

1984

The education of children with specific reading disabilities in Western Australia : report to the Minister for Education

Western Australian Council for Special Education

Follow this and additional works at: <https://ro.ecu.edu.au/ecuworks>



Part of the [Education Commons](#)

Western Australian Council for Special Education. (1984). *The education of children with specific reading disabilities in Western Australia : report to the Minister for Education*. Perth, Australia: Western Australian College of Advanced Education.

This Report is posted at Research Online.
<https://ro.ecu.edu.au/ecuworks/7040>

Edith Cowan University

Copyright Warning

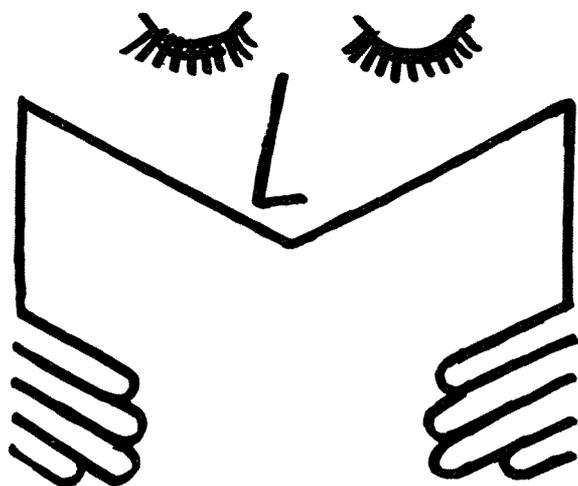
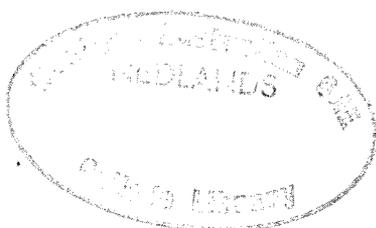
You may print or download ONE copy of this document for the purpose of your own research or study.

The University does not authorize you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following:

- Copyright owners are entitled to take legal action against persons who infringe their copyright.
- A reproduction of material that is protected by copyright may be a copyright infringement. Where the reproduction of such material is done without attribution of authorship, with false attribution of authorship or the authorship is treated in a derogatory manner, this may be a breach of the author's moral rights contained in Part IX of the Copyright Act 1968 (Cth).
- Courts have the power to impose a wide range of civil and criminal sanctions for infringement of copyright, infringement of moral rights and other offences under the Copyright Act 1968 (Cth). Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

THE EDUCATION OF CHILDREN WITH SPECIFIC READING DISABILITIES IN WESTERN AUSTRALIA



**Western Australian
Council for
Special Education**

THE EDUCATION OF CHILDREN WITH SPECIFIC READING DISABILITIES

IN WESTERN AUSTRALIA

REPORT TO THE MINISTER FOR EDUCATION

THE WESTERN AUSTRALIAN COUNCIL FOR SPECIAL EDUCATION

March, 1984

**Printed by the Western Australian College of Advanced Education
Churchlands Campus, Pearson Street, Churchlands, W.A. 6018
Publication-- 375 - 3 - 84 - 1000
National Library of Australia card and ISBN 0 - 7298 - 0019 - 9**

THE WESTERN AUSTRALIAN COUNCIL FOR SPECIAL EDUCATION

TERMS OF REFERENCE AND MEMBERSHIP

The Western Australian Council for Special Education was formed by the then Minister for Education, the Hon. G.C. MacKinnon late in 1974 to advise him on all aspects of special education in Western Australia. The terms of reference of the Council were:

- a. Advise and assist in the development of tertiary education programmes.
- b. Advise on and commission research and evaluation in the area of special education.
- c. Rationalise total State effort within the field of special education.
- d. Provide a forum for debate in the field of special education.
- e. Provide a liaison between professionals and between profession and community.
- f. Assist and advise of programme development.
- g. Provide professional arbitration in the field of special education.
- h. Report to and advise the State Government on matters relating to special education.

The Council has continued to work within those terms of reference for the present Minister for Education, the Hon. R. Pearce and members of the Council for 1984 are:

Dr D.A. Jecks, Director, Western Australian College of
Advanced Education (Chairman).

Dr H.J. Blackmore, Psychiatrist Superintendent, Community
Psychiatrist Division, Mental Health Services.

Dr P.G. Cole, Senior Lecturer in Education, University of
Western Australia.

Mr K. Green, Principal, Balga Special School, Education
Department of Western Australia.

Dr A. Little, Research Fellow, University of Western Australia.

Mr H.W. Loudon, Assistant Director-General (Secondary), Education
Department of Western Australia.

Mrs P Smeeton, O.B.E., J.P., Former President, Country Women's
Association of Western Australia (Inc.)

Dr R. Weiland, Director of Guidance and Special Education, Education
Department of Western Australia.

Mrs N.M. Kennealy, Education Officer, Education Department of
Western Australia (Executive Officer).

CONTENTS

	Page
WESTERN AUSTRALIAN COUNCIL FOR SPECIAL EDUCATION TERMS OF REFERENCE AND MEMBERSHIP	i
CHAPTER ONE: INTRODUCTION	1
CHAPTER TWO: REMEDIAL READING IN WESTERN AUSTRALIAN GOVERNMENT SCHOOLS	10
Primary Schools	12
Secondary Schools	21
CHAPTER THREE A REVIEW OF THE LITERATURE ON LEARNING DISABILITIES	27
Reading Disabilities	34
A New Definition of Learning Disabilities by the American National Joint Council for Learning Disabilities (NJCLD)	39
Minimal Brain Dysfunction	45
Alexia and Dyslexia	49
CHAPTER FOUR: DIAGNOSIS, IDENTIFICATION AND ASSESSMENT	57
Introduction	57
Diagnosis and Assessment	59
Clinical Assessment	61
Early Identification and Prevention	64
Conclusion	66

	Page
CHAPTER FIVE: RECOMMENDATIONS	67
Diagnosis and Assessment	69
Delivery of Services	75
Teacher Education	79
Alternatives for Poor Readers	86
REFERENCES	89
APPENDICES -	
APPENDIX A: Recommendations from <u>Weak Readers in Primary Schools</u> (Deschamp and Markey, 1983, pp. 3-5).	96
APPENDIX B: Comments and Recommendations from <u>Weak Readers in Secondary Schools</u> (Markey, Deschamp and Tame, 1983, pp. 9-20).	98
APPENDIX C: Glossary	105
APPENDIX D: Persons and Organizations Making Written Submissions	108
APPENDIX E: Remedial Facilities Visited by Council	111
APPENDIX F: Persons who gave Oral Evidence at Council Meetings	112
APPENDIX G Student Statistics (Annual Report, Education Department of Western Australia, 1946).	114
APPENDIX H: Commentary and Position Paper No. 1 National Joint Council on Learning Disabilities	116
APPENDIX I: List of Recommendations	123



TABLES

		Page
1	1982 Student Enrolments	8
2	Age and Class of Students in Government Schools in Western Australia, July, 1946.	12
3	Students Receiving Remedial Reading Instruction in Remedial Clinics during 1983	16
4	Students Receiving Remedial Reading Instruction in Remedial Centres during 1983	17
5	Reading Resource Teachers in Secondary Schools, 1984	25

FIGURES

1	Distribution of combined scaled reading scores for Years 3 and 6	60
---	--	----



CHAPTER ONE

INTRODUCTION

- 1.1 There are few developmental tasks in a child's life more important than learning to read. There are not many matters which concern parents and teachers more than whether or not a child makes satisfactory progress in learning to read. Parents and teachers are aware that young children soon realize whether or not they are progressing in much the same way as the rest of their peer group. As children move towards the end of primary school and enter secondary school, reading remains a fundamental skill on which so much other learning depends.
- 1.2 Council is cognizant of the efforts made by teachers, principals and superintendents to improve the teaching of reading in schools so that all children have every chance to develop basic reading competence.
- 1.3 Council has been made aware of some public concern about reading standards in schools and that, even though additional resources have been provided in the schools over the past decade, some children continue to experience significant difficulty in developing basic reading skills. Because of this, Council asked the Research Branch of the Education Department to estimate the magnitude of the problem and the resources being made available to assist students who were experiencing serious reading difficulties.
- 1.4 A first survey of five schools, entitled Weak Readers in Primary Schools (Deschamp and Markey, 1983), indicated that most children in the sample schools were making adequate progress in learning to read. Even though some children had mild or moderate difficulty most were making progress and were developing the basic reading skills necessary for other learning situations. This first survey, which focused on five primary schools, also indicated that some primary school students were experiencing serious difficulties in learning to read.

1.5 On page three of their report to Council, Deschamp and Markey (1983) offered the following overview.

1. Each of the five schools had apparently able students who were weak in reading.
2. The teachers were generally aware of the weak readers and had identified them from standardized and teacher-prepared test results and observations while teaching.
3. Generally speaking, in all five schools the weak readers were being given a common reading programme consisting of written comprehension practice using reading materials appropriate to the previous Year level and word study skill exercises at the present Year level. Very little time was given to students actually reading, and in most cases the weak readers did not spend any extra time on reading. Only one of the 40 teachers interviewed reported any formal attempt at diagnosing individual student weaknesses. Although many teachers indicated that they used standardized reading tests, they did not appear to use the results to place students on materials commensurate with their reading ability. Students identified by their teachers as 'weak readers' were generally given reading materials a year or two below grade level regardless of standardized test results or students' interests. In some cases this material was still too difficult for the students.
4. A wide range of support facilities for weak readers is available, but many eligible students are not offered assistance because of a shortage of places, and a lack of awareness of the availability of the support facilities. Other reasons included the principal's or teacher's belief that the school should offer any remedial assistance necessary, the belief that withdrawing students from their class or school may be emotionally harmful, or because the parents were unable or unwilling to support or approve the provision of extra assistance.

Further, on pages 3-5 of their report to Council, Deschamp and Markey (1983) presented a summary of their recommendations to class teachers, to school principals and to the central administration of the Education Department of Western Australia. These recommendations are included in Appendix A of this report.

- 1.6 Similarly, the authors of a second report, commissioned by Council, Weak Readers in Secondary Schools, (Markey, Deschamp and Tame, 1983) concluded from their investigation of policies regarding the teaching of reaching, assessment of students' reading ability and provisions for students needing special assistance with reading in six secondary schools that "there is widespread recognition that many secondary students are handicapped in their learning because they are unable to handle required reading" (p. 19). From page 9 to page 20 of the report there is a general discussion based on an analysis of the case studies undertaken in the schools and this discussion includes some seventeen recommendations. This full section is included as Appendix B of this report.
- 1.7 For the purposes of this introductory chapter the following quotation shows the general conclusion arrived at by Markey, Deschamp and Tame (1983).

There is widespread recognition that many secondary students are handicapped in their learning because they are unable to handle required reading. Most of these students are likely to be identified by comprehensive screening procedures or by teacher observation. Reading resource teachers are charged with the twin tasks of helping these students to improve their reading and of assisting the subject teachers to find other ways to teach these students. This report has described the ways that six secondary schools have approached this area of schooling. No doubt many other approaches are being used by other schools.

There is very little information available about the success that is achieved. Certainly, the five reading resource teachers observed in the course of the study were very hard at work and all were ready to argue that more time was needed for the weak readers. The subject teachers interviewed varied widely in their preparedness to be involved with students' reading difficulties. They ranged from those who were studying how to teach reading along with their subject content, to others who considered that they did not have time even to assist students to catch up on what they had missed as a result of attending a withdrawal reading class.

It seems clear from the study of these six schools that the teaching of reading is relatively new to many secondary schools, that each is charting its own individual course, and that there is very

little information that schools can use to guide the development of their programmes. These brief case studies may provide some assistance in this regard.

It is hoped that this report will encourage schools to review their approach to the teaching of reading -- especially with the weak readers -- and will provide some examples with which their programmes can be compared (p. 19).

1.8 Finally, in a third survey, 'Underachieving' Readers (Deschamp, Markey and Hill, 1983), the following discussion of results is included.

Irrespective of the position adopted with regard to the relationship between ability and reading achievement, the above results are cause for thought. All of the 'underachievers' were weak at reading, yet unlike the children selected as 'weak readers', not all of them had been identified as needing help with reading. Perhaps these children were adept at concealing their reading difficulties. However, the position of those recognized as weak in reading was not much different from that described for the 'weak readers' in the previous report. The main points in common were:

- . Despite wide differences in achievement levels, a common treatment was given to groups of children who were weak in reading;
- . There was a lack of records of previous test results and the tuition provided;
- . Only for a small proportion of reading lesson time were the children actually reading;
- . There was a whole-class treatment of some reading skills;
- . Many of the teachers perceived themselves as lacking specialist reading expertise;
- . There was both a reluctance to refer children for withdrawal and, in some cases, a school policy of non-referral;
- . There was a shortage of places in special reading services;
- . The teachers did not know about many of the special reading services;

- . Many of the children seem to have been given a similar style of instruction for several years -- despite minimal progress.

With regard to the children classified as 'underachievers', it is notable that:

- . When parents had offered to help, their role had been limited to hearing oral reading;
- . Teaching strategies used with apparently intellectually able children did not differ from those used with the less able;
- . Diagnostic procedures were not used as a basis for decisions on treatment. Generally 'underachievers' were given below Year-level materials in a traditional 'vocabulary and comprehension' practice mode. In many cases, the reading level of the material provided was a year or two ahead of the students' achievement levels as indicated by the tests used in this study. Notwithstanding the fragility of measurement of reading age and of readability formulae, the materials supplied often seem to be too difficult for the students.

These comments are not made as a criticism of the teachers. The findings are taken to suggest that the teachers interviewed in the course of the study did not treat the 'underachievers' in any way that indicated recognition of their 'potential'. The 'underachievers' received the same teaching as the other children in their reading groups. One function of this report could be to stimulate debate on whether such children are different in ways that teachers can identify, and, if so, whether practical implications for their teaching could be derived from an awareness of their distinguishing characteristics. This remains a live area of debate (pp. 16-17).

- 1.9 The surveys conducted for Council by the Research Branch of the Education Department of Western Australia produced results which are consistent with Harris and Sipay (1975) who suggested a one to three per cent incidence level for children who had severe reading difficulties and who needed service provision outside regular classrooms. Prevalence estimates vary with the definition used and the cut-off criteria selected. Incidence levels have ranged from 1-3% to 30-40%, with the most common level being between 10 and 15%. As mild to moderate disabilities are more prevalent than

severe difficulties, (Harris and Sipay (1975) have suggested a 75-25 split), the lower figure of 1-3% for children with severe difficulties could, in the opinion of Council, provide a basis for service provision outside regular classrooms. In some studies it has been found that large urban centres are associated with a higher incidence of reading disability. Incidence figures vary from school to school, from district to district and from area to area.

1.10 The terms of reference of the Council for Special Education relate specifically to special education. For this reason, in this report, Council has focused its attention primarily on the particular needs of those children who are identified as having severe reading disabilities. Even so, Council also has given some attention to those students who have mild or moderate reading disabilities. While the recommendations contained in Chapter 5 relate primarily to those with severe disabilities, they also relate to those with mild or moderate disabilities. In any consideration of reading disabilities it must also be recognized that, at present, there is a lack of clear agreement among experts on the definition of reading disabilities and a lack of uniformity in criteria for selection. The diagnosis of a child as reading disabled in any clinic or school will be subject to the values of the professionals involved in the assessment.

1.11 For the purposes of this report Council has accepted the definitions given by Harris, L. and Hodges in A dictionary of reading and related terms, (1981) published by the International Reading Association. Key terms are defined below and the definitions of associated terms are given in Appendix C. The terms are further elaborated in the review of the literature in Chapter 3.

DEVELOPMENTAL DYSLEXIA

1. a mild form of alexia, presumably neurological in origin, shown by deviations from normal developmental rates or mastery levels; selective or specific reading disability. Contrast with acquired dyslexia. See also dyslexia (def. 1).
2. a reading difficulty assumed to be hereditary or congenital in nature.

DYSLEXIA

The concept of dyslexia, like that of learning disability, has a long history of differing interpretations. The medical profession tends to regard it as a disease for which there is a causative factor; the psychological profession, a serious problem of unspecified origin. The education profession has wavered between these positions. 1.n. medical term for incomplete alexia; partial, but severe, inability to read; historically (but less common in current use), word blindness. Note: Dyslexia in this sense applies to persons who ordinarily have adequate vision, hearing, intelligence, and general language functioning. Dyxllexia is a rare but definable and diagnosable form of primary reading retardation with some form of central nervous system dysfunction. It is not attributable to environmental causes or other handicapping conditions - J. Abrams (1980). 2.n. a severe reading disability of unspecified origin. 3. a popular term for any difficulty in reading of any intensity and from any cause(s). Note: Dyslexia in this sense is a term which describes a symptom, not a disease. Due to all the differing assumptions about the process and nature of possible reading problems, dyslexia has come to have so many incompatible connotations that it has lost any real value for educators, except as a fancy word for a reading problem. Consequently, its use may create damaging cause and effect assumptions for student, family, and teacher. Thus, in referring to a specific student, it is probably better that the teacher describe the actual reading difficulties, and make suggestions related to the specific difficulties, not apply a label which may create misleading assumptions by all involved. See also learning disability. adj., n. dyslexic.

LEARNING DISABILITY

The concept of learning disability, like that of dyslexia, is controversial with respect to its causes and the degree of severity required. 1. a. a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, or mathematical abilities. [Note:] (Such disorders are presumed to be due to central nervous system dysfunction which can result from such factors as anatomical differences, genetic factors, neuromaturational delay, neurochemical/metabolic imbalance, severe nutritional deficiency or trauma). Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g. cultural differences, insufficient/inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences - National Joint Committee on Learning Disabilities (1980). b. in certification for special classes and/or funding in the United States, learning disability is defined as '... a disorder of one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which ... may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include such conditions as perceptual handicaps ... dyslexia, and

developmental aphasia. The term does not include ... learning problems which are primarily the result of visual, hearing, or motor disturbance, or of environmental disadvantage' - HEW Standard Terminology (1975). Note: Students so classified need to have a specified discrepancy between expected and actual achievement in one or more aspects of language usage, particularly in reading, or mathematical usage. 2. an indecisive term for any learning problem of any sort arising from any cause(s). Note: When used by persons of different disciplines and/or theoretical positions, the term 'learning disability' may take on a whole range of connotations with differing, and often conflicting assumptions by the specialist about treatment as well as by the teacher, family, and student. As a result, educators and the public suffer from the same lack of precision in the use of this term as in the use of the term dyslexia. See also dyslexia.

SPECIFIC LANGUAGE DISABILITY (SLD)

1. a developmental difficulty reflected in all aspects of expressive and receptive language, often in persons of normal or better mental ability and arithmetic skills. 2. a particular language problem, as dyslexia, thought to be the result of some form of central nervous system dysfunction, and not a result of emotional or intellectual factors or of insufficient or inappropriate education.

SPECIFIC LEARNING DISABILITY

a developmental learning disability rather than one due to demonstrable brain damage.

SPECIFIC READING DISABILITY

See developmental dyslexia, above, (Harris and Hodges, 1981)

1.12 Table 1, which is based on data collected by the Education Department, shows school enrolments in Western Australia in July, 1982:

Table 1

1982 Student Enrolments

Level	Government Schools	Non-Government Schools	Total
Primary	140,171	28,568	168,739
Secondary	68,257	22,970	91,227
Total	208,428	51,538	259,966

Note: From Pocket Year Book, No. 9 (p. 22), by the Education Department of Western Australia, 1983, Perth: Author.

As a general estimate, and using a 3% incidence rate, it can be calculated that of the 168,739 children in primary schools it is reasonable to suppose that some 5,062 may have severe reading disabilities. Similarly, of the 91,227 students in secondary schools, some 2,736 also may have severe reading disabilities.

- 1.13 While this calculation can provide only a rule of thumb estimate it does show that some 7,700 students could be experiencing severe reading disabilities which would merit the provision of special remedial education. The possible existence of 7,700 cases gives some indication of the magnitude of the problem. Council sees its task as highlighting the needs of these children and of recommending what action should be taken to improve their chances of developing basic reading competence.
- 1.14 In addition to the three reports provided by the Research Branch of the Education Department, Council advertised in the press for submissions and 33 were received. Further, Council conducted a number of visits to schools and also formally interviewed 22 persons (see Appendixes D, E, F). This report is based on evidence obtained from these sources, and Council thanks all those who assisted in any way. Particular thanks are due to P. Deschamp, A. Markey, M. Tame and P. Hill for their substantial and enlightening research reports.
- 1.15 Apart from this introductory chapter, this report includes four more chapters. Chapter 2 reviews the teaching of remedial reading both in primary schools and in secondary schools in Western Australia. Chapter 3 contains a detailed discussion of definitions of reading and learning disabilities. Chapter 4 reviews the identification of students who show evidence of severe reading disabilities and includes discussion of early identification, evaluation, diagnosis and assessment. Chapter 5 contains general comment related to a number of areas, and lists the specific recommendations of Council in relation to these areas.
- 1.16 During its investigation, Council has been convinced that students who experience severe reading disabilities require substantially more remedial help. Council trusts that this report will provide a basis for action and that adequate follow-up of the various recommendations will occur.

