973) and Hallahan and Kauffman (1978), 4-6% of children of educable age would experience some difficulty in speech.

THE EDUCATION OF CHILDREN WITH SPEECH DIFFICULTIES

Children with speech difficulties, taken as a whole, would achieve lower average levels than the general school population on tests of intelligence and academic achievement because of the high associated incidence with other handicaps such as cerebral palsy and mental retardation. Speech impaired children not suffering from such disabilities achieve at the same level as their peers. They may, however, have more problems with interpersonal relationships and may suffer rejection or perceive rejection by other children. This perceived rejection serves to exacerbate the situation for the child and further inhibit satisfactory speech. Developing acceptance and support of the child with speech difficulties is a prime consideration for teachers.

There are no segregated schools or classes for children with speech impairments in ordinary schools, referral must be made to the public and physical handicaps will have speech problems. Speech therapy is, to varying degrees, available to children in schools and in some areas itinerant speech pathologists help teachers to plan and implement remedial programmes. In many cases, however, the classroom teacher is alone in her struggle to improve the speech of a child in her class.

THE WESTERN AUSTRALIAN SCENE

In Western Australia, an ad hoc system of professional speech assistance exists without any co-ordinated speech therapy available through the education system. Speech impaired children who have been placed in remedial centres, for examples, are referred to Princess Margaret or Fremantle hospitals for specialist help and graduate students from the W.A.I.T. speech pathology course are enlisted to help individual children. Those in special schools for the intellectually handicapped often have access to speech therapists supplied by the Department of Intellectually Handicapped of the Mental Health Service. Children in schools for the physically handicapped may have the benefit of a speech pathologist on site employed by the Public Health Department (Willetton and Koondoola) or have access to one supplied by the welfare organisation to which it is attached. For children suffering speech impairments in ordinary schools, referral must be made to the public hospital speech pathology department or to private clinicians. Given the high incidence of speech difficulties in school age children, it is unfortunate that a comprehensive system of speech therapy assistance is not available through our education system.

CONSIDERATIONS FOR THE CLASSROOM TEACHER

The regular class teacher has a role to play in the identification, prevention and remediation of speech difficulties.

Identification

Not all speech problems are picked up by the parents; some begin at school and others, mild in the home situation, may be exacerbated by situations in the educational environment. As a result, the teacher may have a real role to play in recognising incipient speech difficulties

and in providing information about situations, activities and relationships that may precipitate or inhibit such problems. On the basis of such identification, she may then have to communicate with parents and recommend referral through the appropriate channels (e.g., the guidance officer) for some professional assessment.

In conjunction with a speech pathologist and possibly other professionals, a teacher might be required to identify the exacerbating situations in school, make observations in naturalistic and structured social settings, and generally act as part of a multi-disciplinary team assessing the overall nature and quality of a child's difficulty. Most information can be acquired by keen observation and one problem that the teacher should be on her guard against is that of adjusting to a speech difficulty to such an extent that it is not longer heard (Gearheart and Weishahn, 1978). Teachers can enhance their observation skills by reading any of a number of relevant observational guides (Richarz, 1980; Cohen and Stern, 1978).

* Hallahan and Kauffman (1978, p. 268) suggest the following questions be kept in mind when a child is being observed.

- (1) How much does the child talk, to whom and in what situation?
- (2) How do the other children react to his speech?
- (3) How intelligible is his speech?
- (4) How fast does he talk? — any peculiar speech rhythms, prolongations or repetitions?
- (5) Does the speech have an unpleasant quality? — is it inappropriate in pitch and loudness for the particular age, sex or situation?

Age appropriateness must be taken into account when considering each of these questions.

Prevention

In the early school years especially, the teacher has a significant role to play in the prevention of speech difficulties. She should provide a learning environment in which the speech of young children has the opportunity to develop with minimal interference and obstruction. Speech modelling is a powerful tool at the disposal of the class-

room teacher. By providing the child with a good model, the teacher helps the child to discriminate between appropriate and inappropriate speech. The teacher may have to become very aware of her own speech and be aware that some of her own speech idiosyncracies might inhibit the acquisition of correct speech in the "at risk" child.

Both Hull and Hull (1973) and Safford (1978) emphasise the importance of developing listening skills in the child so that he is forced to concentrate on the correct articulation of words. Selective listening is a skill that often requires training and, especially in our multi-media world of non-stop visual and auditory stimulation, a child prone to speech problems may not naturally develop effective discrimination.

Remediation

When attempting to help a child with an existing speech problem, the teacher should not attempt to play the "amateur speech therapist" but rather liaise with a professional (if one is involved) so that extension and complementary activities can be developed in the classroom. Many teachers, unfortunately, are hesitant about contacting professionals in the medical or paramedical specialties, and such lack of liaison works to the detriment of the child. Wherever possible, ongoing contact should be made and maintained for the child's benefit and mutually developed co-operation can reduce the amount of counterproductive activity that a teacher could implement if she were naive and uninformed about the child's expectations and limitations.

In general, the teacher who provides the child with a non-threatening environment for oral communication will assist the child to cope with his problem in school and prevent it from interfering with his learning. To do this, however, requires a recognition of the learning situations that exacerbate the child's problem, being positive and accepting of him and providing an effective model for him to imitate. Many specific activities to help the child fit into the class are outlined by Hull and Hull (1973) but, for each child, particular considerations need to be made that do not necessarily suit the needs of other speech impaired children.

A stuttering child in a normal classroom is often the source of great anxiety for the teacher and this anxiety, immediately perceived by the child, simply adds to the child's discomfort. A number of

general considerations can be taken into account in coping with a stuttering child:

- (a) most stutterers do not stutter all the time, hence being able to anticipate the most threatening times and situations can be of great value to the teacher;
- (b) positive reinforcement and the attainment of success are necessary for the child's self-confidence;
- (c) a classroom environment that is relaxed, uncritical and accepting of individual differences will maximise the child's chance of coping;
- (d) the ridicule and rejection by peers often induced by stuttering must be tackled by the teacher by discussing the nature of the problem with the class and demonstrating an accepting attitude to the child.

More specifically, Hull and Hull (1973) detail a number of hints for the teacher to heed when teaching a stuttering child:

- (a) Give the child enough time to say what he has to say. If possible, give him warning when he is to talk.
- (b) Give compensatory attention to his strengths to help redress the balance of negative attention given to his area of weakness.
- (c) Establish a routine for the child.
- (d) If the child enjoys singing or reciting and does so without impediment (as many stutterers do), then develop his confidence through these activities.
- (e) Sometimes creative activities — drama, puppetry, role playing — may enable the child to become an anonymous participant and help his oral communication.

With competent and sensitive teaching, the child with speech difficulties can enjoy and succeed at his education and, in some cases, his difficulties may in fact be eased or eliminated by the conscientious efforts of the teacher.

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THE SOCIAL PSYCHOLOGY OF CHILDHOOD DISABILITY

"Social psychology is a subdiscipline of psychology that especially involves the scientific study of the behaviour of individuals as a function of social stimuli" (Jones and Gerard, 1967). The emphasis in social psychology is on the study of persons in social settings, their behaviour towards others, and the effects of others' behaviour on them. Elusive and complicated concepts, such as attitudes, values, conformity, dissension, rejection, acceptance, and self-esteem, are the stuff of social psychology and, whilst such concepts are difficult to analyse and define, their study is crucial to the understanding of human behaviour. Man is a social animal and the study of his behaviour is most meaningful when undertaken in social context. This is especially so of children with handicaps, whose emotional and social adjustment are so dependent upon the reactions of others.