CHAPTER TWO

REMEDIAL READING IN WESTERN AUSTRALIAN GOVERNMENT SCHOOLS

- 2.1 The teaching of reading has always been a first objective of teachers in primary schools, and, at the beginning of this century was dominant in the educational programme. Today, with substantial development of a much broader range of subjects and activities, reading remains a key area in the primary school curriculum.
- 2.2 In 1900, the government schools of Western Australia were confined to providing primary education. Between 1900 and 1910 there was strident public debate as to whether or not government schools ought to provide a full secondary school programme, and the establishment of Perth Modern School in 1910 resulted in such provision for selected students for the first time in Western Australia. Between 1910 and 1960, government secondary schools catered for a much smaller proportion of students in the 13 - 17 age range than is the present case. A significantly increasing proportion of an age cohort now remains at school until the final two years of the secondary course.
- 2.3 During recent years there has been considerable discussion concerning the relevance of the secondary school curriculum. When Perth Modern School was established in 1910 there was no doubt that the secondary school was intended to cater for a small group of able students who were at school to study the traditional academic curriculum in English, foreign languages, history, mathematics and science. While attempts have been made to provide for the particular learning needs of a broader range of students, it is fair to say that provision of the traditional subject disciplines remains the main task of secondary schools at the present time. This pattern is now being seriously questioned, and the current Beazley Inquiry is part of a continuing search for a more appropriate pattern to cater for a relatively new situation where almost all students complete the first three years of high school and an increasing proportion remain for the fourth and fifth years.

2.4 In this section of Council's report there is a discussion of the place of remedial reading in government primary schools and government secondary schools in Western Australia. The purpose is to review developments that have occurred, to remind the reader of the relative recency of any special provision of remedial reading programmes and to highlight some of the general issues in remedial education.

Primary Schools

- 2.5 Since schools were first established in Western Australia, there have always been teachers, principals and superintendents concerned about assisting children having difficulty in learning to read. However, as a specific category of special education, the provision of remedial reading classes is a post-1945 development. By the end of World War II in 1945, the Education Department was adopting a policy of chronological promotion and immediately postwar this policy was fully implemented. Prior to this, promotion had depended largely on a student's ability to pass the final examinations for a particular grade. Often students whose reading was poor were failed and were not promoted to the next grade. Those children who had especial difficulty were sometimes placed several grades below their age cohort.
- 2.6 The consequences of the earlier system of promotion in primary schools is shown in the age distribution across grades as reported in various Education Department Annual Reports up to 1946. Table 2 presents data as at the last Friday in July 1946. Associated data are included in Appendix G of this report. Table 2 shows a spread of students of a particular age cohort across grades. The table also shows that acceleration for able students was possible.
- 2.7 Any system of compulsory education is faced with the problem that children learn to read at varying rates and with different levels of proficiency. As early as 1895, the Education Department of Western Australia had amended its regulations on promotion in the junior primary years to take account of children who were, "through

Table 2

Age and Class of Students in Government Schools
in Western Australia, July, 1946

TABULATION A (2).—Total numbers showing average age and Normal Grade for Age with retardation and acceleration from average in Government Primary and Central Schools on last Friday in July, 1946.

	Age in Years.									
	Below 6.	6.	7.	8.	9.	10.	11.	12.	13.	14.
Infants	2,826	4,792	984	186	68	25	18	8	9	.....
Class 1	12	1,954	4,135	1,099	214	77	37	11	7	1
" 2	.....	66	1,717	4,023	1,122	236	90	37	17	6
" 3	.....	.....	51	1,621	3,616	1,317	344	109	40	16
" 4	.....	.....	.....	43	1,345	3,329	1,241	403	142	27
" 5	.....	.....	.....	.....	55	1,253	3,037	1,349	514	104
" 6	.....	.....	.....	.....	.....	46	1,135	2,633	1,329	253
" 7	.....	.....	.....	.....	.....	.....	38	302	883	352
" 8	.....	.....	.....	.....	.....	.....	.....	4	212	383
" 9	.....	.....	.....	.....	.....	.....	.....	.....	21	67
Totals	2,838	6,812	6,867	6,972	6,420	6,283	5,940	4,856	3,173	1,209

	Age in Years.		Totals.	Per cent. in each grade.	Percentage of retardation.		Average age.	Percentage of normal grade for age.	Percentage of Acceleration.
	15.	16.			1 Year.	2 Years or More.			
Infants	1	4	8,901	17.07	10.83	3.58	6.39	53.84	31.75
Class 1	2	1	7,549	14.48	14.55	4.64	7.51	54.77	26.04
" 2	3	1	7,318	14.03	15.33	5.33	8.54	54.98	24.36
" 3	3	6	7,123	13.66	18.49	7.27	9.61	50.77	23.47
" 4	8	7	6,545	12.55	18.96	8.97	10.57	50.87	21.20
" 5	9	22	6,343	12.16	21.26	10.23	11.73	47.89	20.62
" 6	24	34	5,454	10.46	24.36	5.72	12.65	48.27	21.65
" 7	64	197	1,836	3.52	19.17	14.22	13.53	48.09	18.52
" 8	132	89	820	1.57	16.1	10.85	14.61	46.71	26.34
" 9	91	78	257	.5	30.35	.....	15.38	35.41	34.24
Totals	337	439	52,146	100%	.....	.....	.....	.....	.....

Note: From Annual Report: Education Department of Western Australia, 1946, Perth: Government Printer.

bodily or mental weakness ... not ready for promotion" (The Education Circular, 1899 p. 47). The question of retardation was of continuing concern to the Education Department, which regularly published tables showing the percentages of retarded students, those who were in the normal class for their age and those who had been accelerated. During the early years, late school commencement, irregular attendance and "bodily or mental weakness" seemed to have been accepted as the major causes of retardation. Peter Board, the Chairman of a Royal Commission to Inquire into and Report upon the System of Public Elementary Education Followed in the State of Western Australia and the Administration of the Acts Relating Thereto, (1921-22) in commenting on retardation accepted that the movement of a student from school to school was a valid cause of such learning difficulty. He also noted that "there are causes that lead to the failure that are due to the school itself. The chief of these is faulty classification of the child and the failure to recognise the special weaknesses of individual children" (p.16).

- 2.8 Board supported the formation of special classes for educationally backward students but recognised that "in Western Australia, as in other Australian states, any scheme of this kind cannot be adequately carried out as long as the restricting of educational expenditure in every direction is regarded as a primary obligation on the State". He went on to suggest that "it is, however, a development that might be kept in view" (p. 17).
- 2.9 In its 1979 report, The Education of Intellectually Handicapped Children in Western Australia, Council noted that it was not until some thirty years later that classes for slow learners were finally established in Western Australia as an indirect result of another Royal Commission. The 1938 Report of the Royal Commission on Youth Employment and the Apprenticeship System recommended that a vocational guidance bureau be set up (p.xxxv). In 1943 the Education Department established its Careers Research Branch. The next decade was one of much activity in the field of special education. The Education Department assumed responsibility for the education of deaf children and blind children during this period,

and in 1952 the Education Act was amended to provide for the compulsory education of mentally defective children. The Careers Research Branch, which was staffed largely by experienced teachers who were also qualified psychologists, was quickly accepted by teachers in the schools. In 1949 this Branch was renamed the Guidance Branch.

2.10 The reasons for educational retardation, as set out by Board, continued to be accepted as major causes of retardation, but the investigations of the Guidance Branch showed that there were children experiencing learning difficulties and retardation who could not be easily classified and whose retardation did not appear to be based on the previously accepted range of causes. During the 1950s, emotional maladjustment was added to the list of causes and the Guidance Branch provided individual and group play therapy for children and counselling for parents. By 1954 the Guidance Branch was catering for students who were retarded in various subjects, and 25 % of all students referred to the Guidance Branch were diagnosed as requiring remedial education in the skill subjects. In this area, experimental work related to teaching methods was planned to try to reduce the incidence of retardation, and a teacher was appointed to service several schools each week to provide remedial teaching for backward readers. (Education Department of Western Australia, Annual Report, 1954, p. 22). The plan to establish an experimental remedial class in 1956 lapsed due to the "lack of a suitable teacher" (Education Department of Western Australia, Annual Report, 1956, p. 26). However, in 1957 an experimental remedial class was established at Thomas Street School for twenty primary students of average or above average intelligence who were seriously retarded in reading. Although this class was intended to cater for older primary school children it was recognised that the genesis of many reading difficulties was in the early years of schooling.

2.11 This first remedial reading class operated on the basis of intensive teaching of reading over a period of 6-12 months. In 1962, it was reported that during the previous five years, some 80% of those students who had passed through the class had shown

"marked and substantial improvement" (Education Department of Western Australia, Annual Report, 1962, p. 29). McCall, the Superintendent in charge of the Guidance Branch, favoured the retention of children in their regular classes as much as possible, but did recognise that severe cases required some special provision and that particular effort should be made to try to assist these children to establish basic reading skills.

- 2.12 By 1960 the Education Department was giving further attention to the general area of remedial teaching. While such teaching has been practised in some classes and schools from the time the Education Department was first established, the Annual Reports of the Education Department increasingly focused on these problems from the point of view of the central administration. In 1960 it was reported that "the planning of remedial work has been on a two-fold basis - long term preventative work and short-term remedial work with those who are already retarded academically" (Education Department of Western Australia, Annual Report, 1960, p. 26).

The report also noted that despite expert teaching some children of average and above intelligence had made little progress in the remedial class over periods of up to two years. These children were classified by the term "congenital dyslexia" and it was suggested that "the time is approaching when forward planning must make some provision for them other than in the remedial class where they are at the present being accommodated in increasing numbers to the exclusion of normal cases of reading retardation, who are capable of recovery if placed in such classes" (Education Department of Western Australia, Annual Report, 1960, p. 26).

- 2.13 However, the problem persisted through the 1960s, and in 1972 the Education Department reported pressure from parents wanting remedial teaching for their children who were not up to grade level. It was stated that "true remedial education should be limited to two groups - those under-achieving because of cultural deprivation or lack of opportunity and those with a specific learning disability who require help for a limited time".

(Education Department of Western Australia, Annual Report, Perth, 1972, p. 11).

- 2.14 Based on its present investigation the Council is concerned that further consideration should be given to helping students who experience severe specific reading disabilities. There is some evidence to show that a short-term intensive course is able to assist some children and also evidence which indicates that other children require special assistance over a considerably longer period. Because of this, intensive courses of six weeks, which are presently offered, are valuable but there may be a need to develop other long-term remedial programmes which span several years.
- 2.15 Table 3 shows that 634 primary school children were given six-week intensive courses in 1982. Of these, 315 children were in the Metropolitan Area and 319 in country towns.

Table 3

Students Receiving Remedial Reading Instruction
in Remedial Clinics during 1983

Metropolitan		Country	
North East Region (Junior)	60	Albany	67
North East Region (Senior)	64	Bunbury	65
North West Region (Junior)	48	Geraldton	59
North West Region (Senior)	60	Kalgoorlie	62
South East Region	40	Mandurah	66
South West Region	43		
TOTAL	315		319

Note: Figures supplied by the Guidance and Special Education Branch of the Education Department of Western Australia, December, 1983.

In addition, Table 4 shows that 297 children were located in 18 Remedial Centres in the metropolitan area where they were given longer-term remedial assistance.

Table 4

Students Receiving Remedial Reading
Instruction in Remedial Centres during 1983

Metropolitan		Country
Balga	16	NIL
Beaconsfield	15	
Challis	15	
Claremont	14	
Como	14	
East Fremantle	15	
Kalamunda	23	
Lathlain (2)	24	
Mount Hawthorn	21	
Nollamara (2)	27	
North Inglewood	22	
Orelia	20	
Sorrento	16	
Tranby	17	
Victoria Park	23	
Westminister	15	
TOTAL	297	0

Note: Figures supplied by the Guidance and Special Education Branch of the Education Department of Western Australia, December, 1983.

- 2.16 The stated policy of the Education Department is set out in a paper, Educational services for children with learning difficulties, (Policy from the Director-General's office, No. 19), dated April 1979, which is quoted in full below.

The great majority of children maintain a level and rate of progress in their school work which is commensurate with their ability and effort. Their educational programmes are maintained by regular class-room teachers, with the assistance of support services and, where necessary, advice from the school principal. There is obviously a continuing need for general class-room teachers to refine their skills in diagnosis and corrective teaching and for the Education Department to provide in-service experiences which encourage the enhancement of these skills. It is largely through the efforts of class-room teachers that the system as a whole can expect to keep pace with new developments and improve the quality of education in the schools.

There are, however, some children who, for various reasons, are unable to benefit fully from the educational programmes in the regular classroom. This Policy Paper provides an outline of educational services for such children. The following groups of children are recognized:

- (1) Children whose entire educational programmes are the responsibility of classroom teacher but who require additional services.

For these children additional services may be provided:

- (a) By learning assistance teachers.

Learning assistance teachers are school-based advisers who work with class-room teachers to provide appropriate educational programmes for all children, especially those with learning problems. Learning assistance teachers have been trained to identify learning problems; to isolate specific programme components that cause difficulty; to develop instructional programmes designed to remediate such difficulties; and to select material which is appropriate in the regular class-room for the immediate and long-range needs of the children.

- (b) By support teachers.

Support teachers are members of school staffs who may work in a team-teaching situation with class-room teachers to provide for the needs of the children in regular class-rooms. Alternatively, children may be temporarily withdrawn from the class-room to undertake remedial work in specific skill areas with the support teacher. Such arrangements should be planned by principals in consultation with regional superintendents and remedial advisory staff. The keeping of detailed records will ensure that children are not maintained in a school-based withdrawal group if there is no evidence that they are making significant gains in academic skills.

Most regions have a remedial advisory teacher to advise teachers and principals on remedial strategies and programmes.

- (2) Children whose learning difficulties are such that they need to attend a centre where specialist assistance is available.

The following services are provided:

- (a) Regional reading clinics. For young children who have difficulties in reading and related skills. The programme is short and intensive. The child attends the clinic daily for approximately six weeks and does not need to transfer to another school.
 - (b) District remedial centres. For children who have been formally identified as achieving below age or grade level, in spite of average educational potential. The learning difficulties of these children are generally such that longer-term specialized assistance is required. Consequently children are transferred to the school in which the centre is located.
- (3) Children needing placement in special education.

Placement in special education is usually recommended after discussions have been held between parents, class teacher, guidance officer, and Special Education Branch staff. Other people, including outside agencies, are also consulted where necessary.

Special education provides two main kinds of service:

- (a) Special classes in ordinary schools

Special class placement usually needs to be on a long-term basis and the programme is individually designed to meet the needs of the children.

- (b) Special schools.

Each special school caters for children with a variety of problems, but each also specializes in one predominant area of disability. There are schools for children whose primary disability is impairment in intellectual, visual, auditory or physical function.

A common aim with all special classes and schools is to provide 'maximum useful association' between children with learning difficulties and other children in a manner which is consistent with the interests of all the children.

This is a brief statement of the current policy and the range of services being provided to implement it. It is an emerging policy, which emphasizes the value of class-room teachers being responsible for the development of sound educational programmes for the majority of children, and which caters for children with special needs in the least restrictive environment that can be provided.

2.17 Council endorses this statement and notes that in 1979 it was described as an "emerging policy". The use of learning assistance teachers (LATs) has changed since the "emerging policy" was described in paragraph 1(a) of Educational services for children with learning difficulties (1979). Of the 268 teachers who successfully completed the Learning Assistance Teacher courses, fewer than half are now employed in situations where their special training is fully utilized. In the region studied by Research Branch twenty-five LATs were employed, but "only seven were working full-time and two were working part-time as LATs teachers. Sixteen were not used in their specialist capacity at all". (Deschamp and Markey, 1983, p. 19). Council was disturbed that research undertaken showed that while teachers were aware of those children experiencing reading difficulties, in some cases there was no firm evidence of adequate remediation or follow-up. Indeed, Council believes that the Education Department should draw the attention of all of its professional staff to the fundamental implications of Section 1.3 on page 3 of Weak Readers in Primary Schools. (Refer to paragraph 1.5 of this Report). Further, on the basis of its present investigation, Council believes that a strong emphasis should be placed on the teaching of reading and on the provision of remedial programmes if further substantial advance in service provision is to be achieved.

RECOMMENDATION 1. The Education Department should take early and positive action to review the findings of the research reports, Weak Readers in Primary Schools, (1983), and 'Underachieving' Readers (1983), and to implement procedures to improve the teaching of reading in primary schools, especially the provision of adequate remedial reading programmes throughout Western Australia.

2.18 While Council is mainly concerned with students experiencing severe reading difficulties (1-3% of an age cohort) we would point out that there is a larger group of children who experience moderate or mild reading retardation. As already noted, our investigation has shown that the Education Department is concerned with improving the reading skills of all children and that its essential policy is to regard the local school and the normal classroom as important providers of corrective education. Council also endorses this policy of providing for remediation in the local area or school for as many children as possible. As well, we stress that special provision is required to cope with the problem of severe reading retardation when it cannot be provided in all schools.

2.19 During the past decade class sizes have been reduced in government schools and the staffing formula is more generous than it was previously. Schools now have the benefit of supernumerary teachers additional to those required to staff each classroom. Council believes that in view of the importance of the development of reading skills attention should be given to using more of these supernumerary teachers specifically to establish and operate school-based remedial reading programmes and resource rooms for the benefit of those children who are experiencing reading difficulties. Indeed, Council is aware that this approach is already operating in some schools.

Secondary Schools

2.20 In any consideration of the place of remedial reading in secondary schools it is important to remember that the concept of full secondary schooling for all students in Western Australia is largely a post 1945 development. In 1922 a Royal Commission reported that only 10% of children received more than one year of post-primary (secondary) education. By 1940, 20% of primary school leavers went on to complete three years of secondary schooling and by 1962 this had risen to 64.5%. Similarly, in 1940 only some 4-5% of an age cohort completed the full five years; presently this figure is about 35%. During the 1950s and 1960s comprehensive high schools were established as a result of factors such as the final

phasing in of chronological promotion and the raising of the school leaving age to the end of the year in which a student turned 15. Shortly after his retirement, a former Director-General of Education, T. L. Robertson, stated that between 1951 and 1966 he had seen his primary task as establishing a system of comprehensive secondary schools to cater for the gradually increasing proportions of each age cohort who stayed on at secondary level (personal communication with D. Jecks, 1969).

2.21 At present, almost 100% of each age cohort completes the first three years of secondary schooling and consequently there is a much greater spread of student ability in the lower secondary school than was the case 20 to 30 years ago. One of the major tasks of the Education Department is to provide secondary education which is relevant and suitable for students who have this wider range of interests and abilities.

2.22 The change in the secondary school is well illustrated by changes in the examination system. In 1950 those students who remained to the end of the third year sat for an external examination (the Junior Certificate) which was largely academic in nature, although some provision was made for students who followed a commercial or a technical course. Even at that time teachers were facing the problem that the Junior Certificate was unsuited for some students who chose to stay on at secondary school, and in 1951-1952 the High School Certificate was introduced. This certificate was awarded on the basis of a student's total school record and the results of an internally set, and marked, final examination. Though the High School Certificate was not well accepted by students and parents at first, Dettman noted that by 1967 some 17% of secondary students were enrolled for this course (Dettman, 1969, p. 45). Six investigations related to secondary school organisation and curriculum were conducted between 1952 and 1972.

V. Box, The Committee on Secondary Education,
1952-1954.

T. L. Robertson, The Secondary Schools Curriculum
Committee, 1957-1958.

T. L. Robertson, Committee of Enquiry Into Secondary Education, 1962-1963.

W. D. Neal, The Secondary School Curriculum, 1964.

H. W. Dettman, The Committee on Secondary Education, 1969.

H. W. Dettman, The Government Schools Discipline Committee, 1972.

The most influential of these investigations was the 1969 Dettman Report which resulted in the introduction of the internally assessed, and externally moderated, Achievement Certificate in 1971-1972. The consequent abolition of the Junior Certificate was well received by many teachers as it removed the constraint of a wholly external examination.

- 2.23 Between 1945 and 1969 much of the focus of the reorganisation of the secondary programme related to students of higher ability, and, reporting on developments in The Secondary School Curriculum between 1958 and 1964, Neal stated that "some preliminary investigation only has been undertaken on the problem of the 'lower 15 per cent'" (1964, p. 18). At the same time Neal reported that the sixth and last section of the new English curriculum, the Reading Syllabus, was being prepared. It was published in 1968. The following statement was included on page 2 of that Syllabus:

The need for further planned development and extension of reading abilities and interests beyond that given at the primary school level has been apparent for a number of years. Two factors have contributed to this situation - the changing nature of the secondary school, and a clearer understanding of the complexity of the reading process.

The policy of secondary education for all, organized on the basis of the comprehensive high school, has produced a secondary school population characterized by marked diversity in terms of interest, attainments and abilities. Such diversity, the concomitant of natural differences of background and ability, has always existed, but it has been brought into greater prominence by the very nature of the comprehensive secondary schools, which are essentially non-selective. Under this system, the existence of a wide range of interests, attainments and abilities in reading, as in other basic skills, must be

accepted as a normal situation. Many students entering secondary schools will not have mastered the reading skills necessary for them to cope successfully with their studies. It must be realized, moreover, that lack of these skills is not confined solely to students of low ability; students of average and high ability often exhibit weaknesses in those reading skills which they are called upon to use as they proceed further with their education. A "good reader" in Grade 6 is not necessarily a "good reader" in second year high school science, or literature, or social studies. New educational situations impose new demands upon students' reading skills, and it is the responsibility of the schools, at all levels, to equip their students with skills appropriate to the reading tasks they may wish to perform.

The assumption that "reading" is a single skill, something which can be taught once and for all in the lower primary grades, cannot be maintained in the face of the accumulated evidence of forty years' research. The word "reading" covers a multitude of complex, interrelated skills, each of which has a particular readiness phase. The realization that growth in reading ability is continuous, and spans all levels of education, is the basic principle upon which any sound reading programme must be based. As well as helping students to master the skills needed for information-seeking or study-type reading, a worthwhile reading programme must aim at developing in students an appreciation of reading generally, respect for the qualities of good writing, and a love of literature.