Although the term "handicap" is often used synonymously with "disability", there is a significant distinction in meaning when used in the context of social behaviour. A disability is technically a physically imposed limitation, either congenital or adventitious, which may or may not cause a person to be handicapped. The disability is an omnipresent weakness but whether or not it leads to a handicap is very much dependent upon factors such as its social ramifications and the specific relevant situations in which it is considered. A handicap results from a disability when the goals of the individual are thwarted by the presence of the disability. Such restrictions are often situation-specific, a paraplegic may be handicapped when it comes to bushwalking but not in playing chess. Handicaps need not emanate from disabilities as such – a beauty queen aspirant who develops blotchy skin from too much exposure to the sun is certainly handicapped, but it would be stretching the meaning of disability beyond reasonable limits to consider that she was disabled. A significant component of a handicap is the person's perception of others' reaction to his disability. The extent to which disabilities become overwhelmingly handicapping is in part dependent on the social forces acting on the individual. Whilst the distinction between "handicap" and "disability" is rather blurred in the literature, and the terms are often used interchangeably, it is very important to understand the role of social variables in determining whe-

ther a condition becomes a generalised handicap or simply an inconvenience in particular situations. In this chapter, as in others, the rigid distinction between disability and handicap is not made, but the interpersonal forces affecting the emotional and social lives of the individual are examined in detail.

Although the evidence for a higher incidence of maladjustment among children with disabilities is equivocal (Harley, 1973; Rutter, Tizard and Whitmore, 1970), it is undeniable that such children are very vulnerable and emotionally and socially "at risk". Even when maladjusted behaviour is found to be more prevalent among handicapped children, the actual behaviour is not specific to the disability (e.g., aggressive behaviour exhibited by a deaf boy is not different in *kind* from aggressive behaviour displayed by a hearing child). The major source of behavioural deviance among handicapped children is either the extra frustration generated by the disability and/or a sense of devaluation and lowered self-concept brought about by societal reaction to the disability.

FRUSTRATION

To some extent, the frustrations of handicapped children are obvious – the crippled child cannot play physical games with his peers; the hearing impaired child cannot listen to or communicate effectively with his nondisabled classmates; the blind child cannot experience the physical and sensory joys of the sighted child. There are, however, more insidious, less obvious frustrations confronting the handicapped child which emanate from unrealistic expectations and attitudes of parents, friends, teachers and society in general. Frustration occurs when needs and highly desirable goals are blocked. Like nonhandicapped children, those with special problems have the fundamental needs of love, security, acceptance and success. Unfortunately, such needs are not easy to satisfy when a child has a disability. All handicapped children meet with varying degrees of frustration in their attempts to realise these needs – especially those of acceptance and success. Barriers to success and full acceptance are still very much a part of the life of children with handicaps. For many people, full acceptance still requires not being significantly different, and to be different is to invite other substitute reactions – pity, anger, rejection, etc. Success, of course, is frequently made more difficult to achieve because of both the imposition of barriers resulting directly

from the disability and also the unrealistic expectations of others. The sheer physical limitations on access to public buildings, educational institutions and places of recreation make the achievement of vocational, educational and recreational success extremely difficult. Coupled with the necessary restrictions on life activities imposed by the disability, these unnecessary limitations may place a serious burden of frustration and a feeling of unfulfilled potential on the handicapped child.

Frustrations can also result from incompatible expectations being placed on a child. All children, especially in adolescence, face contradictory expectations (e.g., they are expected to be studious and do their best by parents and teachers but, often, to be quite the opposite by their peers). The handicapped child faces these conflicts but, as well, is expected to accept his handicap on the one hand and be as normal as possible on the other (Meyerson, 1971). The problem of resolving these conflicts leads to frustration and, at times, consequent maladjustment in the children. Disappointment at expected outcomes is another source of frustration that everyone faces. Idealistic young teachers, for example, are often frustrated by the marked discrepancy between their expectations of the job and the reality of the teaching situation. For the handicapped child, disappointment and disillusionment are unfortunately very common and often affect not only his performance in particular situations but also the way he feels about himself. Such disillusionment occurs when a person is judged on the basis of his area of weakness, or he is credited with being handicapped, *in toto*, because he has one specific disability (e.g., the child who is considered to be retarded because of a facial disfigurement). The frequent rejection for employment based on the presence of a disability that has no relation to the job requirements is another source of frustration. An adolescent with a serious reading problem might be thought by employers to be retarded and hence not be considered for a job for which reading is not a requirement. It is little wonder that some handicapped people appear bitter about their limited opportunities and frequent rejection, and it is of considerable testimony to the character and resilience of others that they maintain a positive and pleasant disposition in the face of such frustration.

Whilst the long accepted frustration/aggression hypothesis (Miller, 1941) has been challenged and amended as a result of significant empirical studies (Bandura and Walters, 1963), there is no doubt that

constant frustration and disappointment lead to behaviour that is often considered negative and antisocial. Such behaviour, whether it be in the form of aggression, withdrawal or depression, makes the handicapped child more vulnerable as it tends to reinforce the pre-conceived perceptions of others that he is a deviant person. The consequence of such attitudes is one of devaluation of the child as a person, less worthy than his able-bodied peers.

DEVELOPMENT OF SELF-CONCEPT

The way you think about yourself dramatically affects your interpersonal relationships. It influences the way you perceive the intentions of others, your personal life goals, interests, and responsibilities. It is itself a vague entity determined by a constellation of factors difficult to describe and identify but including at least: your feelings about your body; likes; dislikes; your perception of yourself as shy, outgoing, etc.; and a sense of how others are affected by you.

An important concern in the study of self-concept of handicapped children is the relationship between one's physical attributes and personality development. This study of the connection between physique and emotional and social adjustment is often referred to as somatopsychology. Just as organic illness can be precipitated by psychogenic causes (anxiety, depression, etc.), so also can personality and behavioural characteristics be affected by physical conditions. Early work on somatotypes by Sheldon (1942), in which he attempted to match physiques with personality stereotypes, has been largely ignored in the more recent psychological literature because of its lack of rigid empirical support, but the connection between physique and emotional and social adjustment has been extensively studied, especially in relation to the handicapped (Meyerson, 1971; Wright, 1960).

The possibility of a connection between physique and personality type has long fascinated the layman and widely accepted but empirically invalid stereotypes have been incorporated into our social consciousness and affect many of our judgements of individuals and groups - the fiery redhead is a familiar but irrational description; the jovial fat boy is a popular myth, being currently exploded by research into obesity; classical literature, that covert moulder of public attitudes, is full of such connections: "Yon Cassius has a lean and hungry look. Such men are dangerous." In their interactions with the

handicapped, many able-bodied people are concerned and affected by the obvious limitations placed on the lifestyle of the individual because of his disability, but the more insidious and often longer-lasting effects that the disability has on the person's self-concept are not really appreciated. It is partly the ignorance of this effect that leads many non-handicapped people to pity rather than accept, or to reject rather than understand, those with disabilities.

Of central concern in the examination of the interaction between physique and behaviour is the concept of body image. Influenced significantly by the psychoanalytic school, theorists have consistently stressed the intimate relationship between body image and self-esteem. Wright (1960) considers a child's notions about his own body, and what satisfaction it gives and denies him, as a crucial factor in the development of self-image. His attitudes towards himself and feelings about his own adequacy are, in part, affected by the perceptions of appearance and physique. The handicapped child receives negative feedback about his appearance and physique from both the limitations imposed on him by his disability and from the attitudes of others towards him. Studies using projective tests, particularly those involving drawings of self and others, indicate a psychological connection between feelings of self-worth and the perceptions of bodily limitations (Bender, 1948; Schilder, 1950). Whilst psychological interpretation of children's drawings is a contentious area, the significant conceptual differences among some physically handicapped children's drawings tend to indicate devaluation and diminished self-esteem.

Children with disabilities, like any minority group, tend to adopt the value system of the dominant social group, in this case that of their non-handicapped peers, who value highly physical perfection.

In Western culture people are almost obsessed with their bodies. They don't just want to be healthy and strong, they want also to be beautiful, well formed and attractive to others . . . It is not really surprising then that the physically handicapped must fight two battles - - the battle to overcome the limitations imposed by their physical condition and the battle to be accepted by others. (Hallahan and Kauffman, 1978, p. 378).

Glorification of the body beautiful is both overtly and covertly expressed in Western societies through the mass media and advertising.

These vehicles of power and influence project, especially to the young, the idea that to be successful and fulfilled in life one has to be physically attractive. Striving for such an ideal is obviously traumatic for many able-bodied people (viz., the length they go to and pains they endure with crash diets, cosmetic surgery, and body building courses) but for the disabled person the effect on his self-concept of knowing that he cannot, no matter how hard he tries, approximate such an ideal, can be shattering. Having internalised the value system of the dominant nondisabled peer group, he sees himself as inferior because of his inability to achieve the goals aspired to.

Adolescence is the period in which the effects of disability and a defective physique can have the greatest impact on the developing self-esteem. Being a stage of development in which physical strength (boys) and physical beauty (girls) are most highly valued traits, adolescence is a period of severe emotional and social threat to the handicapped individual. It is often during this period that the child realises that his disability will not go away and will be an impediment to him achieving the highly valued goals of his peers. "Unlike the younger child the adolescent tends to regard his physique as the final edition of himself" (Wright, 1960, p. 109). In addition, the pressures of conformity, powerful and effective in the adolescent subculture, can overwhelm him because of his overt difference. In an overview of autobiographical information, Wright concluded that although the handicapped adolescents did not always lack companionship, they were almost universally affected by overwhelming loneliness because of perceived inadequacies in developing satisfactory boy/girl relationships. The problems of developing a positive body image are now compounded by the adolescents' need to view their bodies in terms of sex appropriateness. This dimension of attraction to the opposite sex poses new and often insurmountable difficulties in developing or maintaining a positive view of oneself.

An important factor in the development of self-concept is the individual's perception of others' reaction towards him. As such reaction is very often based on initial physical impressions, the handicapped person is constantly being exposed to potentially threatening social situations. In interactions with the disabled the actual disability tends, on first encounter, to dominate the perceptual field of the non-handicapped person, thus it is the condition rather than the person that is reacted to. Because of a lack of experience and limited contact

with the handicapped, non-handicapped persons often find such social encounters very uncomfortable and they tend to react with uncertainty and awkwardness. Whether the initial reaction is one of avoidance, pity or rejection, the person with the disability will perceive very quickly the negative effect his problem will have on the other's behaviour. This, in turn, establishes an anticipatory frame of reference for the next social encounter so that the individual's concern about the stigmatising effect of his disability dominates his expectations and consequent behaviour. Goffman (1968) has presented a most enlightening account of stigma, its effects on individuals and its management. He distinguishes between individuals who are visibly stigmatised ("discredited") and those whose disability is less visible and more easily concealed ("discreditable"). The discredited group have the anomaly open for all to see and the main concern is to minimise its effects on the perceptions of others. The discreditable group, however, are more concerned with hiding the potentially stigmatising condition and thus live in fear and apprehension that they will be found out. Both groups direct their attention to being as "normal" as possible, as to be different is so often stigmatising. The preoccupation of handicapped persons with minimising the impact of their disabilities on the perceptions of others emphasises the crucial importance societal attitudes have in determining their emotional and social adjustment.

A significant and frequently debilitating extension of the impact of disability on adjustment is that of "spread" (Wright, 1960). "Spreading refers to the self-perceptions of those who see their disability expanding from its original source to encompass the whole body or whole personality" (Thomas, 1978, p. 72). Thus the child begins to see himself as a handicapped person and not as a person with a specific handicap. Unfortunately, this spreading effect can be encouraged and fostered by social attitudes to handicap and difference. It is most noticeable in the way we tend to describe children as spastics, dyslexics or retards rather than as children with physical, reading or intellectual difficulties. This use of the all-inclusive disability noun, a "diabetic", rather than a "person with diabetes" devalues the individual to the extent that the disability becomes the person and he is not considered as separate from it. To some extent, the selective use of the verbs "to be" and "to have" in descriptions appears to determine just which individual differences society considers stigmatising and which it does not. A child *is* deaf but he *has* red hair, he *is* disturbed but he *has* a clear complexion. The distinction,

on the surface, may appear trivial and irrelevant but it does reflect a tendency in our society to describe children by disability labels that imply total limitation.

Individual reaction to disabling conditions may take any of a number of forms. A person may fear, reject, discriminate against, or seek to avoid the affected individual. Any of these reactions, especially when it is consistently evoked, will have a deep and debilitating effect on the self-concept and, unless the child is supported by a strong personality and buttressed by love and affection from significant others (family, teachers, peers, etc.), he may be overwhelmed by feelings of worthlessness and inferiority. A common alternative reaction, often no less demoralising, is that of pity and the consequent expectations of helplessness which tends to lead to a dependent and subservient role for the individual. The debilitating effects of ingratiating pity include the establishment of a superior/inferior relationship and an expectation of gratitude for favours bestowed. When, however, a child is viewed objectively as a whole person with a significant limitation in a specific area of functioning, different only in degree from anyone else's limitations, then the life of the handicapped child is more likely to be productive and independent.

Societal attitudes to the handicapped are shaped by many forces, some of which are subtle, covert and not easily recognised. Historically, the handicapped have been the subject of negative stereotyping and discrimination in the political, religious, vocational, and social spheres. Whilst societies have different ways of interacting with their disabled members, an overview of the history of western civilisation does not reveal, on the whole, an enlightened approach to their acceptance.

SOCIETAL ATTITUDES TO DISABILITY

With our philosophical and political traditions rooted in the writings and institutions of the ancient Greeks, and our religious heritage emanating from the bible, one would think that our "enlightened" view of society would not sanction rejection of our less capable members. This, unfortunately, seems not to be the case. In fact, from some of these revered sources come some disquieting implications for the handicapped. Plato's writings, so influential and important to our Western way of thinking, have connotations for the acceptance of

the disabled. The Platonic ideal of goodness, beauty and truth being the virtues to which all should aspire are, on the fact of it, noble and worthwhile. The interdependence of these three highly desirable qualities implies that absence of one necessarily leads to absence of another: specifically, no beauty — no goodness. This goodness-beauty equation is one that is perpetuated to this day as is its reverse image, evil-ugliness. This association between ugliness and evil has been reinforced in other areas of influence — literature and even the Old Testament (Leviticus 21:16-18). Classical literature abounds with villains and ne'er-do-wells who are deformed, ugly and/or handicapped as though to highlight their evil natures. These characters are invariably pitted against the associated forces of goodness and beauty. This tradition has, of course, been perpetuated in the modern audio-visual media of films and television. To make a 'baddy' more plausible he should be ugly and, if possible, physically deformed; a "goody", on the other hand, must be beautiful and physically attractive to the opposite sex. Whilst countless exceptions to this general pattern could be cited, the overwhelming imagery of literature and films reinforces the evil-deformed, good-beautiful connections.

Nowhere has this connection between evil and ugliness been more obviously portrayed than in children's literature and very few influences are as powerful in establishing impressions in young minds. The pages teem with wicked trolls, ugly scheming stepsisters, witches, crooked men unevenly matched against beautiful princesses and their handsome beaux. Whilst so many of the tales are metaphors about the triumph of good over evil and are not a direct statement about the virtues and vices of disabled persons, the impressions generated in young minds are simple and long lasting — beauty is goodness, deformity is evil.