On page 3, the Syllabus was described in these terms.

It outlines ways of improving the reading skills and habits of those students whose reading ability can be expected to improve under normal conditions of systematic and regular instruction and practice.

It does not cater for students who are so seriously retarded in reading as to require special remedial programmes directed by trained reading teachers.

It is based upon the belief that the formal teaching of reading should continue throughout the secondary school...(Education Department of Western Australia, Syllabus in reading: Secondary School Curriculum, 1968).

2.24 While Council endorses these views from the 1968 Reading Syllabus it is concerned that the teaching of reading and the provision of

remedial programmes remains relatively under-developed in secondary schools. Table 5 shows the number of full-time equivalent Reading Resource Teachers employed in Western Australian government secondary schools in 1984.

Table 5

Reading Resource Teachers in Secondary Schools, 1984

Class of School	Number of Schools	Metropolitan	Country
Senior High Schools	72	38.4	14.4
High Schools	7	2.4	0.8
District High Schools			
Class I	27	-	-
Class II	31	-	-
Colleges	2	-	-
Distance Education	1	1.0	
TOTAL	140	41.8	15.2

Note: Figures supplied by the Superintendents of Education (English), Education Department of Western Australia.

In only two Senior High Schools and in Distance Education are the Reading Resource Teachers employed full time in that capacity. One metropolitan senior high school employs two part-time Reading Resource Teachers to give that school a full-time equivalent of 1.6. At all other senior high schools Reading Resource Teachers work in the area of reading part-time. If they are employed full-time as teachers part of their time is spent teaching other subjects.

2.25 Council suggests that reading education is a fundamental issue which all teachers in secondary schools should no longer avoid, for more than "tinkering with the old model" (of secondary education) is required. Council is concerned that, unless major policy decisions are taken and implemented, the place of reading in secondary schools will remain relatively weak. At a time when the whole pattern of secondary education is being reviewed by the

Beazley Committee, Council believes it pertinent to suggest that unless reading skills are integrated fully as a key component of secondary schooling a real opportunity will have been missed and the established pattern of subject organisation will prevail with little attention given to the teaching of reading.

- 2.26 The research report commissioned by Council, Weak Readers in Secondary Schools (1983), contains several recommendations on pages 18-19 followed by a general conclusion. Council is concerned that more should be done in secondary school to foster reading and agrees with the researchers that:

If reading could be developed as an Achievement Certificate subject, many of the above problems would be alleviated. It would be given space on the timetable, children would receive credit for their studies, and reading would be "seen" as a regular part of the school programme rather than a special provision. If this happened, reading would become a recognized part of secondary education (p. 18)

Council believes that the Education Department should draw the attention of all of its professional staff to the fundamental implications of the recommendations and conclusion, and of the research report as a whole. It would be a serious omission if this study did not result in positive action to improve the situation in secondary schools.

RECOMMENDATION 2. The Education Department should take early and positive action to review the findings of the research report, Weak Readers in Secondary Schools (1983) and to implement procedures to improve significantly the teaching of reading in secondary schools, especially the provision of adequate remedial reading programmes throughout Western Australia.

CHAPTER THREE

A REVIEW OF THE LITERATURE ON LEARNING DISABILITIES

3.1 This chapter contains a detailed discussion of several definitions of learning disabilities, including some comment related to possible causal factors. The review is intended primarily for professionals who have studied in this field or who work directly with the learning disabled. It may also be useful for those professionals who have a general interest or concern in this matter. Interested readers may find that the discussion helps them to establish a better background related to the fields of reading and learning disabilities.

3.2 One of the most widely used definitions of specific learning disability in the United States is included in Public Law 94-142, The Education for All Handicapped Children Act (1975). This definition was originally stated in a report of the National Advisory Committee on Handicapped Children (1968). The relevant section of the report reads:

those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps, or mental retardation, or emotional disturbance, or environmental, cultural, or economic disadvantage (United States Office of Education, August 23, 1977).

3.3 A separate section of Public Law 94-142 deals with the operational definition of the term specific learning disability and is an extension of the above formulation. A diagnosis of a specific learning disability is made if the following conditions are met:

1. The child does not achieve commensurate with his age and ability levels in one or more of seven specific areas when provided with learning experiences appropriate for the child's age and ability levels.
2. The team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas:
 - (a) Oral expression
 - (b) Listening comprehension
 - (c) Written expression
 - (d) Basic reading skill
 - (e) Reading comprehension
 - (f) Mathematics calculation
 - (g) Mathematics reasoning (United States Office of Education, December 29, 1977).

3.4 The term learning disability was originally formulated by Kirk in 1962 in an attempt to rationalise the terminology used to describe underachieving children who manifested minimal behavioural disorders and who did not fit any of the traditional categories of handicap. Kirk (1962) defined the term as follows:

A learning disability refers to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, spelling, writing or arithmetic resulting from a possible cerebral dysfunction and/or emotional or behavioural disturbance and not from mental retardation, sensory deprivation, or cultural or instructional factors (p. 261).

Other authorities define the term learning disability by a process of exclusion. Ross's (1976) definition typifies this approach:

A learning disability is present when a child does not manifest general subnormality, does not show an impairment of visual or auditory functions, is not prevented from pursuing educational tasks by unrelated psychological disorders, and is provided with adequate cultural and educational advantages but nevertheless manifests an impairment in academic achievement ... (p. 11).

3.5 The above definitions of learning disability are consistent in emphasizing that the disorder is not primarily caused by factors such as mental retardation, emotional or psychiatric disorder, physical or sensory handicap, educational disadvantage or cultural deprivation. If there is evidence of an established relationship

between such factors and the putative learning disorder, or if other stipulated criteria are not fulfilled, then the diagnosis of a learning disability is considered inappropriate. In essence, the diagnostic strategy is to exclude those factors or conditions that contribute to other handicaps. If such factors are not indicated and if the other specified criteria are present then it is assumed that learning disability is the appropriate diagnosis.

3.6 At present, there is a marked lack of agreement among experts on the definition of learning disabilities and a lack of uniformity in criteria for selection (Shepard, 1983; Shepard and Smith, 1983, Shepard, Smith and Vojir, 1983; Ysseldyke, Algozzine, Shinn and McGue, 1983). The diagnosis of a child as learning disabled in any clinic or school will be subject to the values of the professionals involved in assessment. Operational criteria for the interpretation of definitions are often only of a suggestive kind and policy statements of educational authorities are frequently ambiguous. There is no one definition accepted by all authorities in the field, and few agree on the operational criteria that should distinguish any particular definition. Some of the more recent research indicates considerable confusion in the interpretation of standard definitions of learning disability, so much so that there is much debate about the usefulness of this term in most clinical or educational settings.

3.7 One of the major problems in defining learning disabilities is in determining the meaning of conditional elements contained in each definition. For example, it is often difficult to determine what are the "basic psychological processes", "adequate cultural and educational advantages" and "unrelated psychological disorders" and how the influence of these variables on learning disabilities can be ascertained. In most cases the clinical judgment and experience of professionals are used to determine the effects of such variables and the interactions between them. However, the relationships between such variables can be extraordinarily complex and it requires observations of home and school influences and knowledge of the child's developmental background to determine the effects of these many influences. Sometimes such factors are the outcomes of a learning disability and at other times they will be

the antecedent causal conditions, yet in a clinical or educational setting they will appear as common identities. It is always problematic to differentiate those factors that are correlated with the disorder, those that are causally related to the condition, and those that are the outcomes of the specific disorder.

3.8 Almost all definitions of learning disability are based on one or more of the following criteria: neurological dysfunction, uneven growth pattern, difficulty in academic and learning tasks, discrepancy between achievement and potential and exclusion of other causes (Lerner, 1981), though few definitions include all criteria. The learning disability concept is of a multi-dimensional kind. The elements of definitions of learning disability interrelate and form complex logical relationships. Each dimension needs to be examined in turn and checked for its relevance against diagnostic criteria. Guidance officers typically need to consider if the criteria associated with the application of the particular facet of the definition meets with standard practice before the final diagnosis is made. Guidance officers must also consider each criterion in turn and also weigh the importance of each factor relative to the final diagnostic decision. There are no easy answers in most cases and most guidance officers and psychologists have individual views on the relative importance of the several factors in each definition and the way such factors should be weighed in educational and clinical practice.

3.9 Most definitions of learning disability are based on the diagnosis of a significant and substantial difference between presumed or predicted potential (or aptitude) and achievement. The specification of the limiting criteria of difference scores is essential if a proper diagnosis is to be made. It is essential to decide what is significant and what is substantial. Most decisions about differences between aptitude and achievement are based on policy decisions by state and regional educational systems. In turn, these decisions are based on judgments about what school systems can provide in the way of educational services for children with the particular disability. A related problem is that in many school systems the critical degree of difference deemed significant or substantial does not change with the grade level of the child,

the types of tests used, or the degree of correlation between measures of aptitude and potential. This occurs even though it is known that such factors will influence the quality of diagnosis and incidence figures for learning disabilities. This determination of a fixed amount of difference prescribed for all grades, all tests and all degrees of relationships between tests is at best an inexpert and distorted view of the learning disability concept. Invariably, this leads to poor diagnoses, particularly for children of secondary school age (Hammill, 1976). Not surprisingly, research has demonstrated very poor validity in the information derived from assessments by different professionals in diagnosing learning disabilities (Visonhaler, Weinshank, Wagner, and Polin, 1983).

3.10 There are substantial measurement problems in identifying potential and achievement and attempting to determine if there are real differences between the two. Thorndike (1963) has identified most of the major difficulties in assessing difference scores.

1. A score on a test of intelligence is often taken as the only estimate of a child's academic potential.
2. Different intelligence tests often provide different estimates of potential.
3. Aptitude test scores are often a poor guide to achievement scores, particularly for students of well above average or well below average aptitude.
4. Difference scores (i.e., differences between aptitude scores and achievement scores) are susceptible to very great statistical error.
5. Different achievement tests often provide varied estimates of attainments in the same skill area.
6. The correlations between aptitude and achievement test scores are often not taken into account when a diagnosis of underachievement or learning disability is being made.
7. It is often difficult to identify essential differences between achievement tests and ability tests, since both depend upon learned responses in a specific cultural context.

3.11 Nearly all of these problems are related to relationships among basic data from ability and attainment tests and subsequent psychological and educational diagnoses. It follows that the

diagnosis of learning disability is extremely problematic and cannot be undertaken by the uninitiated or those without professional training. It is essential that highly reliable and valid tests of ability and achievement be employed. Almost always all test scores need to be verified and where practical a comprehensive set of ability and achievement tests should be administered to ensure that a complete picture is obtained of children's competencies. Guidance officers need to be aware of the correlational relationships between test scores and be cognizant of local conditions that affect such relationships. They also need to be sensitive to standard errors of test scores and be aware of criteria for separating the more severe forms of disability from mild and borderline cases.

- 3.12 Some attempts have been made to distinguish sub-types of learning disabilities but at the present there is little agreement on the criteria which might be used to distinguish them. In addition, given the great variability in the competencies of children in the learning disabilities category, it has proved very difficult to classify sub-types in any useful way that would assist clinical diagnosis and the prescription of educational treatments. The most recent attempt in this direction has been made by Doehring, Trites, Patel and Fiedorowicz (1981). They have identified three major types of reading skill deficits. The first is called Type O and refers to a primary oral reading disorder with related visual scanning problems. The second is referred to as Type A and is an association deficit which involves major weaknesses in matching printed and spoken materials. Subjects in this category were also poor at the oral reading tests. The third is denoted Type S which is a sequencing deficit. Subjects assigned to this category also had more difficulty in reading words and nonsense syllables than in reading letters and words. Doehring et al. (1981) suggest that these categories of reading deficit overlap, but the emerging picture is not one of clear clinical groupings that could be easily differentiated in an educational context. Rather, their analysis suggests a useful framework for a category system rather than a definitive classificatory scheme. Doehring et al. (1981) admit that "a number of subjects were statistically classified into more than one type and had profiles characteristic of the combined types, suggesting some form of continuity between types" (p. 104).

3.13 One approach to the diagnosis of learning disabilities involves the analysis of consistencies and inconsistencies within a child's performance on subtests of an intelligence scale. However, many such cognitive ability subtests have been shown to have relatively low reliability and a profile analysis usually leads to a diagnosis of low validity. Those who typically use this kind of analysis rely on data that demonstrate that certain cognitive deficiencies are correlated with the learning disability diagnosis. They then use the pattern of cognitive disabilities to diagnose the learning disability disorder. Such a diagnostic strategy is clearly tautologous and usually less than efficient because large numbers of individuals with abnormal cognitive patterns or even with a specified profile typical of the learning disabled case have been shown not to be learning disabled on the basis of standard criteria. Not all learning disabled children have an abnormal IQ profile (Doehring et al, 1981) and not all those with an abnormal IQ profile have a learning disability. The abnormal IQ profile strategy is without substantial empirical support as a diagnostic strategy and should not be supported in educational practice.

3.14 In all psychological and educational assessment of learning disabilities it is essential to minimise diagnostic errors. Children can be misclassified in two ways.

1. As false positives: These children are presumed to have a learning disability, but in fact they have not.
2. As false negatives: These children are presumed not to have a learning disability, but in fact they do.

To avoid these problems it is essential to choose tests of high reliability and validity. It is also important to retest children who may fall into borderline categories and to check all doubtful diagnoses by re-administering relevant tests of cognitive ability and academic achievement. Psychologists often check the validity of their results by matching results with data obtained from teachers and other professional workers, such as speech therapists. Such procedures should be given support in clinical and educational practice. There is a constant need to re-assess and re-evaluate diagnoses to ensure a low incidence of false positives and false negatives.

3.15 Children with learning disabilities have been frequently shown to have one or more psychological or behavioural problems. Those problems most often diagnosed are:

1. inadequate visual and auditory discrimination;
2. indiscriminate reactions;
3. an inability to cope with multiple stimuli;
4. impulsiveness;
5. fine and gross motor co-ordination problems;
6. distractibility;
7. hyperactivity;
8. erratic, inconsistent and unpredictable behaviour;
9. poor attention span;
10. poor attention;
11. poor study skills;
12. low frustration tolerance;
13. inadequate verbal skills;
14. difficulties in the perception of sequence (temporal or spatial).

Such disorders are correlated with learning disability more frequently than they are associated with normal development. However, it is not the case that the majority of learning disabled children have all of the above conditions, nor is it true that any particular pattern of the above disorders is invariably correlated with learning disabilities (Nichols and Chen, 1981). Normal children also suffer from some of the minor disorders listed above, and the presence of any one disorder or pattern of disorder has not been proven significant in the diagnosis of learning disability (Rutter, 1978).

Reading Disabilities

3.16 Reading disability is one of the subcategories of the learning disability diagnosis, and is one of the learning problems most often referred to in public discussion, the print and electronic media. It is the disorder that is of most concern to parents and teachers, because of the pivotal role that reading plays in most of the subject content in primary and secondary schools.

3.17 Prevalence estimates for reading disability vary with the type of definition, variety of test instruments and the selected cut-off criteria. Incidence levels have ranged from 1-3% to 30-40%, with the most common being between 10-15%. As mild to moderate disabilities are more prevalent than severe difficulties (Harris, and Sipay, 1975) the lower figure of 2-3% with severe difficulties seems the more reasonable estimate for service provision for learning disabilities in special education. Rutter, Tizard and Whitmore (1970) reported an estimate of 3.6% for the Isle of Wight and later data (Rutter, 1978) suggested that this figure may have been an underestimate. Some American studies suggest very high percentages, but their data should be treated with a great deal of caution. One source (US Department of Health, Education and Welfare, 1979) has reported an incidence figure of 1.89% of the total school-aged population. However, this survey was not comprehensive. The key to the interpretation of incidence figures is the degree of difference between achievement and potential that is taken as the criterion for the diagnosis of reading disabilities. If the level of difference between potential and actual achievement is kept to a figure as low as one-half a standard deviation of difference, then the estimated incidence of reading disability cases will be very high, perhaps 12-15% of the school-aged population. If, on the other hand, a difference of two standard deviations is taken as the criterion, then an incidence figure closer to the 2-3% estimate suggested above would be expected. The key point is that somewhere between these estimates lies a figure that includes those most in need of intensive remedial education. Taken together, the above data suggest a figure of 2-3% for those in need of intensive individual remedial help with a larger number (perhaps as many as 10%) in the borderline category requiring substantial corrective instruction and remedial help on an occasional basis. The data supplied by the Western Australian Education Department's Research Branch suggest that Council's estimate of 2-3% is a realistic one for more severe forms of disability and is consistent with prevalence estimates indicated in recent American studies (Myers and Hammill, 1982).

3.18 It has been found that large urban centres are associated with a high incidence of reading disability. The rate of reading

disability also varies from school to school, from district to district and from country to country. Reading disability has been reported to be less frequent in Italy, Spain and Japan than it is in Scandinavia, the United States and the British Isles, though much of this epidemiological data needs verification with comparable diagnostic criteria and test instruments (Rutter, 1978). The key problem is that the research done in some European and Asian countries is often based on different definitions and criteria of reading and learning disability. Some school systems are reluctant to disclose evidence of failure within their education services because of possible recriminations from official bodies and government agencies. Research teams in other countries often sample only from selected populations, and in other cultures standards of literacy are so low that meaningful interpretations of the incidence of learning disability are not possible. In this context the reported correlation between IQ (cognitive ability) and reading achievement is critical. If the correlation is of the same order as demonstrated elsewhere, then the incidence of reading disability is likely to be as high as that reported in Western European countries. Recent research by Stevenson, Stigler, Lucker, Lee, Hsu and Kitamura (1982) has indicated very comparable incidence levels of reading disability among Chinese children in Taiwan, and Japanese and American children.

3.19 Several investigations have shown that large family size, low social status and low verbal intelligence are associated with reading disabilities. These relationships are correlational and not always causal. There is no evidence to suggest that such factors are the major contributors to reading disability, though there is some data to suggest that these factors can combine to form a cumulative debilitating effect on reading skills development (Rutter, Tizard and Whitmore, 1970). It is probable that the attitudes of parents and teachers are of some importance in explaining relationships between home background and learning problems. It is also known that patterns of social interaction within large families do not typically facilitate competency in language and school-related skills (Nichols and Chen, 1981). In addition, it appears likely that social class factors can delay or advance the development of language, and severely handicapped

groups that have limited social and economic resources are particularly disadvantaged in this regard. One caveat is important in this context: it must be noted here that specific reading disability is not typically found in children from the most disadvantaged homes, but is more likely to be found in families where the father is a skilled manual worker (Rutter, Tizard and Whitmore, 1970).

3.20 A family history of general backwardness, reading difficulties and speech retardation is very much more common in the reading disability group than in the general population. Reading disability appears to be a familial disorder, and the parents and siblings of affected children often present with similar patterns of cognitive disabilities and reading deficits (Decker and DeFries, 1980). Rutter, Tizard and Whitmore (1970) found that more than one third of the close relatives of reading disabled subjects had experienced reading problems, mental retardation or speech problems. Other studies have noted that the siblings of learning disability children are more likely to have suffered some kind of developmental handicap (Nichols and Chen, 1981). As in most studies of this kind, it is hard to separate genetic and environmental causes, and most reputable analyses conclude that the evidence is not available that will allow definitive conclusions about causal factors in individual cases.

3.21 There is evidence of a strong correlation between reading disability and antisocial behaviour. The correlation between reading disability and other childhood psychiatric states (e.g., neuroticism) is far less strong. Children with reading disability and antisocial behaviour resemble children with "pure" reading disability more than children with "pure" antisocial disorders (Rutter, Tizard and Whitmore, 1970). In support of this claim, Rutter has supplied evidence to show that antisocial behaviour in children with reading disabilities was closely associated with large family size, speech delay, a family history of reading difficulties and very poor concentration. However, there was no link between antisocial behaviour in retarded readers from broken homes. This evidence gives some support to the view that children with a learning disability have not developed reading problems

because of factors that contribute to antisocial behaviour; rather the children have a learning disability and an antisocial disorder because of factors contributing to their failure in learning to read. Thus, one would expect the young delinquent child without reading problems to be the result of unfavourable social and family factors. In contrast, the child with a learning disability and antisocial behaviour is probably the manifestation of a different set of factors that have much in common with the genesis of the learning disorder.

- 3.22 There is evidence that speech or language disorders are highly correlated with reading disorders. Young children who begin school with a language disorder are at high risk for reading failure. Approximately one third of such children are subsequently classified as backward readers or learning disabled (Rutter, 1978). These children do not always respond favourably to speech therapy, nor does traditional educational programming always have a positive effect. It is true that many of these children do obtain a reasonable degree of language competence and by high school age most are free from gross disorders and serious communication disabilities. However, pervasive developmental disorders do remain in a substantial minority of such children and many require intensive therapy and individualized educational programmes. Many of these children fall into the learning disability category. Although of normal intelligence, they often lack balanced language development. Vocabulary is often poorly developed, general verbal comprehension is frequently slow and problem solving capacity in the language area is often slower than that observed in their peers.
- 3.23 Medical examinations usually reveal few important differences between children with reading disabilities and normal children (Rutter, Tizard and Whitmore, 1970). Medical histories sometimes indicate a slightly higher prematurity rate in groups of children with specific learning disabilities, but even here the evidence of a link between birth distress and the incidence of learning disability is not strong. Certainly it should not be claimed that the learning disability case is invariably the result of stressful prenatal, perinatal or neonatal events (Nichols and Chen, 1981).