The Christian emphasis on brotherhood, equality and the value of the individual has obviously been a positive force in the acceptance of the handicapped within the society and the demonstrable efforts of religion's representatives to elevate the lives and status of many disabled and distressed persons has had a stimulating effect on their acceptance. Superstitious beliefs, however, often emanating from religious tenets, have also impeded the acceptance of particular types of handicaps. Both Luther and St. Augustine, theologians whose views do not always fit comfortably together, regarded congenital disability as a manifestation of evil. Luther, in fact, considered the

handicapped infant a "changeling", i.e., one whose soul had been replaced by the devil (Ryan and Thomas, 1980). The belief that the disabled must have "done something wrong" or is "suffering for the sins of the father" is still in some cases an inhibiting factor in the full acceptance of handicapped people.

The acceptance of social Darwinism has also had an inhibiting effect on the progress of handicapped people in Western societies. The Darwinian concept of the survival of the fittest reinforced the notion that the weak and disabled members were holding back the progress of the race and it was, in a sense, "natural" to reject and devalue them. Coupled with the predeterministic notion that heredity was the controlling variable in the intellectual, academic and physical performance of the individual, those from "poor stock" were not really considered worth the effort of education and support. Supporting the principles of Darwin was exotic "evidence" from the cultures of primitive tribes who, it was claimed, universally rejected their weaker and disabled members. Tales of infanticide, of cripples left to die in jungles and human sacrifice of the weaker tribal members were popularly accepted as evidence for the "naturalness" of rejecting the disabled. In an interesting review of anthropological evidence, Wright (1960) refutes this popular belief by illustrating the wide diversity of tribal attitudes and reaction to disabled members. She cites, for instance, among many others, three disparate cases which illustrate this variability of attitude: The Masai (Africa) kill misshapen children at birth; the Wogeo (New Guinea) kill children with congenital defects at birth, but those adventitiously handicapped are looked after with loving care; the Dahomeans (West Africa) select their law preservers from the disabled, consider them specially favoured by the spirits and hold them in high esteem. Infanticide and total rejection, it seems, are recorded as anthropologically interesting facts in popular literature, whereas positive, benign attitudes to the handicapped are less exotic and hence less likely to be publicised. What is clear is that, whilst there are many instances of rejection of the disabled within many tribal groups, it is not valid to use such anthropological evidence to support an argument for the universal and "natural" form of such rejection. Even if it were universal among "primitive" tribes that the disabled were devalued, it would seem a poor argument to extrapolate the morality of such behaviour to our civilised society. Indeed, the degree to which a society accepts and supports its weaker members

could reasonably be considered an index of its enlightened and civilised status.

Society's general attitudes to the disabled relegate them to an inferior status position. Wolfensberger (1980) describes this as "devaluation" - - the disabled are devalued members of society in much the same way as minority ethnic groups, criminals, and unemployed are. The analogy with minority ethnic groups has often been alluded to in the literature, but should not be pushed too far because, among other things, the handicapped person does not usually share his inferior status with other members of his family and thus lacks the comfort of familial support and common participation in the devaluation. Consequently, the disabled person is more likely to perceive his devaluation in terms of personal inadequacy rather than the injustice of the dominant group. Implicit in this relegation to an inferior status position is the requirement that the devalued person "not only knows his place but also keeps his place - - that is that he feels and acts like a less fortunate being" (Wright, 1960, p. 15). This effect is fostered and perpetuated by a general attitude of pity and consequent blind charity that highlights the superior-inferior status distinction between the pitier and pitied, the giver and the receiver. A framework of provisions for the disabled based on pity has built in to it the notion that assistance is a privilege, and until it is accepted that a normalised life-style is a *right* for such members of the society the inferior status will remain.

An essential problem of the labelling and categorising process is the relegation of the individual to the low status of the negative stereotype. Thus the child labelled "mentally retarded" is likely to be prejudged according to the prevailing stereotypical connotations of the term (e.g., fully dependent, totally illiterate, antisocial, etc.) even though he may simply have been educationally and socially disadvantaged. Everyone wishes to be judged in his own right and not according to a mythically homogeneous group membership to which he has been assigned.

Whilst the disabled, in general, are assigned a low status in our society, attitudes to the various disabling conditions are by no means uniform or predictable. Whilst there is not always logic or consistency in this variability of societal attitudes, a number of factors seem to be prominent in determining how a disability will be reacted to by

others. These would include: the visibility of the handicap; the degree to which it interferes with interpersonal communication; and the ability of the nondisabled to understand the cause of the condition. A further variable might be the observer's ability to empathise with the handicapped person.

As Goffman (1968) points out, highly visible disabilities have a discrediting effect, i.e., they immediately become the focus of attention in any social interaction. However, there is not a generalised relationship between the severity of the disability and societal attitudes towards it, such conclusions are not universal. The presence of a visible prosthesis can have an ameliorating effect on the evaluation of handicapped children. Kennedy (1974) concluded from the results of peer acceptance scales that children with profound and severe hearing loss were better accepted than those with less deficit. Elser (1959) found that hearing impaired children without hearing aids were significantly less well adjusted than those with aids. Shears and Jensema (1969) concluded that a visible prosthesis may actually reduce the awkwardness between the disabled and nondisabled peer by minimising the need for explanation of the handicap and by modifying unrealistic expectations.

Degree of impairment is only one significant aspect of visibility; the nature of specific handicaps also has an effect on the perception and attitudes of others. Shears and Jensema (1969) found amputation, for example, to be considered more favourably than cerebral palsy. Paraplegia resulting from adventitious trauma is viewed with more understanding than paraplegia associated with cerebral palsy. Facial disfigurements often have more immediate effects on interpersonal evaluations because they dominate initial impressions and, unless consistent contact is maintained, initial impressions become lasting impressions.

Because of the central role of communication in effective social interaction, any restriction in this area invariably evokes some degree of negativism in those unimpaired. Many disabilities impair normal communication: speech problems, hearing loss, cerebral palsy, and intellectual weakness all dramatically affect the degree to which the non-handicapped can communicate with the affected person. It is not coincidental that these particular disabilities are frequently more devalued than those, which on the surface, appear more restricting:

blindness, amputation, etc. The restriction on the ability to express needs and feelings frequently leads to an increase in unacceptable social behaviour (Hewett, 1970) which can reinforce the negative reaction of others. Inhibition of nonverbal communication may also affect attitudes. As people find it disconcerting and uncomfortable when eye contact cannot be made during conversation, this awkwardness can lead to early cessation of the interaction and a feeling of rejection by the disabled. It seems generally to be the case that where a visible physical disability is compounded by a communication problem, the social reaction to the handicapped individual is more negative than it would otherwise have been.

Seeking cause-effect relationships for events and conditions is fundamental to Western thought. A scientific view of man and his universe requires such causal connections to be made and, when they are unavailable, we often resort to myths or folklore to explain events that puzzle us. Attitudes to disabilities are very much affected by this perceived need to attribute cause, and those conditions that are easily understood in terms of their etiological antecedents are usually more positively evaluated. An amputation or paraplegia resulting from a sporting accident is more easily understood than an epileptic seizure or the bizarre speech of the deaf. Ignorance of the etiology can often result in the attribution of negative causes to a disability and the consequent debilitating effect of blame and rejection which often follows lack of understanding.

It is the nature of human beings to search for reasons and answers. We need to know, and where knowledge is lacking, we still try to make sense out of the course of events. And the sense that makes one kind of sense, in the absence of fact, is to link disability as a consequence and producer of error and evil. (Wright, 1960, p. 261)

It is not, of course, universally the case that disabilities whose etiologies are unknown or confused are vested with evil connotations, as, for many people, suffering is seen as a vehicle for the deeper understanding of life. Notwithstanding this view, the ignorance of many in the community about the nature and causes of disabling conditions contributes to the still too frequent negative attitudes present in our society.

To be able to empathise with a person is to be better able to understand and appreciate his difficulties. Such an understanding tends to lead to more positive attitudes and more realistic expectations. Some conditions can be approximately, if not perfectly, simulated and by so doing an able-bodied person gains some superficial insight into the difficulties faced by the handicapped. By covering his eyes and attempting to live an ordinary day (or even an hour) at home, work or school, the sighted person will be exposed to a terrifying experience that will tend to raise his estimation of the visually impaired. Negotiating public transport, toilets, buildings, and recreational areas in a wheelchair has a similarly chastening effect on the able-bodied and leads to a growing admiration and respect for the wheelchair bound. For many special problems such effective simulation is not possible - deafness cannot be effectively produced by blocking the ears, nor can intellectual or speech handicaps be copied by simply acting "dumb" or "mute". In his disturbing novel *Black Like Me*, Howard Griffin acquaints us with the problems of another devalued person - the poor, American black - by artificially altering the pigmentation of his skin. Whilst the lessons learned from such an experience cannot be directly extrapolated to the life of a handicapped person, there are elements of prejudice and rejection common to all devalued people.

Although the presence of negative attitudes within the society obviously does affect the adjustment and development of some disabled children and adults, they are not the sole or most significant determinants. Support from family, significant others (including teachers) and peers are crucial to the establishment of a personality able to cope with the frustrations, hurts and rejections inherent in being significantly different. Ausubel (1952, p. 102) states, "The psychological consequences of deviation will depend upon social and individual attitudes towards nonconformity, the strength of intrinsic attitudes of self-acceptance and the possession of compensatory assets."

The role of the family can never be underestimated and a warm, loving and supportive home environment can buttress the child against the disappointments and hurts he experiences outside. In a study outlined by Langdon and Stout (1951) in which 260 well adjusted children were examined, it was found that, despite the tremendous range of physical and intellectual differences present in the group and the diversity of experiences and child rearing practices to which they

were exposed, a positive, loving home environment was the one outstanding characteristic shared by all. The ability of the family to accept and support the child with a disability is probably the most important factor in his capacity to cope adequately, but the road to full acceptance is very difficult to travel. Wright (1976) outlines the stages that parents of a handicapped child tend to pass through on their way to full acceptance. The universal desire of expectant parents is that the child will be healthy, and the realisation that this expectation has not been met can be a most devastating experience. Attempts to explain the discrepancy between expectation and reality often lead to periods of shock, disbelief, blame, guilt, and depression that extensively strain the family relationships. These stages usually need to be worked through satisfactorily before full acceptance and adjustment can be achieved. For many families the task is too great and the child is either institutionalised or endured in the home situation — either alternative seriously compounding his developmental problem. Where positive adjustment is made and the child is accepted for what he is and not resented for what he might have been, the likelihood of him being able to adjust positively to a lifestyle different from that of his peers and siblings is enhanced.

For many children, especially those with disabilities, teachers represent significant adult models and, as such, their attitudes and values are important in the child's perception of his own self worth. The attitudes of teachers towards handicapped children have typically been studied in relation to the concomitant variables of contact, information, age and sex. The degree of association or contact with children with special needs has been found to be consistently related to positive attitudes. In a series of cross-cultural doctoral studies under the direction of Dr. J. Jordan of Michigan State University, the majority of findings have revealed a significant relationship between positive attitudes and amount of association with handicapped children (Friksen, 1966; Dickie, 1967; Cessna, 1967; and Gottlieb, 1973). These findings have been corroborated in studies involving children and their attitudes to handicapped peers.

Knowledge or understanding of handicapping conditions as a predictor of attitudes of educators is less conclusively demonstrated in the literature. Murphy (1960) and Bateman (1964) found a strong relationship between the amount of knowledge and understanding of visually impaired children and the positive attitudes of teachers

and college students. Wyder, Wilson and Frumkins (1967) failed to find such evidence. Higgs (1975) examined ten groups with differential amounts of contact and information on handicapped children and decided that the attitudes improved with an increase in both variables. When the effects of the two variables were compared singly and collectively, Anthony (1972) concluded that a combination of the two was more significantly related to attitudes than either variable alone. The sex, age or experience of teachers have not been found to be significantly related to attitudes.

CONSIDERATIONS FOR TEACHERS

Arising out of this overview of the social psychology of disability is the awareness that a child brings with him to school, not only the physical, sensory or intellectual restriction imposed by his disability, but also his feelings and perceptions of himself and others and attitudes shaped by the special circumstances of his social history. We have seen that, in comparison with his non-handicapped peers, he is generally exposed to a less positive and nurturant social environment in which his self-esteem is constantly under attack. The teacher of children with special needs has first of all to be a sensitive person who can make the child's education rewarding and confidence building experience.

The child must be considered as an individual with relative strengths and weaknesses and not as a disabled person whose limitation has become the definition of his abilities. All children, irrespective of their difficulties, have competencies that need to be highlighted by the teacher in her class activities. This is especially important for those children whose anomalies have, by their visibility and/or associated stigma, drawn disproportionate negative attention from others. Adequate social and emotional adjustment depends upon the child's perception that he is valued for what he is and can do and if this impression is reinforced he becomes better able to tolerate his failures. In the case of handicapped children, "over compensation" (Wolfensberger, 1980), in the form of extra attention to their relative strengths, may be necessary to redress the balance of negative attention typically given to their handicaps.

An understanding of the child's difficulty will better enable the teacher to set realistic expectations on his immediate performance and

will provide her with insight into his behaviour that may otherwise be misinterpreted. In some situations this may require liaison with the medical or para-medical professional who is responsible for the child's health. It may also be necessary to acquaint the other children in class with the nature of the child's difficulty. This, of course, must be done with sensitivity and subtlety so that the child is not discomforted and the other children are better able to appreciate his specific difference.

The message that comes from studies of attitudes of both peers and teachers toward handicapped children is very clear — the more contact with, and to a lesser degree the more information about such children, the more positive the attitude. This reinforces the other arguments for integration of children with special needs (Chapter 1) and encourages integration at as early an age as possible. Negative stereotypical behaviour towards the disabled has its roots, to a large extent, in ignorance of their difficulties by the general populace and their physical segregation reinforcing their difference from the norm. Forced integration into the classrooms of teachers who presently demonstrate negative attitudes towards the inclusion of such children in their classes will only exacerbate the children's difficulties as such attitudes are likely to be modelled by the other class members. Integration, then, is a sensitive issue and should be implemented (a) as early as possible to offset the negative effects of entrenched rejection, and (b) selectively, so that insensitive teachers are prevented from further contributing to the handicapped child's adjustment problems. To improve attitudes, teachers need involvement with and information about children with special difficulties. Greater contact is often difficult to provide without over-exposing the children to the critical gaze of large numbers of strangers; a situation that in itself often reinforces this deviancy syndrome, the very thing that we are trying to break down. More widespread use of videotapes, films and simulation activities might be effective in achieving a greater awareness of the special needs of the children.

A most effective but infrequently used medium for the transmission of information about childhood disabilities is the literature that portrays children with disabilities in a style and at a reading level appropriate to children (Appendix C). There is currently available a small but growing range of books, suitable for varying ages and presenting a positive view of children coping with their handicaps. The sensitive

use of such books by the classroom teacher might go a long way to developing in the children an understanding of childhood disability and may be fruitfully used as stimulus material for classroom discussion.