Many children with histories of difficult birth do not suffer from learning disabilities and most children whose birth weight is within normal limits and whose gestation is more than 32 weeks rarely need the individualized attention and intensive care often needed by very low birthweight and grossly handicapped children. Of course, it is true that the more severe forms of distress at birth are often associated with physical, cognitive and educational handicaps. The cerebral palsied child, the mentally handicapped and brain injured child often suffer debilitating handicaps because of cerebral damage occurring at birth. In some cases, the learning disabled child has also suffered cerebral damage at birth. These defects have, in such cases, been shown to be related to learning disabilities that are manifested later in life. However, these children are rare and there is little evidence for a strong link between birth damage and specific learning disabilities. It is clear that the majority of learning disability cases are due to a constellation of social and biological factors that are often difficult to unravel in a clinical situation.

A New Definition of Learning Disabilities by the American
National Joint Council for Learning Disabilities (NJCLD)

3.24 A recently formulated definition by the National Joint Council for Learning Disabilities is gaining wide acceptance in the United States. The definition has much in common with the conceptual framework developed in Public Law 94-142, but it also contains a number of new developments and some changes in emphasis.

Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with

other handicapping conditions (e.g., sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g., cultural differences, insufficient/inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences (National Joint Council for Learning Disabilities, 1981).

A commentary and position paper prepared by the NJCLD about this definition are reproduced in Appendix H.

The NJCLD definition emphasizes that the term learning disabilities denotes a group of disorders that refer to specific ability decrements and not general deficits. Myers and Hammill, (1982) state "the difficulty is in one or more ability areas but does not encompass all ability areas" (p. 7). It is clear that the authors of the NJCLD definition have been concerned with children whose pattern of scores show relatively high levels of competence in some areas and specific deficits in others. The committee has not delineated which attainments or abilities should make up the high points in the profile, rather it has been concerned with giving a detailed account of what are to be the areas of deficit. These deficit areas are to be relatively few, and it is supposed from this that the child who has a uniformly flat profile or who shows deficits in all abilities or attainments is to be excluded from the learning disability category. Given this exposition, a real problem of interpretation remains; it is not explained how "general" or "specific" the profiles have to be. Will the child with five of six "problem" areas and one or two "normal", "average", or "high" areas be diagnosed as learning disabled? The committee has not addressed this problem nor have others who have referred to the "imbalances" (McGrady, 1975) and "intra-individual differences" (Kirk and Gallagher, 1979) of the same kind. Few sources have made explicit the exact dimensions of difference that will allow a meaningful distinction between general and specific learning disabilities. The NJCLD group is no exception. It has done little to solve the problem of explaining how the definitional scheme can be given operational validity and clear interpretation in clinical and educational settings.

3.25 The term 'significant difficulties' in the NJCLD definition refers to the fact that "the presence of learning disabilities can be just as debilitating to an individual as the presence of cerebral palsy, mental retardation, blindness, or any other handicapping condition" (Myers and Hammill, 1982, p. 7). This statement highlights the handicapping nature of learning disabilities, but does not make clear the nature of the comparison between the learning disabled and other exceptional children for that depends in large part on the degree of disability experienced by the learning disabled, cerebral palsied, mentally retarded or sensorily impaired individual. For example children with a mild form of cerebral palsy may be highly competent, both intellectually and scholastically, and suffer from only a mild form of handicap. In comparison, a severe form of learning disability may impede progress and adjustment in a number of ways in school resulting in a severe handicap relative to the case of the cerebral palsied child. Such comparisons can therefore be relatively meaningless. What is true is that learning disabled children have been found to be more capable than their physically handicapped peers in concealing their disabilities from teachers and parents. Because of their normal physical appearance and demonstrated abilities in some areas of competency, learning disabled children can often mask the very real difficulties they experience in dealing with learning tasks in school and society.

3.26 The above definition makes no reference to specific criteria for determining discrepancies between expected level of achievement (potential) and achievement. The committee that devised the definition considered that discrepancy formulae lead to problems in diagnosis referred to in paragraph 3.10. Myers and Hammill (1982) have recommended that local school authorities, state education agencies and others concerned with service delivery for the learning disabled should define levels of difference or discrepancy between potential and achievement. They have advocated that local authorities should "operationalize" the definition. This is something of a problem because in no place in the NJCLD definition is there reference to "potential" or "general ability", nor is there reference to any specific discrepancy between "potential" or "achievement". The generic notion of underachievement has been

lost in an attempt to compromise on the many conflicting views on this issue. What is more, there is no hint of what might be included as operational concepts of potential or "expected level of performance" (Myers and Hammill, 1982). It is clear that attempts to operationalize the NJCLD definition are bound to falter on logical grounds since the committee have not made explicit their key concepts, nor have they recognized the generic notion of underachievement in their formulation of the concept of learning disabilities.

3.27 The NJCLD definition includes reference to specific deficits in the areas of listening, speaking, reading, writing, reasoning, or mathematical abilities. It is necessary for there to be "serious impairment in one or more of the listed abilities ..." (Myers and Hammill, 1982) in order for a diagnosis of learning disabilities to be considered. This list of ability deficits is not very different from the categories included in earlier definitions. Spelling is excluded from the list, possibly because it is considered a less serious deficiency than others. The inclusion of reasoning as an essential element looks anomalous, since this category is normally reserved to test for measures of potential or "expected levels of competence". However, as noted earlier, the authors of the NJCLD definition have not made clear what are to be included as measures of potential against which these "listening, speaking, reading, writing, reasoning or mathematical abilities" (Myers and Hammill, 1982) are to be matched. The emphasis in the new NJCLD definition is on the diagnosis of an abnormal profile, with substantial and significant deficits in one or more (how many is left unspecified) abilities.

3.28 A learning disability is considered by the NJCLD to be an intrinsic disorder and not primarily the result of environmental or external factors such as poor schooling, economic deprivation, poor child-rearing practices and other related school, societal or home influences. However, the problem in determining to what extent external agencies or factors may have influenced the development of cognitive or scholastic abilities is not fully addressed by the writers of the NJCLD definition. Their purpose is to satisfy themselves that obvious and measurable environmental influences are

not contributing to the aetiology of the disorder and once this has been done they presume that for the remaining disorders internal or genetic influences account for any aberrant pattern of abilities. However, as Coles (1980) has pointed out, many research studies seeking endogenous or genetic factor explanations have failed to look beyond obvious and measurable environmental factors in the aetiology of learning disabilities. The influence of the environment, particularly in the early stages of development, is often subtle and unquantifiable. If it were possible quickly and reliably to determine the influence of environmental factors on human abilities, then there would be some validity in the strategy of the NJCLD committee.

- 3.29 The members of NJCLD have defined the disorder as being one that is the result of central nervous system dysfunction. It has long been the view of many professionals in the area that learning disabilities are the result of "sequelae of traumatic damage to tissues, inherited factors, biochemical insufficiencies or imbalances or other similar conditions" (Myers and Hammill, 1982, p. 8). In this respect the definition is similar to Kirk's (1962) original formulation and the views of Clements and Peters (1981). Two objections to the NJCLD view on aetiology are important in this context. It is axiomatic that matters of aetiology should be the concern of research scientists and not the province of councils or committees. It is not sufficient to define all learning disabilities to be the result of brain damage, since there is no empirical or diagnostic evidence to support such a claim. As yet there is no diagnostic tool that will allow the clinician to isolate those children with specific learning disabilities that are a consequence of brain damage. The second objection is just as fundamental, and is based on evidence showing no experimental evidence of a direct link between neurological damage and specific learning disabilities. There are no data to show that all learning disabilities are caused by trauma, biochemical or genetic influences. In particular, as Coles (1980) has pointed out, the evidence is extremely strong that genetic influences are not the only causal factors. Coles has shown that the effects of environmental influences are often ignored and that the case for the predominance of genetic factors is not proven. He has demonstrated that in many research studies there is clearly

"failure to investigate adequately environmental factors as explanations of reading problems" (Coles, 1980, p. 369). In addition, there is a great deal of medical and psychological research to indicate that much of the research on a link between learning disabilities and central nervous system dysfunction is speculative rather than scientific.

3.30 It is the NJCLD view that learning disabilities may occur concomitantly with other handicapping conditions. This new definition stipulates that children diagnosed as having a sensory or physical handicap, intellectual handicap, psychiatric or personality disorder may also be diagnosed as having a learning disability. However, the NJCLD definition stipulates that learning disability cannot be primarily caused by sensory or physical handicap, intellectual handicap, psychiatric disability or physical disorder. Hammill and Myers (1982) have argued that learning disabilities are not caused by another primary disorder, nor are they a "direct result of those conditions or influences" (p. 6). This point is consistent with the general approach adopted by other authorities. Learning disabilities are not caused by low intelligence, poor socio-economic conditions, deficient language, poor schooling, or sensory or physical handicap. However, given this new definition it is possible for a child to be diagnosed as intellectually handicapped and learning disabled; another child may be classified as having a visual handicap and a learning disability; still another may be diagnosed as having a severe personality disorder, a physical handicap and a learning disability. This is a significant advance over previous diagnostic criteria that precluded the possibility of multiple diagnoses and an overlap of categories. However, this definitional advance has caused some additional problems, particularly in diagnosing learning disability and determining causal relationships. Obviously, in many cases it is problematic to determine to what extent a primary disorder (e.g., intellectual handicap) has disrupted the development of skills such as listening, speaking, reading, writing, reasoning or mathematics. Also, in a clinical setting it is often impossible to judge the extent to which one or more disabilities or handicaps have interacted to affect patterns of learned skills. Despite these problems, the change in emphasis

should be applauded since many children with multiple handicaps have been denied the advantages of remedial services because of their exclusion from traditional diagnostic categories.

Minimal Brain Dysfunction

- 3.31 The minimal brain dysfunction (MBD) syndrome is often used in conjunction with the learning disability concept. The MBD concept was first used in a report for the National Institute of Neurological Diseases and Blindness (1966).

The term 'minimal brain dysfunction syndrome' refers ... to children of near average, average, or above average general intelligence with certain learning or behavioural disabilities ranging from mild to severe, which are associated with deviations of function of the central nervous system. These deviations may manifest themselves by various combinations of impairment in perception, conceptualisation, language, memory, and control of attention, impulse or motor function (Clements, 1966, p. 10).

Clements suggested that similar symptoms sometimes are concurrent with diagnoses of cerebral palsy, epilepsy, mental retardation, visual and auditory handicaps. He also indicates that these aberrations may be caused by genetic variations, biochemical factors, perinatal brain insults or other factors that are critical to normal development of the central nervous system.

- 3.32 The minimal brain dysfunction concept has much in common with the learning disability definitions referred to in paragraphs 3.1 to 3.11. It is presumed that the children have a developmental disorder that is not the result of mental retardation or other gross developmental handicaps. The minimal brain dysfunction definition focuses on children of normal intelligence who have difficulty in specific areas of psychological or psychomotor functioning. No specific reference is made to deficits in the

areas of subject skills competencies (e.g., reading, writing, spelling). The emphasis is on minor neuromotor and neuropsychological disturbances often observed in children with borderline neurological abnormalities.

- 3.33 The MBD syndrome had its origins in some early work by Strauss, (Strauss and Lehtinen, 1947). Strauss observed that some of the children who attended clinics for learning problems showed evidence of perceptual and psychomotor disorders. On previous examination these disorders had often been classified as mild or transitory aberrations of minor importance. They appeared to be of an attenuated kind similar to those observed in children with mild cerebral palsy and other disorders of established neurological origin. Strauss did not have direct evidence of brain damage, but observed that the behavioural characteristics of these children were similar to those seen in children with gross neurological disorders. The presumption was that since the children behaved in much the same way as brain injured children then it was likely that they suffered from a mild form of brain dysfunction.
- 3.34 Much of the literature on minimal brain dysfunction discusses the learning and behavioural disorders that are associated with this disability. The four conditions most often cited are hyperactivity, distractibility, impulsivity and excitability. Some writers prefer to use the term hyperactive child syndrome (HACS) (Cantwell, 1975; Weiner, 1982) in preference to MBD. The American Psychiatric Association (1980) uses the term attention deficit disorder (ADD) to refer to many of these same children because of the high levels of distractible behaviour and limited attention span that they demonstrate. Some authorities (e.g., Weiner, 1982) believe that the terms minimal brain dysfunction, attention deficit disorder and hyperactive child syndrome refer to the same generic condition and have stated a preference for the definitions that focus on behavioural characteristics rather than neurological dysfunctions. Weiner (1982) has suggested the use of the term MBD/ADD as a compromise solution to problems of classification.

- 3.35 Despite their obvious commonalities the conditions of MBD, ADD, HACS and MBD/ADD are derived from different diagnostic and definitional frames of reference. Minimal brain dysfunction and the hyperactive child syndrome are typically diagnosed by a neurologist whose clinical background is in neurological disorders. The attention deficit disorders and learning disabilities handicaps usually require the attention of a child psychiatrist or psychologist whose training is in diagnosing behavioural disorders. In addition, it is not unusual for children to be classified as having both a neurological disorder and a behavioural disability at any one time. Children diagnosed as having a learning disability may also be classified as having MBD, ADD and HACS. This possibility of multiple diagnosis causes much confusion, particularly as these several disorders also share common symptomatology.
- 3.36 There appears to be no easy reconciliation on this matter. Ross (1976) and Rie and Rie (1980) are highly critical of the minimal brain dysfunction hypothesis because of the lack of neurological evidence of a link between the MBD syndrome and its presumed aetiology. They do not question the evidence that some learning disability children have been also identified as brain damaged, but point to the data of Rutter (1978) that show that it is difficult, if not impossible, to detect brain damage where there is no overt evidence of neurological disease or disorder. Further, the epidemiological data show that where there is evidence of definite or borderline brain damage the association is with general learning disabilities and not with specific learning disabilities (Rutter, 1970). Despite this persuasive evidence the NJCLD group continue to ignore their critics and define learning disability as "presumed to be due to central nervous system dysfunction" (Myers and Hammill, 1982, p. 6).
- 3.37 The review by Hughes (1978) provides a useful perspective. His material is directed particularly to studies on developmental dyslexia, but is also relevant in this context. Hughes demonstrates a tentative link between electroencephalographic (EEG) data and learning disabilities. He claims that "positive spikes seem to be more frequently mentioned in the studies on dyslexia"

(1978, p. 216) and then goes on to point out the many faults in the design of studies in this field. The data indicate only an equivocal relationship between EEG findings and learning disability. Hughes (1971), for example, found more abnormal EEG patterns in patients with borderline and mild learning disorders than in patients with severe learning disabilities. In this context, Connors (1978) is particularly critical of the view that there are definite links between learning disabilities and EEG abnormalities. His data show that a substantive relationship between these two variables has not been established and that much of the evidence demonstrates a lack of functional dependence between the neurological disorders measured by the EEG and learning disabilities.

3.38 There are numerous studies that have attempted to show a relationship between the diagnosis of a pattern of purported soft neurological signs and learning disabilities. In one study, Rie and Rie (1978) showed that for subjects of mean age 8 years the number of neurological signs did not predict organicity, that hyperactivity and organicity were not clinically related and that many of the soft neurological signs decreased or disappeared with age. It was also found that responses that require motor functioning and sensory processing were more effective than most other neurological soft signs in predicting demonstrable brain damage. Adams, Kocsis and Estes (1974) studied 10 and 11 year-old children and discovered that learning disabled children could not be discriminated from normal controls on measures of soft neurological signs. Clearly, the parameters of difference are as yet unclear and more research needs to be done on the kinds of soft neurological signs that may prove useful in clinical investigations of learning disability.

3.39 Rie and Rie (1980) have summarised much of the critical literature. Since in most cases the signs of brain damage occur concurrently "some of the time, but not consistently enough to be characterised as a syndrome" (p. 14) Rie and Rie state that it is logical to hypothesize that some signs are secondary to the manifestation of CNS impairment. They have also suggested that the pathognomonic significance for CNS impairment of given symptoms or

categories of signs is of doubtful validity and that the consequences of such dysfunctions need to be distinguished from other maladaptive behaviour. If possible, the sites and degree of structural damage involved in minimal brain dysfunction need to be identified and the link between such structural defects and particular behavioural characteristics needs to be established. However, present data indicate that such links may be impossible to establish since lesions in the same structures often lead to widely diverse behavioural responses in different subjects.

- 3.40 Most of the major problems with the MBD syndrome relate to the logical and empirical status of the definition of the term. First, the nature and sites of structural damage or functional disorder in minimal brain dysfunction need to be identified. Second, the relationship between particular forms of brain damage and behavioural deviations needs to be explicated. Rie and Rie suggest that the pathognomonic significance for CNS impairment of given categories of signs should be thoroughly investigated and that the consequences of such impairments be distinguished from the other disorders. In most cases, critics remain unconvinced about the nature of "minimal brain dysfunction" and whether structural damage or functional disorder is involved. If there is a functional disorder, rather than structural damage, then this functional disorder needs to be specified and its parameters distinguished from the disorders due to structural abnormalities.

Alexia and Dyslexia

- 3.41 Definitions of alexia and dyslexia have been given in Chapter 1 and Appendix C. Alexia means a complete loss of developed reading ability and dyslexia means impairment of reading ability. Originally both terms were used to describe disorders in literate persons which were sequels to known brain damage. Thus both referred to acquired disorders. However, the extension by analogy of the term "dyslexia" to encompass the problems of children who have difficulty learning to read for no readily apparent reasons has necessitated the use of some means of distinguishing between the dyslexia of a previously literate person and that of a child

who has not become literate. Various means of distinguishing between them have been proposed. Benson (1979, p. 107) suggests that "Alexia ... may be defined simply as the loss or impairment of the ability to read caused by brain damage ..." and "Dyslexia is thus defined as an inherent inability to learn to comprehend written or printed material ...". He stresses that alexia is an acquired disorder and that dyslexia is a developmental abnormality. Some authors (e.g. Warrington and Zangwill, 1977, p. 209) use alexia and dyslexia interchangeably in discussing disordered reading in previously literate adults while others distinguish between acquired and developmental dyslexia (Sasanuma, 1980, p. 48; Marcel, 1980, p. 253). The latter usage seems preferable in educational discussion. Without the qualifying word "developmental" there is a tendency to forget that whereas a link between the behaviour "disordered reading" and direct anatomical evidence of structural brain damage has been established for acquired dyslexia such a link has not been established for developmental dyslexia. Possible links between the behaviour "disorder in learning to read" and any delay, difference or deficit in brain structure or function have so far only been inferred from other disordered behaviour known to be directly linked with brain damage, not yet unequivocally demonstrated.

3.42 The World Federation of Neurology has provided two definitions of dyslexia that are widely reported in the literature. The first definition refers to primary dyslexia postulated to be caused by genetic or constitutional factors.

A disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence and sociocultural opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin (Critchley, 1970, p. 11).

The second definition designated as secondary dyslexia has less limited scope and includes children who may be handicapped by cultural background, bilingualism, inadequate social support and psychological or behavioural disorders.

A disorder in children who, despite conventional classroom experience, fail to attain the language skills of reading, writing and spelling commensurate with their intellectual abilities (Critchley, 1970, p. 11).

3.43 Critchley has pioneered much of current research on dyslexia. An approach has been adopted by Critchley to account for the phenomenon which represents it by analogy with acquired dyslexia as a condition that has the characteristics of a physical disease. The emphasis is on diagnosis and medical or psychiatric treatment. The deviant reading behaviour is said to be associated with disorders of speech and language, clumsiness and incoordination, difficulties in spatial relationships, directional confusion, right/left confusion, disordered temporal orientation, difficulties in naming colours and in recognizing the meaning of pictures, and inadequate, inconsistent or mixed cerebral dominance. Psychological factors are not recognized as progenitors in the aetiology of the disorder. Dyslexia is placed in the same category as aphasia, dysarthria and other disorders of communication that are linked with biological factors, in particular with disorders of function or structure of neurological origin.

3.44 The latter definition is almost entirely consistent with most definitions of specific reading disabilities. Some recent writers have adopted the view that dyslexia and specific reading disability cannot be distinguished on conceptual grounds. Vellutino's (1979) most recent text adopts the view that dyslexia is synonymous with the terms specific reading disability and reading disability. He states:

the study of dyslexia is best undertaken in severely impaired readers who have at least average or above average intelligence, who sustain no sensory acuity problems, gross brain damage, or pronounced emotional or social disorders, and whose learning difficulties are not due to inadequate instruction or socioeconomic disadvantage (Vellutino, 1979, p. 321).

3.45 There are many who claim that dyslexia is inherently different from other reading disorders. The most often cited difference is a

postulated disorder of the brain caused by constitutional factors of genetic origin. This hypothesis has great attraction for some neurologists and psychologists who espouse the importance of biological factors in human development and learning. The evidence for the hypothesis remains slight. There is little data to show a particular behavioural characteristic or neurological defect is inherited in dyslexic subjects, nor is there any substantial data on the means of inheritance (polygenetic, autosomal dominant, sex-linked, etc.). As Rutter (1978) has pointed out there are no behavioural or biological markers that distinguish dyslexia from other reading disorders and no indication of how the biological mechanisms affect the transmission from one generation to the next. It is true that reading disability cases are more likely to occur in children from certain classes of society, are more likely to be boys, and are more likely to occur in families where the immediate family suffers from a similar disorder. But this evidence is based on correlational data. The claim that some biological or genetic mechanism accounts for a substantial amount of this covariation remains unproven.