Actual classroom organisation and programming may have a bearing on the acceptance of children with problems. In a review of models of social organisation within the classroom Gump (1980) has concluded that small heterogeneous social groupings which function as learning and interactive units within the classroom, are most efficacious in developing understanding and tolerance among the children. The groups should be comparable in range of abilities and differences. Whilst the studies reviewed examined the role of such class organisation in breaking down prejudice towards culturally different children, it is reasonable to suppose that such positive results would similarly be found in the acceptance of handicapped children.

If access to regular education is to become increasingly available to children who were hitherto considered too handicapped for such placement, then the Education Department and the colleges responsible for teacher training should be very committed to improving the knowledge and consequent attitudes of the teachers who will be responsible for the education of these heterogeneous groups of children. Wherever practical, involvement with handicapped children should be encouraged so that the myths and inaccuracies associated with particular difficulties are dispelled and teachers in general develop a more favourable attitude to extending the range of individual differences within their regular classes.

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APPENDIX A

EDUCATIONAL FACILITIES IN WESTERN AUSTRALIA FOR CHILDREN WITH SPECIAL NEEDS (1981)

CHILDREN WITH INTELLECTUAL DIFFICULTIES

The Education Department of W.A. through the Special Education Branch provide special classes (in ordinary schools) and special schools for children who have general learning difficulties.

Special Classes — Primary

| | |
|----------------------|--------------------------|
| Amaroo | Maddington (2) |
| Armadale | Medina (2) |
| Balga Junior Primary | Merredin |
| Bayswater | Midvale (2) |
| Beaconsfield | Mirrabooka |
| Belmay | Morley |
| Bentley | Mt. Barker |
| Bicton | Mt. Hawthorn |
| Boulder (2) | Mullaloo Heights |
| Broome D.H.S. | Narrogin |
| Bunbury South | Nollamara Junior Primary |
| Cloverdale | Nollamara |
| Derby D.H.S. | North Innaloo |
| East Carnarvon | North Perth |
| East Hamilton Hill | Pinjarra |
| East Narrogin | Queen's Park (2) |
| Esperance | Rockingham Beach |
| Geraldton (2) | Safety Bay |
| Gwynne Park | Scarborough |
| Highgate | South Terrace (2) |
| Hilton | Spencer Park |
| Hillcrest | Tuart Hill |
| Kalamunda (2) | Victoria Park (2) |
| Kalgoorlie | Victoria Park East (2) |
| Koonawarra | Willagee |
| Manjimup | Westminster |
| Marmion | Wagin |

Special Classes — Secondary

| | |
|--------------------------------|----------------------------|
| Armadale Senior High (2) | Kent Street Senior High |
| Belmont Senior High | Kewdale Senior High |
| Bentley Senior High | Kwinana Senior High |
| Bunbury Senior High | Lockridge Senior High |
| Cannington Senior High | Melville Senior High |
| Collie Senior High | Merredin Senior High |
| Eastern Goldfields Senior High | Modern School Senior High |
| Geraldton Senior High | Rockingham Senior High |
| Governor Stirling Senior High | Scarborough Senior High |
| Hamilton Senior High | Thornlie Senior High |
| John Curtin Senior High (2) | Tuart Hill Senior High (2) |
| Kalamunda Senior High | |

Special Schools — Metropolitan

| | |
|------------------|---|
| * Balga | * White Gum Valley |
| Bayswater | Kenwick |
| * Millen | Safety Bay |
| South Kensington | McGilvray House (Association with D.I.H.) |

Special Schools — Country

| | |
|-----------|--------------|
| Albany | Geraldton |
| Boulder | Kellerberrin |
| Bunbury | * Manjimup |
| Busselton | Narrogin |
| Carnarvon | Port Hedland |
| * Collie | Wongan Hills |
| Esperance | |

* pre-school centre at the school.

The Slow Learning Childrens' Group provide day activity schools for those children whose intellectual handicap is currently considered too severe for placement in special schools.

| Metropolitan | Country |
|------------------|-----------|
| Churchlands | Bunbury |
| Inglewood | Esperance |
| Victoria Park | Mandurah |
| White Gum Valley | Northam |

The Division for Intellectual Handicap (Mental Health Services) provides pre-schools for young children with intellectual difficulties. The pre-schools are situated in metropolitan regions:

Northern
Eastern
South Eastern
Central

Education is also provided at Pyrtton Training Centre and the Prospect school.

CHILDREN WITH PHYSICAL DIFFICULTIES

Special schools are provided by the Education Department for children suffering a wide variety of disabilities including cerebral palsy, muscular dystrophy, spina bifida and a wide range of chronic ailments.

Special Schools

Willetton Special School — modern school designed especially to meet the needs of physically handicapped children, caters for children from the Southern Metropolitan regions.

Koondoola Special School — similar to Willetton — provides for physically handicapped children from the northern suburbs.

Buckland Hill Special School — adjoins Rocky Bay Children's Village operated by the Crippled Childrens' Society. The school caters for children disabled mainly by muscular dystrophy and spina bifida.

Sir James Mitchell School — attached to the centre owned and operated by the Spastic Welfare Association. Caters for children with cerebral palsy.

Lady Lawley Cottage — attached to a hospital run by the Red Cross Society, the school caters for a wide range of chronic ailments, post operative recovery cases, etc.

Hospital Schools — Princess Margaret and Fremantle Hospitals have schools for children attending.

Homebound — Children who are confined at home because of illness or who miss substantial schooling as a result of intermittent hospitalisation are catered for by the "Booraak" service of home visiting teachers.

Rehabilitation Centre — Schools for rehabilitees exist at Melville Rehabilitation Centre and Royal Perth Hospital — (Shenton Park Annexe).

CHILDREN WITH VISUAL DIFFICULTIES

Special School — Sutherland Blind Centre, attached to Sutherland Primary School (Dianella) is a centre in which training in mobility, braille reading and typing are taught to children with severe visual problems. A pre-school centre is attached and currently caters mainly for multiply handicapped blind children.

Special Classes — Special classes for visually impaired children have been established at Nollamara Primary School and Lathlain Primary School.

A resource teacher is located at Morley High School and serves a number of children at the school and also acts as an itinerant advisory teacher for blind children in other high schools.

CHILDREN WITH HEARING DIFFICULTIES

The Education Department provides:

Hearing Assessment Centre. The centre provides hearing assessment and parent counselling as well as diagnostic pre-school facilities.

Cottesloe Primary School for the Partially Hearing. Partially hearing children follow a natural language programme.

Mosman Park School for Deaf Children. This school provides education for children with severe hearing difficulties and follows a total communication system.

Secondary Partially Hearing Classes. There are three at Swanbourne Senior High School and one at Bentley Senior High School.

Primary Partially Hearing Classes. Ardross Primary (2), Bicton Primary (1), Dianella Primary (1), and Yokine Primary (1).

Visiting Teacher Service. Advisory teacher who visits children with hearing difficulties in regular classrooms.

The Speech and Hearing Centre (Wembley) provides an alternative education for children with serious hearing and speech problems. It also has small units in selected private schools.

CHILDREN WITH SPECIFIC LEARNING DIFFICULTIES

Resource Centres staffed by advisory teachers are located in all regional centres.

Metro N. E. Region

c/- Yokine Primary School, Woodrow Avenue, Yokine.

Metro N. W. Region

176 Newborough Street, Doubleview

Metro S. E. Region

1 Division Street, Welshpool

Metro S. W. Region

184 Hampton Road, Beaconsfield

Special Education Branch

322 Hay Street, Subiaco

South West Region

Queen Street, South Bunbury

Resource Centre

Craig House, Pickersgill Street, Bunbury

Great Southern Region

Serpentine Road, Albany

Upper Great Southern Region

Homer Street, Narrogin

Midlands Region

Duke Street, Northam

Goldfield Region

Federal Road, Kalgoorlie

Geraldton Region

30 Gregory Street, Geraldton

Pilbara Region

S.G.I.O. Building, Welcome Road, Karratha

Kimberley Region

Government Offices, Cnr. Papuana Street & Konkerberry Drive, Kununurra

Yilgarn Region

Cunningham Street, Merredin

Regional Remedial Clinics

These provide short intensive remedial instruction for children from regional schools on the basis of daily withdrawal sessions for five or six weeks. These clinics operate primarily for children in the junior grades. Currently the clinics are situated in the:

Metro North-East Region

Metro North-West Region

Metro South-East Region

Metro South-West Region

Goldfields (Kalgoorlie) Region

Great Southern Region (Albany)

South West Region (Bunbury)

Remedial Centres are located at central schools and children from the surrounding areas can attend on a withdrawal basis. These centres are located at the following primary schools:

| | |
|----------------------|-----------------|
| Balga Junior Primary | Mt. Hawthorn |
| Beaconsfield | Nollamara |
| Challis | North Inglewood |
| Claremont | Orelia |
| Como | Sorrento |
| East Fremantle | Tranby |
| Kalamunda | Victoria Park |
| Langford | Westminster |
| Lathlain | |

Most high schools have remedial reading teachers attached to the English Department.

Provisions for Children with Learning Difficulties in Rural Areas. Chidley Educational Centre is a short-term residential facility for children from country areas who do not have access to local remedial help.

There is also the Rural Childrens' Special Education Unit, which provides back up itinerant support for the School of the Air children, those from Chidley Point and other children in remote areas in need of specialist diagnosis and remediation.

Classes exist in some Catholic and independent schools, but there is no co-ordinating body that organises them.

CHILDREN WITH BEHAVIOURAL DIFFICULTIES

The Education Department has developed Socio-psychoeducational Resource Centres (S.P.E.R.C.S.) which are treatment centres for children with serious behavioural difficulties. Each SPER Centre is attached to a normal school to facilitate "maximum useful association" when a child's behaviour has improved sufficiently.

S.P.E.R. Centres are located at:

Challis (Armadale)
Coolbellup
Queens Park
Warriapendi

The Community Welfare Department provides special schools for children with behavioural difficulties who have been referred from a number of sources. The main schools are Koorana in Bentley, and McCall Centre in Cottesloe. Teachers are also supplied at the remand and detention centres at Bridgewater; Hillston; Longmore; Nyandi and Riverbank.

The Catholic Church has schools for children with behavioural problems. They are Castledare and Clontarf for boys, and Home of Good Shepherd and Forrest Street Centre for girls.

Mental Health Services. Specialist medical and psychiatric help is given at the Child Guidance Clinic and Mildred Creek Autistic Centre.

CHILDREN WITH SUPERIOR ABILITIES

The Education Department through its Gifted Children's Programme makes special provision for intellectually gifted and talented children.

For primary school children, each region has developed its own philosophy for the detection and provision of such children. (The addresses of the regional offices are listed earlier).

For secondary school students, eight high schools have been selected as centres for gifted programmes:

| | |
|-------------------|-----------------|
| Applecross | Hollywood |
| Belmont | Kelmscott |
| Duncraig | Mt. Lawley |
| Governor Stirling | South Fremantle |

In addition, selected high schools have become centres for extension work for children with special talents.

| | |
|-----------|-----------------------------|
| Music | — Perth Modern; Churchlands |
| Art | — Applecross; Balcatta |
| Dance | — Girrawheen; Balcatta |
| Drama | — John Curtin |
| Languages | — Mt. Lawley; Scarborough |

More detailed information on resources can be obtained from the publications:

Education Department of Western Australia: Educational Facilities in Western Australia for the Child with Special Needs.
Produced by the Special Education Branch, 1981.

Educational Resource Index, W.A. Institute of Technology, 1979.

APPENDIX B

VOLUNTARY AND GOVERNMENT SUPPORT AGENCIES FOR CHILDREN WITH SPECIAL NEEDS

(1981)

VOLUNTARY

| | |
|---|--------------|
| Arthritis and Rheumatism Foundation 1st Floor, 865 Hay Street, Perth 6000 | 322 5252 |
| Association for the Advancement of Brain Injured Children P.O. Box 113, North Beach 6020 | 447 3590 |
| Association for the Blind 61 Kitchener Avenue, Victoria Park 6100 | 362 1122 |
| Asthma Foundation of W.A. 89 St. George's Terrace, Perth 6000 | 322 4000 |
| Australian Association for Better Hearing 306 Murray Street, Perth 6000 | 322 4085 |
| Australian Council for Rehabilitation for the Disabled 434 Scarborough Beach Road, Osborne Park 6017 | 444 5504 |
| Autistic Children's Centre Mildred Creak Centre, 56 Subiaco Road, Subiaco 6008 | 381 2901 |
| Autistic Children's Association (Parent Support Group) Unit 208, 396 Scarborough Beach Road, Osborne Park 6017 | 444 6933 |
| Cleft Palate and Lip Society — Cleft PALS 57 Birdwood Avenue, Como 6152 | 367 2672 |
| Crippled Children's Association of W.A. Inc. McCabe Street, Mosman Park 6012 | 384 1855 |
| Cystic Fibrosis P.O. Box 7271, Cloister Square, Perth 6000 | a/h 299 6003 |
| Diabetic Association 19 Irwin Street, Perth 6000 | 325 7174 |
| Foster Parent's Association of W.A. G.P.O. Box E287, Perth 6001 See also under Foster Parents | 381 1529 |

| | |
|--|-----------------------|
| Gifted and Talented Children's Association 19 Denmark Way, Warwick 6024 | 447 4913 |
| Handicapped Children's Association Johnston Street, Cottesloe 6012 | 384 3657 |
| Hyperactive Help 77 Fernhurst Crescent, Balga 6061 | 349 9759 272 6143 |
| Independent Living Centre (Aids, display and information — service for the disabled). 60 Havelock Street, West Perth 6005 | 322 4995 3217975 |
| Junior Dieters Club for Overweight Children Princess Margaret Hospital | 381 0222 Ext. 440. |
| Mentally Incurable Children's Association 462 Great Eastern Highway, Redcliffe 6104 | 277 2750 |
| Multiply Handicapped Children's Association Johnston Street, Cottesloe 6012 | 384 3657 |
| Narkaling Centre (Voluntary assistance for intellectually handicapped children and their families — a service of the Slow Learning Children's Group) 313 Churchill Avenue, Subiaco 6008 | 381 9574 |
| Riding for the Disabled Brockway Road, Claremont 6010 | 384 3492 |
| Slow Learning Children's Group 1305 Hay Street, West Perth 6005 | 322 3377 |
| Spastic Welfare Association 40 Rookwood Street, Mt. Lawley 6050 | 272 1888 |
| Speech - W.A. (Society for promotion of essential education for children with communication handicaps) 125 Eglinton Crescent, Hamersley 6022 | 447 5392 4473745 |
| Speech and Hearing Centre for Children Dodd Street, Wembley 6014 | 387 5444 |
| Specific Learning Difficulties — SPELD Dyslexic Children 53 Curtin Avenue, Mosman Park 6012 | 384 1299 |

| | |
|--|----------|
| Spina Bifida Association 8 Vaughan Street, Dianella 6062 | 276 8490 |
| Toys — Noah's Ark Toy Lending Library for Handicapped Children 153 Beaufort Street, Perth 6000 | 328 1589 |
| W.A. Deaf Society 300 Hay Street, Perth 6000 | 325 5077 |

GOVERNMENT

Mental Health Services (Division for Intellectually Handicapped).