3.46 The second most often cited difference between dyslexia and other reading disorders is in respect of the homogeneity of the behavioural or psychological characteristics of children and adults who are said to suffer from the disorder. The dyslexics are said to be very much like one another, whereas the children who suffer from other reading disorders are said to come from a heterogeneous group with diverse physical and psychological makeup. Many research workers (Taylor, Satz and Friel, 1979; Critchley, 1970; Rutter, 1978) have attempted to define such a group and identify their common qualities. All have failed for as Benton (1978) has suggested there is little to support the view of "homogeneity among dyslexics with respect to the qualitative aspects of their reading performance, the status of their other cognitive functions, their history or their neurological condition" (p. 456). This view is that the term developmental dyslexia encompasses many disorders, each group of different status and origin, each of which must be identified as representing a condition of different aetiology. Recent research efforts have been directed towards solving the problem of identifying the nature of these separate conditions.

3.47 Other authorities recognize the importance of an appropriate use of reliable and valid test instruments and measurable limits of difference between potential and achievement. Eisenberg (1978) has suggested a modified version of the standard definition. He recommends that:

Specific reading disability (or developmental dyslexia) should be diagnosed when individually administered reading and intelligence tests given by competent examiners reveal a severe performance deficit (greater than two standard errors of prediction) between the obtained reading level and that expected on the basis of age and intelligence - in a child who has received reading instruction in his native language in a kind and amount ordinarily sufficient for his peers (Eisenberg, 1978, p. 41).

This statement has much in common with the definition of secondary dyslexia referred to by Critchley (1970).

3.48 Eisenberg makes clear that both individual tests of intelligence and reading should be administered and that a difference of two standard deviations will be the critical criterion to distinguish dyslexics from other children. Even so, his definition is not completely satisfactory, for there is no explicit determination of what is "reading instruction ... (of) a kind and amount ordinarily sufficient for his peers" and no discussion of poor achievement and its effects on the kind of education a child receives. There is an interaction between competency in reading and quality of education, a matter that is rarely dealt with by those who define the dyslexia syndrome.

3.49 Several key questions should be asked about the scientific validity of the dyslexia concept. The most relevant questions are:

1. Have we the diagnostic tools to differentiate the dyslexias caused by endogenous and exogenous factors?
2. Is there a dyslexia syndrome that is characterised by its "purity of symptoms" (Eisenberg, 1978) that is qualitatively different from other reading disorders?
3. To what extent are the dyslexias defined in the literature different from definitions of specific reading disability?
4. Is there any real need for a reading disability of separate status called dyslexia?

3.50 These questions are often confused, though the answers to any one question will determine, in large part, the answers to others. The answer to the first is a clear and unequivocal negative. As yet there is no diagnostic instrument that will allow an unqualified determination of those students who have a putative syndrome called dyslexia. The evidence suggests that some authorities will allow certain patterns of test scores and criteria to be interpreted as evidence of dyslexia but that other authorities typically choose other criteria and test instruments for the same purpose. There are doubts about the underlying pathogenesis and even more doubts about the procedures that should be used to assess the nature of the supposed substantive properties of the disorder.

3.51 If there is no identifiable diagnostic tool for identification then there could still be an underlying syndrome characterised by a "purity of symptoms" that defies reliable measurement. However, there is little evidence of such a disorder. There appears to be no pattern of test scores, no set of neurological data, nor any collection of reading test scores that will allow the definition of such a syndrome. For example, research has shown that children who have a family history of reading disorder do not differ in any significant way from children who have not such a background (Rutter et al, 1970). In like fashion, children with mixed or confused laterality do not have a special set of cognitive or achievement scores to show the need for special status. All attempts to classify a distinctive group of neurological or behavioural states of special quality has foundered on empirical grounds.

3.52 The research data up to the present indicate a very weak relationship between the various definitions of dyslexia and other behavioural, constitutional or neurological variables. The data do not cluster or pattern in the way that some research workers have postulated. It may be that there is an underlying pathology, but if there is its clinical manifestations reveal a diverse set of behavioural states. There appears to be little evidence of a disorder recognizable by the purity of its pattern of symptoms.

3.53 The answer to the third question follows from the answer to the previous questions. The dyslexias have been defined as being separate from the other reading disorders in several respects:

1. in terms of particular patterns of cognitive and behavioural states,
2. in terms of the degree of difference, i.e., the dyslexias are said to represent more severe forms of reading deficit, and
3. in terms of the genetic or constitutional factors involved.

3.54 It is possible to define these differences and a number of authorities have devoted much time to classifying and developing taxonomies of various kinds to represent such variations. Factor analysis, cluster analysis and other statistical procedures have been tried to effect useful diagnostic subgroups. In general these attempts at classification have proved useful in providing conceptual frameworks for the analysis of data, but they have not provided additional information about any other differences of real importance. It is not too difficult to define a special group of dyslexias as different from other dyslexias on stipulated criteria. The more difficult task is to show that the defined differences have any scientific and clinical usefulness. In other words, dyslexic children can be shown to differ from children with reading disability in the way they are defined to be different, but in no other way that reveals substantive or qualitative distinctions. Further, in most cases there has been little evidence to show that the criteria used to differentiate the dyslexias have been systematically applied or based on a substantive theory about the generic nature of different kinds of disorder. For example, there is little to show of the genetic mechanisms that underlie a constitutional dyslexia and how they operate and differ from those that underlie other dyslexias. Much of the present evidence is still based on retrospective correlational analyses. Likewise, there is little theory on the cognitive or verbal mechanisms that would account for some of the other dyslexia theories. Most of the latter are based on pure speculation or probabilistic associations of dubious value.

3.55 The last of the four questions is probably the easiest to answer. Some authorities (e.g. Vellutino 1979) suggest that the term dyslexia is synonymous with specific reading disability and that

there is no real point in trying to discriminate between the two. Other authorities (e.g., Eisenberg, 1978) maintain that it is useful to identify the more severe reading disabilities with such a term. Yet others claim that the question of the status of the term dyslexia will depend on future research that may identify a unique disorder of genetic or psychological origin. Any of these approaches is legitimate, so long as the difficulties of such interpretations are clearly recognized. The data from research up to now demonstrate that specific reading disability and dyslexia cannot easily be differentiated except in terms of some arbitrary set of definitional rules. Perhaps such differentiation is necessary if research is to progress, but there is little real evidence to show the clinical usefulness of any such separate system of classification.

CHAPTER FOUR

DIAGNOSIS, IDENTIFICATION AND ASSESSMENT

Introduction

- 4.1 In Chapter Three definitions of learning and reading disabilities were discussed and possible causal factors were also mentioned. The discussion in this chapter deals primarily with underachieving children who show evidence of severe problems in learning to read. This discussion will include the early identification of children who exhibit response patterns which suggest vulnerability for difficulties in learning to read in the regular classroom situation. This discussion will be limited to the diagnosis and assessment of those children of average intelligence whose difficulties are so severe that progress in basic skills is affected.
- 4.2 On the basis of Council's investigation the following statements seem to be generally accepted.
1. Because learning to read is a complex process involving different cognitive skills at different levels of abstraction, problems can arise at any stage of education, both in primary school and secondary school. Success in mastering the mechanics of oral reading does not necessarily result in later comprehension, assimilation and utilisation of the information contained in what is read. Therefore, the evaluation of progress and the identification of difficulty should be an ongoing process both in primary schools and in secondary schools.
 2. The classroom teacher is most important in the diagnostic programme. Through regular observation and periodic assessment, the teacher is in a key position to identify children who need help. While most teachers do identify these children, some do not have the knowledge or experience

to do this and to proceed with appropriate corrective or remedial programmes in the classroom. Such teachers tend to rely on assistance from outside resource persons, if, or when, this is available.

3. Most parents are aware of the importance of adequate reading skills and will go to considerable lengths to ensure that their children receive help. While some parents initially are reluctant to accept the recommended placement of their children in a remedial class or clinic, most find that their children benefit from such special placement.
4. While the problem of inadequate reading skills is readily recognized in secondary schools, organised reading programmes usually are not available in sufficient numbers, particularly so far as diagnosis and/or remediation is concerned. There is a need for more to be done for older children with reading problems. This has already been highlighted in paragraphs 1.6 and 1.7 in discussing the research report Weak Readers in Secondary Schools (Markey, Deschamp and Tame, 1983).
5. When adequate cumulative records of progress are available, identification of a child's problems is facilitated. Such records are particularly valuable when they show a decline in performance. At this stage, the classroom teacher may be able to identify the problem. If not, assistance from specialist personnel should be sought. The three research reports cited in paragraphs 1.4, 1.5, 1.6, 1.7 and 1.8 show that adequate cumulative records are not always available. This needs to be rectified.
6. Short-term corrective remedial programmes may result in quite spectacular gains for some children. However, these gains are not always maintained, and continuing special assistance from either classroom or specialist teachers may be necessary to sustain progress and motivation.

Diagnosis and Assessment

- 4.3 Diagnostic techniques range from screening surveys to individual case studies, the choice of method depending usually on the purpose of the evaluation. Screening surveys can be used as a means of identifying children who are 'underachieving', but this approach gives only an estimate of a particular child's cognitive ability and reading attainments and is usually used to determine those children who need further and more intensive evaluation. Group achievement tests, which have acceptable reliability and validity, are also available. These are economical and easily administered. While they may tend to over-emphasize the failure of poor achievers and to penalise the child who has a foreign language background, they are useful in identifying children who need more intensive investigation. However, it is possible that an observant classroom teacher may accurately identify children with learning problems. With the typical pencil and paper tests, some basic reading skills are required. As a result 'underachievement' can be confused with below average intelligence (group intelligence tests penalise both 'slow learners' and poor readers).
- 4.4 Figure 1 shows the distribution of reading scores in the five primary schools studied by Research Branch. Different tests were used for each year level. The arbitrary cut-off score of 1.5 standard deviations below the mean was used to select students with the lowest scores for further study. This selection process excluded students, who, although scoring above the cut-off point, were not reading as well as other predictors suggested they might; nor was the small number of students who scored below approximately 78 on the combined intelligence tests included. The figure shows yet again the wide range of reading achievement levels which teachers must programme for in age-graded classrooms for the scores obtained by the 3.6% of students selected for further study indicate that all their classwork dependent on reading should be at a level comparable to that in classrooms one or two years below that in which they were being taught. Arranging programmes to cater for their needs is difficult and time-consuming and emphasizes the need for many classroom teachers to have the help of trained staff to assist in the assessment of poor readers and to devise practical remedial programmes.

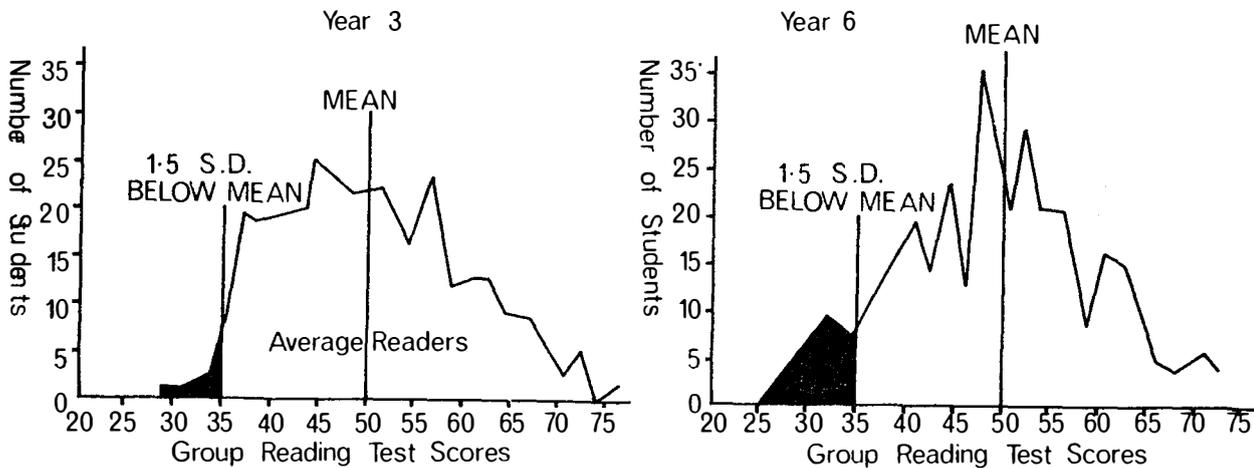


Fig. 1. Distribution of Combined Scaled Reading Scores

Figure 1. Distribution of combined scaled reading scores for Years 3 and 6.

Note: From Weak Readers in Primary Schools by P. Deschamp and A. Markey, 1983, Perth: Education Department of Western Australia.

4.5 Assessment of all the children identified as low achievers in a screening test programme would be a major undertaking if the children so identified represented some 10-12% of the primary school population. Obviously some checking and assessment could be carried out in the school by the classroom teacher or by other qualified personnel. Some children who were found to be performing poorly in all areas, including reading, might be of below average intellectual development and could be achieving adequately for their ability level. Group tests of general achievement and general intelligence are available - some of the latter with non-verbal content which, if adequately analysed and interpreted with sensitivity, can be used to diagnose such low-ability children. On the basis of such identification, appropriate programmes could be planned to meet their needs and thus relieve these children from the burden of constant failure.

4.6 Group tests of general achievement and general intelligence should be carefully selected for Australian conditions. Tests prepared

and normed in the United States of America or the United Kingdom may not be suitable for children in Western Australia. However, some tests developed overseas have been standardized by the Australian Council for Educational Research and are reasonably valid and reliable for general use in Australia. Teacher-made tests and curriculum based tests produced locally may have practical validity and reliability for use within a school, provided that their limitations are realised and the results treated as tentative. The major value of a classroom test programme of achievement testing is to establish attainment levels as a basis for future teaching rather than as a means of highlighting failure.

Clinical Assessment

4.7 It is suggested that survey and classroom achievement test programmes should be used to identify those children with major problems. These children usually require more intensive assessment under clinical conditions. Procedures will vary according to the severity of the problem, the training and experience of the clinician (Guidance Branch staff may or may not have had training and experience as classroom teachers, or post graduate training in clinical psychology or remedial education), the level of cooperation of parents and teachers, and the amount of time available. Assessment may be undertaken in a school or in a clinical setting.

4.8 A typical case study assessment would include most of the following:

Interviews Developmental health, social and educational histories can be obtained both from parents and teachers through interviews. Parents may harbour feelings of resentment against teachers who have not solved their child's problem previously, especially if the parent feels that he or she knew the child was failing long before the teacher and the school identified and acknowledged there was a serious problem. A history of prematurity, early

difficulties with language, temporary hearing loss, visual defects or neurological disorders will alert the clinician to the need for a medical check of vulnerable areas. For example, checks on the present status of visual and hearing acuity can be arranged through the Schools Medical Service. Some children have definite signs of neuromotor dysfunction, others may be clumsy, or are distractible and unable to concentrate long enough to become involved in a task. These so-called soft signs of cerebral dysfunction may indicate the possible cause of the child's problem but may only be variations of normal behaviour. It is therefore advisable where such behaviours are noted that a neurological assessment be made.

Individual Assessment Because of the diverse range of problems associated with reading difficulty, no set diagnostic test battery should be prescribed. Clinicians will have preferences according to their training and experience. Most group achievement tests, and some psychological tests of ability, aptitude and attitude require basic reading skills. If a child's problems are severe, it may be necessary to use non-verbal tests of intelligence and ability to identify basic inhibiting factors and a typical response pattern.

If the child can read, albeit with difficulty, it may be that the focus of the diagnosis will be on the problems as they are occurring, with an intensive analysis of what is evident as the child struggles to read. With such children, a diagnostic test as devised by the Australian Council for Educational Research, or some similar composite test which looks at areas of word recognition, word analysis, speed and accuracy, and comprehension may prove useful. However, the value of these structured tests lies mostly in diagnosing problem areas experienced by underachieving readers.

Individual intelligence tests have traditionally featured in the assessment of reading disabilities. If the tests are given by a clinician rather than a psychometrist, and if the

responses are interpreted sensitively with awareness of the possible implications of successes or failures, much valuable information can be gained from standardised tests such as the Wechsler Intelligence Scale for Children, the British Ability Scale, and, to a limited extent, the Stanford-Binet Test. However, the use of individual intelligence tests which result in the categorisation of the child on the basis of an IQ score is to be deplored.

Similarly, tests such as the Illinois Test of Psycholinguistic Abilities and the Frostig Developmental Test of Visual Perception may yield valuable insights into the cognitive functioning of a child if interpreted with sensitivity. However, the child may be penalised if the results are improperly used to label a child as 'brain-damaged', 'retarded', or, 'dyslexic'.

In addition to assessing the abilities and achievements of a child with severe reading disabilities, personality and motivational factors should also be investigated. If a child has experienced constant failure under successive teachers, he or she is likely to be unhappy, to be poorly motivated and to have low self-esteem. Response to failure can take various forms such as withdrawal, deliberate avoidance of failure by not trying, attention seeking, clowning, aggression, and petty delinquency. Social factors, such as home circumstances, family emergencies, poverty and cultural factors (including language and customs associated with non-English speaking homes), may contribute to the problem. Some children actually use their failing status for secondary gain and attention seeking, while others will 'cover-up' relatively successfully and invent ways of coping by copying other children's work and imitating their behaviour. Only a case study clinical approach, preferably conducted by a clinical team, is likely to uncover such complex features of an individual child's problems.

Individual assessment and diagnosis loses its value unless remedial programmes are planned, implemented and followed up

for the benefit of the child concerned. Information from all sources needs to be brought together and evaluated by a case study team, which should include not only guidance officers and other specialist professionals, but also the child's parents, the teacher, the school principal and representatives of the Guidance and Special Education Branch. Planning the remedial programme should be realistic and based on consensus rather than on authoritative direction.

Early Identification and Prevention

4.9 During the past decade, early intervention and corrective and remedial programmes have demonstrated the value of early diagnosis in bringing help to children before they commence formal schooling. Identification of physical and intellectual deviations during infancy and early childhood have provided opportunities for corrective action such as provision of hearing aids, or of spectacles, and the involvement of the child and his family in compensatory training programmes. Many of these programmes have a strong educational bias, and are helpful in preparing a child to succeed in his or her formal schooling.

4.10 Research in the area of early intervention has shown variable results. Even so, most authorities support the following general views.

1. While physical and intellectual factors which may interfere with learning to read can often be identified before a child enters school, failure in the academic skills areas is often only evident after the child has begun formal learning at school.
2. Many children with severe physical handicaps learn to read without undue difficulty, while other children who are apparently mentally and physically normal, have learning and basic skills problems.

3. Educational screening programmes at the pre-school level may identify children who have minor developmental deviations which suggest that they may be 'at-risk' when exposed to formal skills learning.
4. School readiness, although often associated with physical, intellectual and social maturity, does not necessarily correspond with chronological and mental age.
5. Reading and school readiness may be fostered and encouraged with suitable pre-school education.
6. Personality and social maturity are important factors in assessing readiness for formal learning.

4.11 As children in Western Australia usually commence formal education in the February of the calendar year in which they turn six years of age, there are wide variations in the level of readiness for formal learning within the six-year-old age cohort. As most children attend pre-school for the year prior to entering Year One, pre-school teachers have a particular responsibility in identifying children who may be at risk in a formal learning situation. Advisory teachers and guidance officers are available to assist pre-school teachers and parents to plan programmes to assist particular children. A testing programme is provided on request for children considered at-risk in school learning, and some special programmes are available for children with severe language problems, and with hearing, visual or intellectual handicaps. The involvement of parents is important, and the assessment of pre-school children who seem to have potential problems is undertaken with the parents' consent. Some parents insist that the child start formal learning with his or her peers, even when the prognosis is not good. Some other children only experience difficulties as the demands of the reading programme become more complex. Accordingly, teachers in the first formal years of learning will identify other children at risk who need special attention and encourage the provision of individual programmes designed to improve their reading skills.

Conclusion

4.12 Diagnosis should be seen as the beginning of remedial intervention for children experiencing difficulties in learning to read. This principle applies both to primary school students and to secondary school students. At all stages of schooling, evaluation of progress and the keeping of systematic records of the reading performance of all children will assist in the identification of children who are in difficulty. Classroom teachers are most important in identifying children experiencing difficulty, and they may be able to provide corrective measures unobtrusively before there is a need for expert intervention and investigation. However, such teachers may lack the knowledge and experience to provide adequate individual programmes for children needing additional assistance and Council believes that some of these teachers would welcome the opportunity for further training in the general field of remedial teaching.

CHAPTER FIVE

RECOMMENDATIONS

- 5.1 The recommendations which follow are made on the basis of submissions received following advertisements by the Council, of visits to schools, of discussions with various persons, of investigations made by the Council, and of the research reports commissioned by the Council and undertaken by the Research Branch of the Education Department (see Appendixes E, F, G and References). As noted in Paragraph 1.10, while the recommendations which follow relate primarily to students with severe reading disabilities, they also relate to those with mild or moderate reading disabilities. Council has not separated different categories of reading disabled children, nor has it thought it desirable to do so.
- 5.2 Council views reading as a fundamental skill and considers that all students have a right to expect that teachers will give particular emphasis to developing their reading skills as fully as possible. People who are unable to read, or have such severe learning disabilities that their reading proficiency is poor, suffer a serious deficiency in relation to their fellows. In Western Australia, the Council believes that effective leadership to improve the teaching of reading should be provided by the Education Department, the Catholic Education Commission and the private schools. The public generally, and parents and students in particular, have a right to expect that the major employing authorities will ensure that reading programmes for all students are strongly developed.

5.3 From the evidence received Council considers that the reading skills of a significant number of students with learning disabilities in Western Australian schools could be improved. While Council's major focus is on the small percentage of children who experience severe reading disabilities, it also has a general concern for those who experience either mild or moderate difficulties.