| | |
|--|----------|
| Irrabeena Centre 53 Ord Street, West Perth 6005 | 322 2499 |
| Pre-School Services Eastern Region — Day Unit Pyrtton Training Centre, Lord Street, Eden Hill 6054 | 279 5300 |
| Northern Region — Elwyn Morey Centre, 21 Wordsworth Street, Dianella 6062 | 276 9244 |
| South Western Region — 335 Rockingham Road, Spearwood 6163 | 418 4644 |
| Central Region — 19 Walker Avenue, West Perth 6005 | 322 2499 |
| South Eastern Region — 53 Matilda Road, Huntingdale 6110 | 398 4144 |

Child Guidance Clinic

Assistance to children, adolescents and families who have emotional or behaviour problems.
590 Newcastle Street, Perth 6000 328 5788

Child Development Centre

A unit of the Community and Child Health Services. The centre provides an assessment referral service for any child with developmental problems including those of physical, psychological or social origin.
4-6A Rheola Street, West Perth 6005 321 6161

Community Welfare Department

81 St. George's Terrace, Perth 6000 321 0244

Princess Margaret Hospital

24 hour service. You will always be able to talk to someone who can help you. 321 0244

Parent Guidance Centre for Children with Impaired Hearing
 Johnston Street, Cottesloe 6011 384 9747
 State Assessment Centre for Children with Impaired Hearing
 Johnston Street, Cottesloe 6011 384 9749

For a more comprehensive catalogue of services refer to the:

Directory of Parent Support Services in W.A. Prepared by Child-
 birth and Parenthood Educational Association, Perth W.A. (Inc.).

APPENDIX C

ANNOTATED BIBLIOGRAPHIES OF LITERATURE ON DISABILITIES

BIOGRAPHIES AND AUTOBIOGRAPHIES OF HANDICAPPED CHILDREN

- Brown, C. *My left foot*. London: Seeker & Warburg, 1954. The brilliant autobiography of one of Ireland's foremost authors, severely crippled from birth with severe cerebral palsy.
- Browning, E. *I can't see what you're saying*. London: Eleck, 1972. The story of a mother's efforts in the upbringing and education of a child with serious speech and hearing problems.
- Copeland, J. *For the love of Anne*. London: Arrow, 1973. Biography of an autistic child based on the diary of her father.
- Crossley, R., & McDonald, A. *Annie's coming out*. Ringwood, Victoria: Penguin, 1980. Controversial story of the rehabilitation of a seriously disabled girl who was taken from an institution by an involved hospital worker.
- D'Ambrosio, R. *No language but a cry*. New York: Doubleday, 1970. The account by a psychoanalyst of the success in helping a seriously handicapped and withdrawn girl to function normally.
- Edwards, G. *Keep in touch*. London: McGibbon & Kee, 1962. An autobiography of a person who became blind in early childhood.
- Epstein, J. *Mermaid on wheels*. Sydney: Ure Smith, 1967. A biography of a person who became wheelbound in early adulthood.
- Epstein, J. *Image of the King*. Sydney: Ure Smith, 1970. A biography of an intellectually handicapped youth.
- Green, H. *I never promised you a rose garden*. New York: Holt, Rinehart & Winston, 1964. The brilliant story of a schizophrenic girl and her struggle to regain her sanity.
- Hickman, J. *One step at a time*. Adelaide: Rigby, 1980. Autobiography of a cerebral palsy person who achieves a PhD.
- Hundley, J. *The small outsider*. Sydney: Angus & Robertson, 1971. A moving story of a family's struggle in bringing up an autistic child.

- Hunt, M. *The world of Nigel Hunt*. New York: Garrett, 1967. An autobiography of a Downs Syndrome child — unique in the field.
- Mortenson, R. *Leave the light on for Kent*. New York: Exposition Press, 1971. The story of a family's realization of the fact of their child's cerebral palsy and their struggle to cope with the situation.
- Opie, J. *Over my dead body*. London: Pan Books, 1973. An autobiography of a person who developed polio in late adolescence.
- Park, C. *The siege*. Boston: Little Brown & Co., 1967. A family's battle for the understanding and love of their autistic child.
- Marshall, A. *I can jump puddles*. Hawthorn, Victoria: Lloyd O'Neil, 1972. Brilliant autobiography of a man crippled by polio as a child. Recently serialized on television.
- Stuecker, U. *Tommy*. Arlington, Virginia: CEC, 1972. A case study of the treatment of an autistic boy.
- Wakefield, T. *Some mothers I know*. London: Routledge & Kegan Paul, 1978. A subjective account of the lives of four mothers of handicapped children — their frustrations, fears and achievements.
- Wallace, M., & Robson, M. *On giant's shoulders*. New York: Times Books, 1976. The inspiring story of a child afflicted at birth from the effects of thalidomide.
- West, P. *Words for a deaf daughter*. New York: Harper & Row, 1968. Biography of a deaf child written by a talented and creative parent.

BOOKS ON DISABILITIES WRITTEN FOR CHILDREN

Junior and Middle Primary

- Brightman, A. *Like me*. Little Brown. Colour photo-story of a retarded boy.
- Fanshawe, E. *Rachel*. Bodley Head. Story of a girl confined to a wheelchair.
- Gold, P. *Please don't say bello*. Human Sciences Press. Story about an autistic boy.
- Hasler, E. *Martin is our friend*. Methuen. The developing acceptance of a handicapped child through his love of a horse.
- Hawker, F., & Withall, L. *Donna finds another way*. Jacaranda. Tells

how Donna, a spastic girl, learns that she can't always do what other children can do.

- Hawker, F., & Withall, L. *I can read in the dark*. Jacaranda. Describes how blind children can see with their hands.
- Hawke, F., & Withall, L. *With a little help from my friends*. A boy with spina bifida learns that he can do almost anything with a little help from his friends.
- Lasker, J. *He's my brother*. Whitman. Story of a slow learner told by his older brother.
- Levine, E. *Liza and her soundless world*. Human Sciences Press. Liza teaches about children with hearing difficulties.
- Lichfield, A. *A button in her ear*. Concept books. A young girl with hearing problems gets a hearing aid.
- Lichfield, A. *A cane in her hand*. Concept books. A young girl with a serious visual handicap learns to walk with a cane.
- Peterson, P. *Sally can't see*. Black. Clear description and picture of a totally blind child.
- Spence, E. *October child*. Oxford University Press. An award winning story about a family coping with an autistic child.
- Stein, S. *About handicaps*. Walker & Co. Shows the relationship between a spastic boy and a non-handicapped boy.
- Tassler, J. *Howie helps himself*. Whitman. Describes the sense of achievement when Howie, a cerebral palsied child, can move his own wheelchair.

Upper Primary and High School

- Andrew, P. *Mister O'Brien*. Thomas Nelson. A lame boy learns to become independent.
- Corcoran, B. *A dance to still music*. Athenum. The story of the adventures of a deaf girl who runs away.
- Gold, P. *Please don't say bello*. Human Sciences Press. Story of an autistic child and the adjustment of his family when moving in to a new neighbourhood.
- Parker, R. *He's my brother*. Brockhampton Press. A sensitive story of an autistic boy's behaviour as seen through the eyes of his brother.

Savitz, H. *On the move*. John Day Co. The story of a paraplegic girl tackling her emotional and social problems.

Savitz, H. *Run don't walk*. New American Library. The story of a paraplegic high school girl and her attempt to cope with the limitations of the school building.

Southall, I. *Let the balloon go*. Methuen. A spastic boy copes with the over-protectiveness of his mother.

Wrightson, P. *I own the racecourse*. Hutchinson. A fascinating story about the fantasy world of an intellectually handicapped boy.

For more comprehensive bibliographies refer to:

What difference does it make? A publication of the Australian Library Promotion Council.

Baskin, B., & Harris, K. *Notes from a different drummer : A guide to juvenile fiction portraying the handicapped*. New York: Bowker, 1977.

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