5.4 In the recommendations which follow Council has accepted the fact that financial resources are limited and that priorities must be established among the wide range of goals in education. In framing its recommendations Council has considered the following factors.

1. Skilled reading is a complex activity which is developmental in nature. Therefore opportunities for improving reading ability should be available to persons of all ages who wish to improve their reading skills.
2. Reading ability is not synonymous with intellectual ability.
3. Since reading is used as a medium of education in schools it is the responsibility of those providing that education to ensure that the levels of reading materials used match the reading attainments of the students being educated.
4. The earlier that problems with reading are detected the easier it is to overcome them.
5. Some students will have reading disabilities of such severity that they will require special help throughout their school years.

5.5 Council's first two recommendations were included on pages 20 and 26 based on the general discussions in Chapter 2. They are repeated here as part of this final chapter.

RECOMMENDATION 1. The Education Department should take early and positive action to review the findings of the research reports, Weak Readers in Primary Schools, (1983), and 'Underachieving' Readers (1983), and to implement procedures to improve the teaching of reading in primary schools, especially the provision of adequate remedial reading programmes throughout Western Australia.

RECOMMENDATION 2. The Education Department should take early and positive action to review the findings of the research report, Weak Readers in Secondary Schools (1983) and to implement procedures to improve significantly the teaching of reading in secondary schools, especially the provision of adequate remedial reading programmes throughout the secondary schools of Western Australia.

Diagnosis and Assessment

5.6 From its review of learning disabilities and the teaching of reading, Council accepts that there is no infallible procedure which will predict whether a child will experience difficulty in learning to read. However, there may be a number of indicators which suggest that the performance of some children should be closely watched both in the first years at school, on through the middle and upper primary grades and into the secondary programme.

RECOMMENDATION 3. The Education Department should develop procedures for the identification of children with learning disabilities. These procedures should be initiated in the pre-school year (where presently more

than 90% of children who will commence school the following year are enrolled) and continue through the primary school and the secondary school programme.

RECOMMENDATION 4. Procedures for the identification of learning disabilities should be initiated by teachers and supervised by guidance officers and other professional staff trained in diagnostic assessment.

5.7 A number of submissions made to Council suggested that the diagnosis of specific reading disabilities should be left to teachers. Council accepts that the classroom teacher has a major role both in diagnosis and in taking action to implement suitable learning experiences for particular children. However, where a mild or moderate disability is persistent, or where the disability is severe, Council considers that teachers are not sufficiently expert to enable them to identify some factors, such as vision, hearing, and neurological deficits which may be affecting a student's performance.

RECOMMENDATION 5. Principals of primary and secondary schools should have specific responsibility for the referral of students with severe reading disabilities to guidance officers and regional directors.

RECOMMENDATION 6. Guidance officers should have a major responsibility in the diagnosis of severe reading disabilities and should work co-operatively with parents, principals, teachers and special education staff in planning and providing suitable educational programmes.

5.8 It is important that teachers and other professionals recognize that parents have the right to approach any of the Education

Department's services independently and should be encouraged to participate directly in any situation where a child has a significant reading disability.

5.9 While Council is aware of problems associated with mass testing, and of the keeping of a range of records which may not be of direct benefit to particular students, nevertheless it supports a general testing programme and the keeping of functional records. Council envisages that the results of large scale testing will be used positively to improve services to students and suggests that such large scale testing may serve to improve resource allocation. At the present time, Council considers that the Education Department does not have information readily available that would enable it to decide whether sufficient resources are being devoted to the teaching of reading, particularly to those students experiencing severe difficulties.

5.10 During its investigations, Council was informed that a set of reading comprehension tests was being developed by the Curriculum Branch of the Education Department in association with the Research Branch.

RECOMMENDATION 7. The Research and Curriculum Branches of the Education Department should continue to develop sets of standardised or calibrated reading tests for use in Western Australian schools to assist the monitoring of levels of reading achievement and the incidence of reading disabilities.

5.11 During its investigations Council has also become aware that reading disabilities can manifest themselves in different students at different stages of their education. While emphasis on early detection of reading disabilities is essential it should be regarded as the beginning of a continuing identification process to locate students who require particular attention. Further, while Council is aware of the arguments against standardised testing,

some of which stem from misuse and misinterpretation, it considers that a systematic approach to the identification of children with severe reading disabilities is necessary if these students are to receive appropriate help.

RECOMMENDATION 8. Towards the end of each school year a set of standardised or calibrated reading tests should be administered to all students in Year One, Year Three and Year Six in primary schools, and at the beginning of Year Eight and Year Ten in secondary schools. Principals, regional superintendents and guidance staff should be directly responsible for the selection of suitable tests, the organisation of the recommended survey, testing and follow-up procedures.

RECOMMENDATION 9. Data from these periodic survey tests and the results of other relevant achievement tests should be used to identify students in need of more intensive diagnostic assessment and as a basis for the planning of appropriate reading programmes.

5.12 In a number of submissions, parents complained that they had been unaware that their child was experiencing reading difficulties. There was also the complaint from some parents that while they had suspected there might be a problem, they had been unable to obtain appropriate information from the school about the basis of their child's apparent problems. Council considers that parents have a right to know at an early stage whether a child is suspected of having particular reading difficulties. The support of parents is a key element in developing special programmes.

RECOMMENDATION 10. Principals should inform parents in writing as soon as it is apparent that a reading problem is of such a severe

nature that it is inhibiting the child's progress. Parents should be invited to the school to discuss all associated matters including what action is being taken to try to improve the child's reading skills.

5.13 Council recognizes that it may not be possible to provide remedial education for all students experiencing severe disabilities in all primary and secondary schools. However, it should be possible to provide some corrective instruction in all regular schools.

5.14 Council is aware that teachers differ in their skills and experience in dealing with reading problems. Any decision on the appropriate mode of special help must take into account the competence of the classroom teacher, the characteristics of other students in the classroom, the severity of a student's problem, and the support that is available to both child and teacher within and without the normal classroom situation, and the attitude of the parents.

RECOMMENDATION 11. Students diagnosed as having specific reading disabilities should be provided with one, or more, of the following programmes:

- (a) corrective instruction within the classroom;
- (b) remedial instruction with modified teaching in individual tutorial situations, or in small groups, outside the regular classroom;
- (c) adaptive instruction with modified teaching in special classes;
- (d) some form of special instruction that contains elements of types (a), (b), and (c) as set out above.

- 5.15 In Paragraph 5.9 reference was made to record-keeping which has been the subject of much continuing professional discussion over recent years. On one side there are arguments that record-keeping uses up time that would be better used for teaching, that unfavourable records stigmatise students and may preclude them from the opportunity of making a fresh start, and, that as all teachers have been given appropriate training, all are competent to assess informally the educational needs of students.
- 5.16 Arguments on the other side are that comprehensive written records will improve teaching by keeping teacher attention focused on the area of greatest student need. Further, that a lack of adequate records may lead to unsuitable teaching or the continuation of methods and materials which have already been shown to be ineffective.
- 5.17 Council believes it is important that adequate records are kept for the purpose of ensuring that programme planning and implementation results in benefits to students. While there may be some negative aspects to record-keeping, on balance Council believes that, when properly used, they have advantages for teachers and students.

RECOMMENDATION 12. Comprehensive records should be kept on the reading attainments of all children within the school, particularly those receiving corrective or remedial instruction. At least every six months the principals of all primary and secondary schools should review the records of students receiving corrective or remedial instruction and forward the results of such reviews to the appropriate Regional Director so that senior staff have up-to-date information to guide their decision-making.

Delivery of Services

- 5.18 During the past decade the Western Australian Education Department has made significant improvements to pupil:teacher ratios in schools. In particular more support teachers have been appointed to primary schools and there has been a general reduction in class size.
- 5.19 During its investigation Council found that support teachers were used for a wide range of functions in schools. It is Council's view that trained teachers should be given roles and duties where their training and skills are used directly for the benefit of the educational programme and that trained teachers should not be used for peripheral general duties. In particular, Council is concerned that support teachers should be available to assist in the development of adequate reading programmes for all students. While Council realises that this view may be seen as "special pleading", having regard to the main purpose of this report, it is strongly of the view that support teachers should be used to strengthen remedial educational programmes.

RECOMMENDATION 13. The Education Department should review the policy of appointing support teachers to schools so as to ensure that they are used directly in the educational programme, with a high priority given to remedial reading.

- 5.20 Before 1970, opportunities for further study for teachers in Western Australia were relatively limited. The past decade has seen a significant change and Council is aware that there is now a good provision of graduate level courses for specialised training in remedial and special education. It is important that the Education Department, the Catholic Education Commission and private schools review previous policies and procedures in view of this change. While Council accepts that it is possible for some teachers to become proficient in dealing with students with severe reading disabilities, without the benefit of additional formal education, it believes that specific courses to extend background

knowledge are essential if marked improvement is to occur. Because of this, greater recognition should be given to the value of further formal training in remedial and special education.

RECOMMENDATION 14. When staffing remedial programmes in schools, the Education Department, the Catholic Education Commission and private schools should give preference to teachers who have gained graduate level qualifications in remedial and special education.

RECOMMENDATION 15. No person should be offered a permanent appointment as a teacher in remedial or special education unless he or she has obtained a relevant graduate qualification.

5.21 During its investigations Council found no evidence to suggest that one type of remedial education is superior to any other, having regard to the range of problems which students experience. Indeed, Council believes that the evidence supports the provision of a variety of facilities to meet the differing needs of students and schools.

RECOMMENDATION 16. The present diversity of provision of remedial facilities such as district or regional reading clinics, district remedial centres, school based remedial classes and mobile clinics should be continued and expanded to serve a greater number of children in need of special help.

RECOMMENDATION 17. The Education Department should experiment with additional schemes of remedial reading education, such as reading resource centres.

5.22 The use of computers in the teaching-learning process is an area that most professionals expect will grow during the coming years. In this regard it is well to remember the development and use of teaching machines in the late fifties and early sixties when such machines were readily available but the soft-ware programme materials for use by students were limited. With the introduction of computers into schools it is important to realise that the significant focus must be beyond the hardware. Further, the development of this software must be seen as a significant professional challenge so that it is developed both at school and system level as a first priority. Council does not take the view that the use of the computer will be a panacea as far as remedial reading education is concerned, but it is convinced that it could be a powerful tool and that it has the potential to be a worthwhile component in a broader remedial reading programme. Further, Council is strongly of the view that a first priority in developing software should be to focus on remedial aspects and not on programmes for children who have no specific learning disabilities. In this regard, Council was encouraged to note the following statement which was included in Policy Paper Number 29 issued in November 1980 by the Director-General of Education.

There is no doubt that the computer can be programmed to provide carefully sequenced, individualized instruction and to keep detailed records of students' responses. Suitably programmed, a computer can provide instruction which is individualized, immediately responsive, and pitched at the point of error - all done with almost infinite patience. Such instruction is suited to a number of areas of the curriculum, such as spelling, number facts, vocabulary and parts of speech in a foreign language (Education Department of Western Australia, Perth: Author).

Given this statement it seems to Council that the potential of computers to individualize instruction should be investigated in the context of remedial reading.

RECOMMENDATION 18. The Education Department should give a high priority to a research programme to evaluate the use of computer-assisted instruction in remedial education. This

research programme is a necessary base to establish evidence on which to develop software for use in remedial reading.

RECOMMENDATION 19. The Education Department should allocate resources both for the proposed research project and for the development of remedial reading software, which should be the direct responsibility of professionals concerned with remedial reading.

5.23 The longer a student remains in a failing situation the greater the chance that that student will develop behavioural problems and the greater the chance that dysfunctional learning will be reinforced. Students who experience such failure may develop negative attitudes towards school and try to avoid failure situations. Council is of the view that an attempt should be made to identify as early as possible students who are experiencing difficulties in learning to read. Council strongly believes that students should not be allowed to experience continuing failure to the point where they may be disruptive or withdrawn in class and may have come to accept the fact that they have little real chance of learning to read. It seems better to make significant provision for younger students in an attempt to reduce the need for remedial services in middle and upper primary school and in secondary school, and the incidence of adult illiteracy. Council realises that services will continue to be required at these levels but would hope that significant early provision would reduce this need.

RECOMMENDATION 20. Immediate steps should be taken to ensure the concentration of significant remedial reading programmes in the early primary years. Further, there should be a continuation of adequate remedial reading programmes for older students, including adults.

5.24 During its investigation Council came to the conclusion that students in secondary schools have special needs in reading education. Further, Council is aware that the Education Department recognizes this. It is hoped that there will be a thorough reassessment of the place of reading in secondary schools. At present, Council believes that the provision of resources for reading and remedial reading at secondary level is inadequate. In its submission to Council, the Western Australian High Schools Principals' Association stated:

In most cases accommodation is of the converted variety (home science flats, cloak rooms, store rooms, etc.) In three schools, with a high percentage of students requiring help, demountables are used. The room is frequently small and often necessitates changes as schools re-organize their accommodation. ("This is my ninth in nine years").

This is clearly an unsatisfactory situation.

RECOMMENDATION 21. Early action should be taken to establish well-housed and well-equipped remedial reading centres and/or resource rooms in all secondary schools. These centres should be staffed by qualified and experienced teachers who have graduate level qualifications in remedial or special education and who have career prospects equal to other categories of secondary teachers.

Teacher Education

5.25 The central and important role that teachers play in the teaching-learning process is self evident. Where special provision is made to benefit a particular student, or group of students, the role of the teacher is critical. Accordingly, Council believes that teacher education requires particular comment.

5.26 In its research studies, the Research Branch of the Education Department found that most students who were experiencing severe learning disabilities had already been identified by their teachers. However, the Branch also found that in many cases the same students were not receiving appropriate teaching or other attention. Reasons for this may involve lack of time for detailed planning, lack of documentation of the previous learning of the students, lack of confidence or knowledge on the teacher's part in using alternative approaches, or, at secondary school level, a view firmly held by subject teachers that they have no real part to play in helping students improve their reading.

5.27 During the past decade there have been a number of reports on teacher education and particular aspects of the educational process. These include:

Learning Difficulties in Children and Adults. "Cadman Report". (Australia, Parliament, 1976).

Education, Training and Employment. "Williams Report". (Australia, Parliament, 1979).

Report of the National Inquiry into Teacher Education. "Auchmuty Report". (Australia, National Inquiry into Teacher Education, 1980).

Teacher Education in Western Australia. "Vickery Report". (Education Department of Western Australia, 1980).

Preparation for the Workforce. "Davidson Report". (Australia, Parliament, 1981).

5.28 In Western Australia the Vickery Report (Education Department of Western Australia, 1980) contained the following recommendations.

R4 That all teacher education courses include criteria for diagnosing standards of numeracy and literacy of student teachers and provide remedial work for those who fail to meet minimum standards, and that teacher-employing authorities seek evidence of acceptable standards in all prospective appointees (p. 29).

- R5 That all primary teacher education institutions review their course offerings in the language arts, particularly reading
- (a) to ensure that adequate time is devoted to them;
 - (b) to assess the appropriateness of the methods advocated to the classroom settings that are encountered by beginning teachers; and
 - (c) to ensure that sufficient emphasis is given to recognizing, diagnosing and remediating learning difficulties of students in schools in the area of language (pp. 29-30).
- R6 That all institutions providing courses of secondary teacher preparation develop for all secondary teacher trainees courses that will assist the trainees.
- (a) to develop the language skills of their students within the context of their special teaching area, and
 - (b) to identify the level of language development of students with the objective of enabling trainees to adapt classroom activities to an appropriate level (p. 30).

5.29 The Williams Report (Australia, Parliament, 1979) contained the following recommendation:

R4.11 ... that departments of education in colleges of advanced education and universities give greater emphasis to ways of teaching reading and number work; and to ways of identifying children who are handicapped or have perceptual problems that might cause learning difficulties and have need of special teaching.

5.30 The Auchmuty Report (Australia, National Inquiry into Teacher Education, 1980) contained the following statement:

6.42 ... that all graduates of pre-service programme must have achieved a minimum acceptable standard in the teaching of language skills appropriate to their teaching level and graduates of primary teacher education programme should have reached comparable standards in the teaching of mathematics. The standards should be specified by the teacher education institution following consultation with employing authorities (pp. 117-118).

This report also recommended that:

R6.2 All pre-service courses for teachers should give systematic treatment to methods of adapting educational provisions to a wide range of individual differences among pupils. Such courses should provide information on the support and other specialist services, available within education systems and from other professions, which may need to be utilized to support action taken in school for children with more than ordinary difficulties (p. 119).

5.31 It is the view of Council that all teachers, not just Early Childhood and Junior Primary teachers should have substantial knowledge about the teaching of reading and how it relates to their broader teaching responsibilities. The responsibility to ensure adequate reading skills at all levels of schooling rests with each and every teacher. It is important that all teachers are conscious of the development of reading skills and how students who are experiencing reading difficulties may be helped. Council agrees fully with the following statement from The Western Australian Education Department's Syllabus in Reading (1968).

... the classroom teacher of any subject that depends upon the students' power to read and comprehend must be able to contribute towards the improvement of students' reading and comprehension abilities. This is particularly important in non-selective, comprehensive schools.

5.32 The Priest Committee, (Education Department of Western Australia, 1981), which reported on Educational Standards in Lower Secondary Schools in Western Australia, suggested that teachers be given greater responsibility for making professional decisions (p. 60). Council agrees with this view and believes that it is the responsibility both of educational institutions and of employing authorities to make sure that all teachers have the best knowledge base possible on which to make judgments about the teaching of reading.

5.33 During its review of reading in secondary schools, Council found that some teachers had little or no knowledge about the teaching of reading, even though the success of their own teaching often depended on a sufficient level of reading skills in each student. Council believes that teachers in secondary schools have a direct responsibility to foster the improvement of reading and that with intensive instruction many secondary students have the capacity to improve their skills. Obviously, the teacher education institutions have a key role to play if this end is to be achieved. Council recognizes that the amount of attention given to the teaching of reading in early childhood, primary and secondary pre-service courses varies among teacher education institutions and

suggests that employing authorities should consider exercising stronger sanctions to try to ensure that all teachers they employ have completed an adequate course in reading education. It is critical that all primary and secondary teachers recognize that the teaching of reading is not something confined to the junior grades of the primary school, but is an essential learning skill which all students should continue to develop right up until the end of secondary school. The Council recognizes that to achieve this end would require a significant change of attitude, particularly at secondary school level.

RECOMMENDATION 22. All student teachers in early childhood, primary and secondary pre-service courses should be given a thorough grounding in current methods of teaching reading, in the psychology of reading and in the principles of remedial reading. These courses should contain both practical and theoretical content relevant to the classroom situation.

RECOMMENDATION 23. The employing authorities, when considering new graduates for employment should satisfy themselves that each beginning teacher has completed an adequate range of courses in the teaching of reading.

RECOMMENDATION 24. The employing authorities, particularly the Education Department, should give high priority to in-service programmes which encourage primary and secondary teachers to develop effective remedial reading programmes.

5.34 In the Education Department, guidance officers play an important part in the diagnosis of specific reading disabilities, and, in this area, Council is aware that the Guidance and Special Education Branch is attempting to improve the service provided for schools.

RECOMMENDATION 25. The Education Department should ensure that its guidance officers are given adequate specific courses in the diagnosis and remediation of reading disabilities in their pre-service courses and that adequate provision be made through in-service education to keep them abreast of developments in remedial teaching.

5.35 In 1981, Churchlands College, Claremont Teachers' College, Mount Lawley College and Nedlands College were amalgamated to form the Western Australian College of Advanced Education. Prior to amalgamation, various courses in special education and remedial education were conducted at the different colleges. On the basis of its discussion with senior officers of the Education Department, Council believes that the new college should develop a single centre of excellence incorporating special and remedial education.

RECOMMENDATION 26. Graduate level courses in special and remedial education should be concentrated on one campus of the Western Australian College of Advanced Education. These graduate-level courses should be taught by staff holding at least a Master's degree in an appropriate field, who also have had substantial experience teaching in schools.

5.36 During its investigation, Council found that the responsibility for the teaching of reading is spread through all levels and branches of the Education Department. While this is not surprising, Council believes that the time has come when the Department should consider whether greater co-ordination of reading education services should be developed.

5.37 In primary schools, district superintendents are responsible for ensuring that an adequate reading programme is planned and implemented. In secondary schools, the superintendents of English

are responsible for reading as part of the English curriculum and for the appointment of reading resource teachers. Indeed, the Education Department is fortunate that some superintendents of English have particular interest in the teaching of reading at the secondary level. However, the constraints of the secondary school curriculum, which seems to be based on the false assumption that all secondary students have reached a satisfactory level in reading attainment, and the lack of appropriately-trained secondary teachers, have in Council's view resulted in inadequate attention being given to the further development of reading skills.

- 5.38 Council believes that until the senior staff in secondary schools take a particular interest in, and responsibility for, the teaching of reading, the traditional emphasis on subject disciplines will continue to remain and the resources available for the teaching of reading will continue to be undeveloped.

RECOMMENDATION 27. The Education Department should review thoroughly the teaching of reading in secondary schools and should take action to ensure that the programme is adequate and related to the needs of all students.

- 5.39 Council believes that at present there may be some lack of co-ordination among various branches of the Education Department in relation to the reading curriculum. The situation may have resulted from the view that teachers in normal classrooms will not have to deal with students experiencing severe reading disabilities. However, this is not always the case, and Council has found that there are students with severe reading disabilities in normal classrooms who do not have access to remedial reading programmes. Council suggests that now is an appropriate time for the Education Department to review thoroughly all aspects of the teaching of reading, particularly remedial reading programmes. Council makes this suggestion having considered the small amount of space devoted to remedial reading in the recently published Reading Notes for K-7 (Education Department of Western Australia, 1983), statements in the 1968 secondary reading syllabus (Education Department of Western Australia, 1968), and the 1973 suggestions for teaching English at basic level at secondary schools (Education Department of Western Australia, 1973).

RECOMMENDATION 28. The Education Department should review thoroughly the curriculum on the teaching of reading, particularly remedial reading programmes, with the aim of developing an overall policy and a fully integrated programme.

RECOMMENDATION 29. The Education Department should appoint a specialist superintendent of remedial education in the Division of Guidance and Special Education who should be responsible for overall policy and a fully integrated programme for all students from pre-primary to Year 12. This superintendent should be responsible for working closely with regional directors, superintendents and the staff of Guidance and Special Education Branches, and should also be responsible for a total programme of in-service education related to remedial reading.

RECOMMENDATION 30. The Education Department should provide additional resources for the development of curriculum materials suitable for use in remedial and corrective education programmes at all levels.

Alternatives for Poor Readers

5.40 Readers of this report will be aware that other media supplement and complement the printed word. Even so, in the schools most instruction continues to centre on the printed word, which is established as a normal, efficient and economical means of instruction. There is a very small group of students who because of well below average reading skills do not benefit fully from such instruction and who may be overlooked in the educational process. Increasingly, commercial provision is being made for print-handicapped persons who may be better able to talk, look or listen than read. For example, ALCOA has prepared tape and slide sets of instructions related to the use of their products to lend

to persons who prefer these to printed instructions. Also, a rapidly increasing range of spoken word books is becoming available to the general public, either by purchase or through public libraries. Further, a number of medical journals have been published on audiotape for some years.

- 5.41 At present, the Education Department recognizes and makes formal educational provision for a small group of chronically print-handicapped students who are either blind or partially sighted. For students with normal vision, efforts are usually made to remedy the reading difficulty rather than to encourage students to learn by alternative means as visually impaired students must do. Council recognizes that in the schools print is the dominant means of instruction and assessment, but points out the desirability of using a variety of methods to assist those students who have reading disabilities.
- 5.42 Council's investigation has shown that there is not a one-to-one correspondence between low mental ability and poor reading ability. Reading ability has been used as a simple selection device which may result in the labelling of poor readers as slow learners who may be expected to perform poorly. However, the evidence presented to Council leads to the conclusion that a proportion of students in schools perform poorly because of specific reading disabilities and that these same students cannot be regarded as slow learners.
- 5.43 Council supports strongly the special provision which has been made to assist the visually-impaired, the hearing-impaired and similar groups. Such provision has public support as a means of enabling as many individuals as possible to lead satisfying lives in the wider community. Council draws a parallel between this well justified special provision and its position that similar special provision should be made for those students who experience severe reading disabilities. Unless a sustained effort is made to assist these children, they are probably denied satisfying lives in the wider community. In brief, Council urges that real efforts should be made to assist sighted, print-handicapped students and that alternative means of learning should be investigated for those students. While in the past, the public may have accepted it as

proper to channel the blind, no matter how intelligent, into manual tasks, present views are substantially different. Similarly, it is not proper to continue with procedures which channel intelligent, sighted, print-handicapped students into low-level education and occupations. Because these students are not physically different from most of their peers, in some cases they may be overlooked.

RECOMMENDATION 31. **The Education Department should formally recognize the existence of sighted, print-handicapped students and should make a fresh assessment both of what is being done for these students and what should be done.**

RECOMMENDATION 32. **The Education Department should foster the development of learning programmes using non-print media for students who have severe reading disabilities.**

5.44 If the solutions to the problems which Council has investigated were simple, they would have been implemented by concerned professionals years ago. Council recognizes that these problems are both deep-seated and are difficult to solve. This state of affairs will probably continue unless there is determined and sustained effort to effect improvement. In view of the increased financial resources which governments have put into education for the public good, the resultant more generous provision of professional personnel and the smaller class sizes achieved during recent years, Council argues that this should be a time for decisive action at all levels and for the provision of additional resources as indicated in this report. If this action does not follow, Council believes that little, if any, improvement will occur and that individuals with poorly developed reading skills will continue to be unable to fulfil either their own potential or their potential to contribute to the community. Now is the time for decision and action. The ability to read may be taken for granted by many. The lack of the ability to read reasonably well is a grievous disadvantage for students who are preparing to meet the needs of modern societies.

REFERENCES

- Adam, R.M., Kocsis, J.J., & Estes, R.E. (1974). Soft neurological signs in learning disabled children and controls. American Journal of Diseases in Childhood, 128, 614-618.
- American Psychiatric Association (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.
- Australia, National Inquiry into Teacher Education. (1980). Report of the National Inquiry into Teacher Education (Professor J.J. Auchmuty, C.B.E., Chairman). Canberra, A.C.T.: Australian Government Publishing Service.
- Australia, Parliament. (1976). Learning difficulties in children and adults. (Report of the House of Representatives select committee on specific learning difficulties, Mr A.G. Cadman Chairman). Canberra, A.C.T.: Australian Government Publishing Service.
- Australia, Parliament. (1979). Education, training and employment (Vol. 1). (Report of the Committee of Inquiry into education and training: Professor B.R. Williams, Chairman). Canberra, A.C.T.: Australian Government Publishing Service.
- Australia, Parliament. (1981). Preparation for the workforce. (Report of the Senate standing committee on education and the arts inquiry into the effectiveness of Australian schools in preparing young people for the workforce with particular emphasis on literacy and numeracy: Senator G.S. Davidson, C.B.E., Chairman). Canberra, A.C.T.: Australian Government Publishing Service.
- Benson, F.R. (1979). Aphasia, alexia, and agraphia. Clinical neurology and neurosurgery monographs (Vol. I). New York: Churchill Livingstone.
- Benton, A.L. (1978). Some conclusions about dyslexia. In A.L. Benton & D. Pearl (Eds.), Dyslexia: An appraisal of current knowledge (pp. 451-476). New York: Oxford University Press.
- Benton, A.L. & Pearl, D. (Eds.). (1978). Dyslexia: An appraisal of current knowledge. New York: Oxford University Press.
- Cantwell, D.P. (1975). Clinical picture, epidemiology and classifications of the hyperactive child syndrome. In D.P. Cantwell (Ed.). The hyperactive child. (pp. 3-15). New York: Spectrum.

- Clements, S.D. (1966) Task Force 1: Minimal brain dysfunction in children. National Institute of Neurological Diseases and Blindness. Monograph No. 3, U.S. Department of Health, Education and Welfare.
- Clements, S.D. & Peters, J.E. (1981). Syndromes of "minimal brain dysfunction". In P. Black (Ed.). Brain dysfunction in children: Etiology, diagnosis and management (pp. 181-191). New York: Raven Press.
- Coles, G.S. (1978). The learning disabilities test battery: Empirical and social issues. Harvard Educational Review, 48, 313-340.
- Conners, C.K. (1978). Critical review of "Electro-encephalographical and neurophysiological studies in dyslexia". In A.L. Benton & D. Pearl (Eds.). Dyslexia: An appraisal of current knowledge (pp. 251-261). New York: Oxford University Press.
- Critchley, M. (1970). The Dyslexic Child. Springfield, Il: Academic Press.
- Decker, S.N. & De Fries, J.C. (1980). Cognitive abilities in families of reading-disabled children. Journal of Learning Disabilities, 13, 517-522.
- Deschamp, P. & Markey, A. (1983). Weak readers in primary schools. (Discussion Paper No. 16). Perth: Education Department of Western Australia.
- Deschamp, P., Markey, A., & Hill, P. (1983). 'Underachieving' readers. (A Report for the Western Australian Council for Special Education). Perth: Education Department of Western Australia.
- Doehring, D.G., Trites, R.L., Patel, P.G., & Fiedorowicz, C.A.M. (1981). Reading disabilities. The interaction of reading, language and neuropsychological deficits. New York: Academic Press.
- Education Department of Western Australia. (1946). Annual Report. Perth: Government Printer.
- Education Department of Western Australia. (1954). Annual Report. Perth: Government Printer.
- Education Department of Western Australia. (1956). Annual Report. Perth: Government Printer.
- Education Department of Western Australia. (1960). Annual Report. Perth: Government Printer.
- Education Department of Western Australia. (1962). Annual Report. Perth: Government Printer.
- Education Department of Western Australia. (1972). Annual Report. Perth: Government Printer.

- Education Department of Western Australia. (1972). Discipline in secondary schools in Western Australia. (Report of the Government Secondary Schools Discipline Committee under the Chairmanship of Mr H.W. Dettman). Perth: Author.
- Education Department of Western Australia. (1973). English at basic level: Suggestions for teachers. Perth: Author.
- Education Department of Western Australia. (1899). The Education Circular, 1.
- Education Department of Western Australia. (1983). Pocket Year Book, No. 9. Perth: Author.
- Education Department of Western Australia. (1979). Policy from the Director-General's Office (No. 19, Educational services for children with learning difficulties). Perth: Author.
- Education Department of Western Australia. (1980). Policy from the Director-General's Office (No. 29, Computing in secondary schools). Perth: Author.
- Education Department of Western Australia. (1983). Reading K-7: Teachers' notes. Perth: Author.
- Education Department of Western Australia. (1954). Report of the Committee on Secondary Education (Mr V. Box, Chairman). Unpublished Departmental report.
- Education Department of Western Australia. (1981). Review of educational standards in lower-secondary schools in Western Australia (Report of the Panel appointed by the Minister for Education in Western Australia: Professor T.A. Priest, Chairman). Perth: Author.
- Education Department of Western Australia. (1969). Secondary education in Western Australia (Report of the Committee on Secondary Education appointed by the Minister for Education in Western Australia under the Chairmanship of Mr H.W. Dettman). Perth: Author.
- Education Department of Western Australia (1963). Secondary Education in Western Australia. (Report of the Committee of Inquiry (1962-63): Mr T.L. Robertson, Chairman). Perth: Author.
- Education Department of Western Australia. (1964). The secondary school curriculum: A review of developments in Western Australia 1958-64 with proposals for the future. Perth: Author.
- Education Department of Western Australia. (1958). Secondary schools' curriculum. (Interim report of the Committee appointed to review the secondary schools' curriculum: Dr T.L. Robertson, Chairman). Perth: Author.

- Education Department of Western Australia. (1968). Syllabus in reading: Secondary school curriculum. Perth: Author.
- Education Department of Western Australia. (1980). Teacher education in Western Australia (Report of the Committee of Inquiry into Teacher Education, appointed by the Minister for Education in Western Australia, Dr R.L. Vickery, Chairman). Perth: Author.
- Eisenberg, L. (1978). Definitions of dyslexia: Their consequences for research and policy. In A.L. Benton & D. Pearl (Eds.), Dyslexia: An appraisal of current knowledge (pp. 29-42). New York: Oxford University Press.
- Hamill, D.D. (1976). Defining "learning disabilities" for programmatic purposes. Academic Therapy, 12, 26-37.
- Harris, A.J. & Sipay, E.R. (1975). How to increase reading ability: A guide to developmental and remedial methods (6th ed.). New York: McKay.
- Harris, T.L. & Hodges, R.E. (Co-eds.). (1981). A dictionary of reading and related terms. Newark, DE: International Reading Association.
- Hughes, J.R. (1971). Electroencephalography and learning. In H.R. Myklebust (Ed.). Progress in learning disabilities (Vol. 1, 113-146). New York; Grune and Stratton.
- Hughes, J.R. (1978). Electroencephalographic and neurophysiological studies in dyslexia. In A.L. Benton & D. Pearl (Eds.), Dyslexia: An appraisal of current knowledge (pp. 205-249). New York: Oxford University Press.
- Kirk, S.A. (1962). Educating exceptional children. Boston: Houghton-Mifflin.
- Kirk, S.A. & Gallagher, J.J. (1979) Educating exceptional children (3rd ed.). Boston: Houghton-Mifflin.
- Lerner, J.W. (1981). Learning disabilities: Theories, diagnosis and teaching strategies (3rd ed.). Boston, MA: Houghton Mifflin.
- Marcel, T. (1980). Surface dyslexia and beginning reading: a revised hypothesis of the pronunciation of print and its impairments. In M. Coltheart, K. Patterson, & J.C. Marshall (Eds.). Deep dyslexia. (International Library of Psychology). (pp. 227-258). London: Routledge & Kegan Paul.
- McGrady, H.J. (1975). From diagnosis to remediation. In S.A. Kirk & J. McR. McCarthy (Eds.). Learning disabilities: selected ACLD papers. (pp. 46-57). Boston: Houghton Mifflin Company.

- Markey, A., Deschamp, P., & Tame, M. (1983). Weak readers in secondary schools. (Discussion Paper No. 17). Perth: Education Department of Western Australia.
- Myers, P.I., & Hamill, D.D. (1982). Learning disabilities. Basic concepts, assessment practices, and instructional strategies. Austin: Pro-ed.
- National Advisory Committee on Handicapped Children of the U.S. Office of Education. (1968). First Annual Report. Washington, DC: US Government Printing Office.
- The National Joint Committee on Learning Disabilities. (1981). Learning disabilities: Issues on definition. A position paper of the National Joint Committee on Learning Disabilities, January, 1981.
- Nichols, P.L. & Chen, T. (1981). Minimal brain dysfunction. A prospective study. Hillsdale: Lawrence Erlbaum.
- P.L. 94-142, The Education of All Handicapped Children Act of 1975, 20 U.S.C. Sec. 1401, 1402, and 1411 through 1420.
- Rie, E.D. & Rie, H.E. (1978). An analysis of neurological soft signs in children with learning problems. Brain and Language, 6, 32-46.
- Rie, H.E. & Rie, E.D. (Eds.). (1980). Handbook of minimal brain dysfunctions: A critical view. New York: Wiley.
- Ross, A.O. (1976). Psychological aspects of learning disabilities and reading disorders. New York: McGraw-Hill.
- Rutter, M. (1978). Prevalence and types of dyslexia. In A.L. Benton & D. Pearl (Eds.). Dyslexia: An appraisal of current knowledge (pp. 5-28). New York: Oxford University Press.
- Rutter, M. Tizard, J., & Whitmore, K. (1970). Education, health and behaviour. London: Longman.
- Sasanuma, S. (1980). Acquired dyslexia in Japanese: Clinical features and underlying mechanisms. In M. Coltheart, K. Patterson, & J.C. Marshall (Eds.). Deep dyslexia. (International Library of Psychology). (pp. 48-90). London: Routledge & Kegan Paul.
- Shepard, L. (1983). The role of measurement in educational policy: Lessons from the identification of learning disabilities. Educational Measurement: Issues and Practice, 2, 4-8.
- Shepard, L.A. & Smith, M.L. (1983). An evaluation of the identification of learning disabled students in Colorado. Learning Disability Quarterly, 6, 115-127.

- Shepard, L.A., Smith, M.L., & Vojir, C.P. (1983). Characteristics of pupils identified as learning disabled. American Education Research Journal, 20, 309-331.
- Stevenson, H.W., Stigler, J.W., Lucker, G.W., Lee, S., Hsu, C., & Kitamura, S. (1982). Reading disabilities: The case of Chinese, Japanese, and English. Child Development, 53, 1164-1181.
- Strauss, A.A. and Lehtinen, L.E. (1947). Psychopathology and education of the brain-injured child. New York: Grune and Stratton.
- Taylor, H.G., Satz, P., & Friel, J. (1979). Developmental dyslexia in relation to other childhood reading disorders: Significance and clinical utility. Reading Research Quarterly, 15, 84-101.
- Thorndike, R.L. (1963). The concepts of over-and-under-achievement. New York: Bureau of Publications, Teachers College, Columbia University.
- United States Office of Education. (1977). Procedures for evaluating specific learning disabilities. Federal Register, 42, 65082-65085.
- United States Office of Education. (1977). "Education of Handicapped Children. Implementation of Part B of the Education of the Handicapped Act". Federal Register, Part II. Washington, DC: U.S. Department of Health, Education, and Welfare, August 23.
- United States Office of Education. Federal Register, Part III. Education of Handicapped Children; "Assistance to States: Procedures for Evaluating Specific Learning Disabilities", Washington, D.C.: U.S. Department of Health, Education and Welfare, December 29.
- Vellutino, F.R. (1979,a). The validity of perceptual deficit: Explanations of reading disability: a reply to Fletcher and Satz. Journal of Learning Disabilities, 12, 160-167.
- Vellutino, F.R. (1979,b). Dyslexia: Theory and research. Cambridge, MA: MIT Press.
- Vinsonhaler, J.S., Weinshank, A.B., Wagner, C.C. & Polin, R.M. (1983). Diagnosing children with educational problems: Characteristics of reading and learning disabilities specialists and classroom teachers. Reading Research Quarterly, 18, 134-164.
- Warrington, E., & Zangwill, O.L. (1957). A study of dyslexia. Journal of Neurology, Neurosurgery and Psychiatry, 20, 208-215.

Weiner, I.B. (1982). Child and adolescent psychopathology. New York: Wiley.

Western Australian Council for Special Education. (1979). Education of intellectually handicapped children in Western Australia. Perth: Education Department of Western Australia.

Western Australia. Votes and Proceedings of the Parliament of Western Australia. (1921-1922) Report of the Royal Commission to Inquire and Report on the System of Public Elementary Education followed in the State of Western Australia and the Acts Relating thereto. Vol. 1 (Paper No. 4). Perth: Government Printer.

Western Australia. Votes and Proceedings of the Parliament of Western Australia. (1938). Report of the Royal Commission on Youth Employment and the Apprenticeship System. (Paper No. 9). Perth: Government Printer.

Ysseldyke, J.E., Algozzine, B., Shinn, M.R. & McGue, M. (1982). Similarities and differences between low achievers and students classified learning disabled. The Journal of Special Education, 16, 73-85.

Appendix A

Recommendations from Weak Readers in Primary Schools
(Deschamp and Markey, 1983, pp. 3-5)

1.4 A Summary of the Recommendations

On the basis of the findings and what the researchers believe about the teaching of reading, it is recommended that class teachers:

- . Assess the reading skills of all students at least once per term.
- . Administer diagnostic tests or check-lists to identify the specific reasons for students' problems with reading.
- . Prepare and implement individual programmes on the basis of the diagnostic information.
(Note: It might be best not to concentrate solely on areas of weakness. Interest and motivation may follow from success gained through a concentration on reading.)
- . Ensure that the weak readers work with material that interests them and which they can read with ease.
- . Ensure that the weak readers regularly spend time reading (as opposed to spending most of reading lessons practising skills and writing answers to comprehension exercises).
- . Keep comprehensive records of the teaching methods and materials used with weak readers.
- . Review each weak reader's progress at least every six weeks, and modify unsuccessful aspects of his or her reading programme.
- . Seek specialist assistance regarding students who are not making satisfactory progress either from a fellow staff member with expertise in the design of remedial reading programmes, the advisory teacher at the reading resource centre, the remedial advisory teacher at the regional office, the teachers at remedial reading clinics or centres, or from Special Education Branch.

That principals ensure that schools:

- . Maintain detailed records about the treatment and progress of weak readers as they move through the school.
- . Monitor all students' progress in reading with good quality standardized tests at least annually.
- . Do not use the same reading tests repeatedly.
- . Assign support-teacher time to assist with the design and operation of programmes for weak readers.

- . Make full use of any staff who have specialist reading skills.
- . Make full use of regional support services for reading and, if those available are fully committed, urge their extension.
- . Regularly invite specialist reading teachers to the school to discuss students' programmes, support services and available materials.

That the central administration of the Education Department:

- . Evaluates reading support services to consider how they are co-ordinated with one another and with school-level programmes.
- . Plans an early intervention programme which would identify children in Year 1 who were likely to have reading difficulties.

Appendix B

Comments and Recommendations from Weak Readers in Secondary Schools
(Markey, Deschamp and Tame, 1983, pp. 9-20)

3.0 COMMENTS ARISING FROM ANALYSIS OF THE CASE STUDIES OF THE SCHOOLS

Generally, in each of the five senior high schools, the subject teachers knew the weak readers in their classrooms and endeavoured to help them read the set material by pre-reading and explaining assignment material, and by introducing new vocabulary. The major responsibility for assisting weak readers to improve their reading ability appeared to rest with the reading resource teachers. The teachers in the district high school, where there was no reading resource teacher, knew which students were weak at reading but had no special programmes for them.

3.1 School Policies

In only one of the schools in the study was there a written policy that made reference to the teaching of weak readers. Within that school, there was a noticeable concern for the problems of weak readers. According to one of the principals, a written policy on the teaching of reading would be impractical in his school, because subject commitments and lack of knowledge about the reading process would not allow all the teachers to implement the policy. The district high school had a written policy that made reference to how remedial reading teaching should be approached in the school, but its main focus was on Years K-7. A language policy had also been developed in the district high school; however, the reading strand was almost exclusively directed towards the primary grades.

While the other schools had no written policies, they all believed that a de facto policy existed, because some attention was being given to reading. In-service courses for subject teachers on the teaching of reading had been held at one school. Another was preparing a programme for the following year that would help Year 8 students at all levels of reading ability to improve their comprehension of the course materials. In that school, the English, mathematics, social studies and science teachers, who were to teach the reading strategies to their students, were to receive suggestions from the reading resource teacher on how to teach the strategies, while using their subject texts.

In the four schools that allocated time for daily sessions of USSR¹ the teachers believed that the practice indicated a school-wide acceptance of the importance of giving attention to the development of reading skills, and that this in effect constituted a policy. In the other two schools, USSR was taken once a week

1. This abbreviation for Uninterrupted Sustained Silent Reading will be used throughout this report. USSR is a strategy where both staff and students read material of their own choosing during a period of the school day designated for this purpose.

with every class, in place of an English lesson. Each week, between 40 and 150 minutes were timetabled for USSR in all six schools. It was commonly believed that USSR was instrumental in improving the reading ability of weaker readers and that it helped to develop a more positive attitude towards reading in all the students. However, several of the teachers were of the opinion that USSR was of little use to the students, especially those who were very weak at reading. Most of the sceptical comments about USSR originated from one school where little instruction had been given to the teachers on how to conduct USSR for maximum effectiveness².

Recommendations

1. That the Education Department issue a policy statement on the teaching of reading in secondary schools and encourage schools to state their position on the teaching of reading in their school policy.
2. That school and subject department policies encourage teachers to accept responsibility for helping students who are experiencing difficulty in reading their subject materials.
3. That, where a school has or is proposing to implement a USSR programme, all teachers who are to be involved should be made aware of the procedures that contribute toward its success.

3.2 THE ROLE OF THE READING RESOURCE TEACHERS

In all the schools the programme for the weak readers had been determined almost entirely by the reading resource teachers who were employed part-time in that role. In each case, the reading resource teacher did not have sufficient time to have contact with all the students in the school who were having difficulty with reading -- yet three of the five teachers were also teaching another subject.

All the reading resource teachers allotted most of their time to working with small groups of students who had been identified as weak at reading. The size of the withdrawal classes and the time each group spent with the reading resource teacher varied in the five schools. At one school, where the reading resource teacher met with only six students, a student worked alone with her or shared her time with one other student. These students usually had four forty-minute lessons each week. In another school, two groups of fourteen Year 8 students, one group of twenty Year 11 alternative course students and four migrant students were each given two fifty-minute reading lessons per week. The reading resource teachers at the other three schools were withdrawing between thirty-seven and sixty-nine students to the reading class every week.

-
2. Both advocates and opponents of USSR have looked for evidence of its effectiveness. While some claims have been made by both groups, the position is by no means resolved (Evans and Towner, 1975; Cline and Kretke, 1980; Collins, 1980; Summers and McClelland, 1982).

The school at which the reading resource teacher gave instruction to thirty-seven students had groups of less than eight students attending the reading class for fifty minutes, four times a week. Every week, in another school, forty-seven students were receiving help with reading in groups of two to six for two lessons of thirty-eight minutes each. The fifth reading resource teacher had divided the sixty-nine students into groups of three to ten students. These students had one seventy-minute lesson per week.¹

Two reading resource teachers were also trying to provide an advisory service for the subject teachers either through in-service courses or attendance at staff, subject or senior master meetings. These same teachers also made contact with the parents of the weak readers to make them aware of their children's difficulties and to advise them on how they could help their children with reading at home.

Considering the number of students known to be experiencing difficulty with reading and the time that it usually takes to assist weak readers to achieve sufficient competency to handle the set readings, it is evident that only a limited amount of help can be given when there is only one person appointed on a part-time basis to attend to the teaching of reading to these students. Also, the role of the reading resource teacher is being enlarged to encompass the training of other teachers and parents in the skills of teaching reading.

Recommendations

1. That a Departmental policy statement be issued to outline the intended role of reading resource teachers.
2. That Departmental procedures be changed to enable permanent status to be granted to reading resource teachers, without them having to demonstrate teaching competence in another subject area.
3. That the amount of reading resource teacher time allocated to a secondary school should depend on the number of students who are identified as needing help with reading.
4. That reading resource teachers should be encouraged to work with groups of about six to ten students who meet at least three times per week.

3.3 Identification of Weak Readers

In each of the senior high schools, weak readers entering the school were identified through the administration of at least one standardized reading test. In two of the schools, an intelligence test was also given. The reading resource teacher and the school's

1. Other studies have suggested that for students of this level to make any worthwhile gains in reading, the groups generally need to be no more than six; the students need to have at least four lessons a week; and the lessons should be of 40-50 minutes duration (e.g. Ekwall, 1976).

guidance officer administered tests to the Year 7 students in the feeder primary schools. In the district high school, a similar testing programme was conducted; but the records were incomplete, and there did not appear to be any use made of the results. The weak readers identified by the tests were not receiving any specific help with their reading.

Each of the five senior high schools selected students according to substantially similar selection criteria, for help in the withdrawal reading classes. The main difference in criteria was that some schools required the students to have average or better than average IQ scores. It was generally believed that the weak readers who were withdrawn in each school were likely to be a small percentage of those students in the school who were experiencing difficulties reading the subject material.

Methods of assessing the progress of the students in the withdrawal classes varied widely. In three of the schools, standardized tests were used quite frequently to identify any change in reading performance. The other two schools relied on teachers' observations for their assessment. In all but one of the senior high schools, the students were returned to their regular classes in less than a term if the reading resource teacher believed they were reading at a level that would enable them to cope with their reading in the subject classes. In the remaining school some students had attended the reading class for three years because (according to the reading resource teacher) they had not attained a standard that would enable them to read and understand materials at their grade level.

Recommendations

1. That all secondary schools have comprehensive screening procedures to identify the weak readers.
2. That reading resource teachers be encouraged to maintain comprehensive records of students' achievement levels including results on group-administered standardized tests, and that the results from individually administered tests be used to inform decisions about whether a child is ready to return to normal classes.

3.4 Facilities Available for Teaching Reading

At each of the senior high schools a room had been made available for the withdrawal class. Two schools had allocated classrooms within the main school building. Another two schools used rooms which had been intended as storerooms. The fifth school used a demountable room set apart from the main body of the school. In one case the room had previously been used as a classroom for special education students; and this caused some of the students in the withdrawal class to be reluctant about being seen there.

The appearance of these rooms depended largely on what the teacher could afford to purchase; what was available from other sources; and the creative ability of the reading resource teacher. There was a noticeable difference in the range of materials and funding that they had at their disposal. One teacher had received a School Based Curriculum Development grant, and another had received a donation from a Rotary Club. Generally, however, the teachers

purchased new materials from English department or general school funds. Sometimes the reading resource teachers, the subject teachers, and even the students themselves, helped by donating or lending books. Only one reading resource teacher did not have any school funds allocated for the purchase of materials, and that situation was expected to change very shortly.

The teachers at the district high school believed that the variety of materials available in their school's library was adequately providing reading practice for students of all reading levels.

Recommendations

1. That schools allocate, for use by reading resource teachers, a room which is well located within the main school buildings, and provide resources so that it can be set up in such a way as to encourage an interest in reading.
2. That reading resource teachers set up their rooms in such a way that they display material calculated to promote an interest in reading.
3. That an allowance for the reading class be a standard feature of each high school's budget.

3.5 Approaches Used by the Reading Resource Teacher

Individualized programmes prepared according to diagnostic test results were observed at only one of the five senior high schools. In contrast, at another school lessons were taken with the class as a whole, regardless of the particular difficulties that the individual students might be having. At this school, the reading resource teacher did not consider that it was appropriate to assess individual student's weaknesses. She believed that the habits of good readers should be developed in the weak readers. In two other schools, diagnostic tests had been used by the reading resource teachers, but the students in the withdrawal classes did not appear to have had programmes drawn up to match their specific needs.

The approaches being used by the reading resource teachers varied from language experience to basal readers. Four of the teachers were using the strategies of PSSDR¹ on material set as Year 8 subject texts. Two of the teachers had a strong skill component in

-
1. This abbreviation for Predicted Substantiated Silent Discourse Reading will be used through this report. Sloane and Latham, (1981, pp. 143-144) provide the following description of PSSDR:
The main strength of PSSDR is that it is excellent for developing the comprehension strategies of scanning, selecting, confirming and correcting ... The concept of overall meaning is provided for in this strategy where there is, first, a very open prediction based on the pictures and/or title and/or first paragraph ... A discourse question is set to facilitate the retention of the central idea in the selection. In phase two of the lesson sequence, where there are particular questioning strategies used on portions of the text, specific meanings are checked, developed and reinforced through substantiations by the participants. In this way, thinking is developed through analysis and synthesis of textual information.

their programmes. Teacher-prepared materials were being used in each school along with basal reader series, reading kits, boxed libraries, newspapers, subject texts, and a variety of other resources.

According to teacher assessments and/or standardized test results, some of the students had made sufficient progress to return to their regular classrooms within a term, whereas some had attended the reading class for three years. None of the schools had any follow-up procedures to see how the students who had returned to normal classes were managing.

Occasionally subject teachers had requested advice from the reading teachers concerning help for a particular student, but the reading teachers usually did not hear whether their suggestions had worked, or even if they had been implemented.

Recommendations

1. That reading resource teachers review their programmes to consider the extent to which the planned activities are directed at helping students with their particular reading difficulties.
2. That reading resource teachers ensure that students who 'graduate' from the withdrawal class are monitored to see if they are managing the required reading, and that the subject teachers are given suggestions about ways they can continue helping such students in their class.

3.6 The Attitudes of Other Teachers Towards Teaching Reading

Typically, subject teachers interested in assisting weak readers were explaining new vocabulary, pre-reading homework or other set reading, and discussing the vocabulary required for new topics and class assignments. In at least one school, some subject teachers were trying to write assignments and worksheets in such a way that the weak readers could handle the required reading.

Efforts to learn more about the reading process and the teaching of reading were being made by some of the subject teachers in two of the schools by enrolling in tertiary level reading courses or attending in-service courses within their school or region.

There were mixed feelings among the teachers about the withdrawal of students for help from the reading teacher. Some maintained that the students would not gain much in their classrooms if they had a reading problem, and therefore they would be better off attending the reading class. Others were of the opinion that often these students were behind in their assignments because of their reading problems and that they would get further behind if they were withdrawn from their lessons. The teachers of the students who were withdrawn usually tried to arrange their programme so that these students would not miss out on new work. However, when work was missed, it was generally considered to be the student's responsibility to find out what had been covered and to catch up.

If reading could be developed as an Achievement Certificate subject, many of the above problems would be alleviated. It would

be given space on the timetable, children would receive credit for their studies, and reading would be 'seen' as a regular part of the school programme rather than a special provision. If this happened, reading would become a recognized part of secondary education.

Recommendations

1. That a Departmental policy statement be issued to encourage subject teachers to see it as a responsibility to cater for the weak readers in their classes, either by the way they introduce set readings, or by the adoption of alternative approaches for such students.
2. That subject teachers be given suggestions about how to conduct USSR for maximum effectiveness.
3. That subject teachers endeavour to avoid introducing new work in the periods when the weak readers are withdrawn, but, when this is unavoidable, that they ensure that these students are helped to catch up and are not disadvantaged as a result of having missed some of their normal lessons.
4. That reading be developed as an accredited subject so that children can receive credit for their studies, and teachers and parents will see it as a part of the 'normal' school programme.

3.7 Conclusion

There is widespread recognition that many secondary students are handicapped in their learning because they are unable to handle required reading. Most of these students are likely to be identified by comprehensive screening procedures or by teacher observation. Reading resource teachers are charged with the twin tasks of helping these students to improve their reading and of assisting the subject teachers to find other ways to teach these students. This report has described the ways that six secondary schools have approached this area of schooling. No doubt many other approaches are being used by other schools.

There is very little information available about the success that is achieved. Certainly, the five reading resource teachers observed in the course of the study were very hard at work and all were ready to argue that more time was needed for the weak readers. The subject teachers interviewed varied widely in their preparedness to be involved with students' reading difficulties. They ranged from those who were studying how to teach reading along with their subject content, to others who considered that they did not have time even to assist students to catch up on what they had missed as a result of attending a withdrawal reading class.

It seems clear from the study of these six schools that the teaching of reading is relatively new to many secondary schools, that each school is charting its own individual course, and that there is very little information that schools can use to guide the development of their programmes. These brief case studies may provide some assistance in this regard.

It is hoped that this report will encourage schools to review their approach to the teaching of reading -- especially with the weak readers -- and will provide some examples with which their programmes can be compared.

Appendix C

Glossary

From: A Dictionary of Reading and Related Terms
(Harris and Hodges, 1981)

- ACQUIRED ALEXIA n. the complete loss of the ability to read because of disease of or injury to the brain.
- ACQUIRED DYSLEXIA n. the partial loss of existing reading skills because of disease of or injury to the brain.
- ALEXIA 1.n. the complete inability to read; specifically, a form of aphasia in which the visual modality is disabled, yet reasonable vision, intelligence, and language functions, other than reading, are intact; congenital or developmental alexia. 2.n. the loss, because of damage to or disease of the brain of reading ability acquired earlier; acquired alexia.
- APHASIA n. a general term for any receptive and/or expressive disorder in the use of language because of disease of or injury to the brain, particularly in Brodmann's areas 22, 39, 40, 41 or 44... Note: alexia, dyslexia, and other symbolic manipulation disorders for which brain damage is presumed are considered variant forms of aphasia. Aphasias often follow a major stroke or head injury. There are many types and combinations of aphasia, depending on the amount and location of brain damage.
- CONGENITAL ALEXIA see dyslexia (def. 1) Note: congenital alexia is an incorrect term, because it has never been shown that children (other than severely sub-normal) are congenitally incapable of learning to read - M.D. Vernon (1978).
- CONGENITAL WORD BLINDNESS see dyslexia (def.1).
- CORRECTIVE READING supplemental, selective instruction for minor reading difficulties, often within a regular classroom by the regular teacher, an aide, or peer tutor. Corrective reading instruction is more specific than developmental instruction but less intensive than remedial reading instruction.

DEVELOPMENTAL ALEXIA

the complete inability to read, presumably due to defective or delayed brain growth, without demonstrable brain damage. (p. alexia; acquired alexia.)

DEVELOPMENTAL APHASIA

disturbance in language processing, presumed due to defective or delayed brain growth without demonstrable brain damage.

DEVELOPMENTAL READING

1. reading instruction, except remedial, for students at all levels.
2. reading instruction, except remedial, for all students beyond elementary school level. Note: According to N.B. Smith (1965), this is the earliest meaning of the term in the reading literature. 3. a comprehensive school program of remedial and non-remedial reading instruction for all students. 4. remedial reading instruction in high school and college, a misuse of the term.

REMEDIAL READING

1. any specialized reading instruction adjusted to the needs of the student who does not perform satisfactorily with regular reading instruction. 2. intensive specialized reading instruction for students reading considerably below expectancy. Note: Remedial reading is usually highly individualized reading instruction that is conducted outside the classroom in a special class, school or clinic by a teacher trained in the use of clinical methods in reading. Eligibility for some remedial reading programs may be determined by legal definition or by specific age/grade requirements. Reading achievement two or more years below expectancy is a frequent eligibility requirement. 3. reading instruction which is more specialized than corrective reading in the classroom but not as specialized as that in definition 2. 4. developmental reading instruction set at a different pace and designed for an individual student or a selected group ... The principles of remedial and of initial instruction are the same ... Remedial reading ... is in some degree present in all reading programs - P. Witty and D. Kopel (1939).

REMEDIAL READING CLASS

1. a course designed to improve the reading of disabled readers. 2. the students in such a class. 3. a teacher education class in remedial reading.

REMEDIAL READING PROGRAM

1. the curriculum and operation of a program designed to provide intensive remediation in reading, usually by a teacher with advanced training and in a setting that allows flexible adjustment of materials and methods to individual differences. 2. any set curriculum or material for the remediation of reading skill deficits, usually commercially prepared, into which the student is fitted.

REMEDIAL TEACHING

See remediation.

REMIEDIATION

1.n. teaching which includes diagnosis of a student's reading ability, and corrective, remedial, or clinical approaches to improve that ability. After three weeks of remediation, the student's reading improved. 2.n. the process of correcting a deficiency.

WORD BLINDNESS

1. alexia. 2. dyslexia. Note: T. Hepworth (1971) makes this observation: the dyslexic child can see words, but for him some words and letter shapes do not have perceptual constancy - that is, they are perceived differently in different phrases or sentences and in different positions.

Appendix D

Persons and Organizations Making Written Submissions

In response to formal advertised requests, Council received written submissions from the following institutions, organizations, associations and individuals:

ABDULLAH, Mr Ibrahim		Control Data Australia P/L 16 Ord Street WEST PERTH WA 6005
ALDRIDGE, Mrs M J	Parent	Jayes Road BALINGUP WA6253
AMM, Ms L	Private Remedial Tutor	65 Rowland Street SUBIACO WA 6008
The President Australian Association of Speech and Hearing (WA Branch).	Professional Organization	P.O. Box 224 SUBIACO WA 6008
BANT, Mr C	Superintendent of Education (Primary)	Metropolitan NE Regional Centre Laythorne Street NOLLAMARA WA 6061
BAPTIST, Ms Muriel)) BOX, Ms Rosemary))	Teachers with Catholic Education Commission	190 The Strand BEDFORD WA 6052 13 Hillview Road MOUNT LAWLEY WA 6050
BENNETT, Mrs Gillian	Private Learning Disabilities Teacher	30 Hobbs Avenue DALKEITH WA 6009
CANT, Ms Dorothy	Remedial Teacher	19 Ludgate Way GWELUP WA 6021
CASEY, Mr Kevin	Lecturer, Remedial Education	WACAE Claremont Campus
The Catholic Education Commission of W.A.		P.O. Box 254 SUBIACO WA 6008
COLLIER, Mr & Mrs I M	Parents	21 Beenan Close KARAWARA WA 6152
GAMACK, Mrs Merryll	Parent	6 Saunders Street COMO WA 6152
GRAY, Mrs C A	Parent	258 Grove Road LESMURDIE WA 6076
HOWSE, Miss D M	Deputy Principal	23A Victoria Road BALGA WA 6061

LYNN, Mrs Barbara	Reading Resource Teacher	Wanneroo Senior High School
MAINE, Mr K	Director, Government Department	Community Welfare Department 81 St George's Terrace PERTH WA 6000
MILLS, Mrs Glennis	Parent	37 Bruce Street COMO WA 6152
MORRIS, Mrs Moya	Parent, Ex-Teacher, SPELD Teacher	33 Calume Street HILLMAN WA 6168
NORRIS, Mrs Val	Director, Christian College of Gymnastics Inc	2 Lakes Way Prinsep Park JANDAKOT WA 6164
PEARCE, Mrs Judy	Parent	"Chinenup" KENDENUP WA 6323
RICHARDSON, Dr Brian	Principal	Chidley Education Centre Owston Street MOSMAN PARK WA 6012
Schools of the Kalamunda Motor Programme (S..A.M.P.)	Parents and Teachers	
SPEECH	Parent Organization	125 Eglinton Crescent HAMERSLEY WA 6022
SPELD (WA) INC	Parent/Professional Organization	P.O. Box 61 MOSMAN PARK WA 6012
State School Teachers' Union of WA	Teachers' Organization	150-152 Adelaide Terrace PERTH WA 6000
STONE, Mrs Y G and Mr D S	Parents	131B Meda Crescent DAMPIER WA 6713
VINICOMBE, L J	Parent	60 Fourth Avenue MOUNT LAWLEY WA 6050
Western Australian Association of Occupational Therapists, Inc	Professional Organization	9 Hesperia Avenue CITY BEACH WA 6015
The Western Australian Council of State School Organizations Inc.	Parent Organization	151 Royal Street EAST PERTH WA 6000
W.A. College of Advanced Education (Churchlands Campus)	6 Lecturers in Remedial Education	Pearson Street CHURCHLANDS WA 6018

W.A. College of Advanced
Education (Mount Lawley
Campus).

The Western Australian
High School Principals'
Association

Professional
Organization

2 Bradford Street
MOUNT LAWLEY WA 6050

c/- Mr A Jones
Rossmoyne Senior High
School
Keith Road
ROSSMOYNE WA 6155

Appendix E

Remedial Facilities Visited by Council Members

Visits to some of the remedial facilities of the Education Department were made during the Council's investigations. School and Special Education Branch staff who were principally responsible for explaining the operations of the centres during these visits were:

Chidley Education Centre	Dr B Richardson, Principal
Claremont Remedial Centre	Mrs J Glanville, Remedial Teacher
Lathlain Remedial Centre	Miss E Rosewarne, Deputy Principal Mrs D Turton, Remedial Teacher
North Inglewood Remedial Centre	Mr R Lefroy, Remedial Teacher
North-East Metropolitan Regional Remedial Clinic	Ms D Prakhoff, Remedial Teacher
Special Education Branch	Ms F Boersma, Senior Advisory Teacher Ms R Trouchet, Guidance Officer

Appendix F

Persons Who Gave Oral Evidence at Council Meetings

During its investigations the following individuals were invited to attend Council meetings to give oral evidence:

Mr C Bant	Superintendent of Education (Primary), North-East Metropolitan Region, Education Department of Western Australia
Ms F Boersma	Senior Advisory Teacher, Special Education Branch, Education Department of Western Australia.
Mr A Choules	Principal, Wirrabirra Primary School
Mr P Deschamp	Education Officer, Research Branch, Education Department of Western Australia
Mr W Hann	Superintendent of Education (English), Education Department of Western Australia
Mr S Jongeling	Senior Lecturer, Education and Psychology, Mount Lawley College of Advanced Education
Dr R Latham	Assistant Director (Academic Planning) Claremont Teachers' College
Mr D Leach	Lecturer in Psychology, School of Social Enquiry, Murdoch University
Dr M Lee	Senior Lecturer-in-Charge, Education and Psychology, Mount Lawley College of Advanced Education
Dr W Louden	Director, Guidance and Special Education, Education Department of Western Australia.
Ms Monica Lynch	Co-ordinator, Adult Literacy Project, Technical Education Division, Education Department of Western Australia
Mrs A Markey	Mistress (Special Duties), Research Branch, Education Department of Western Australia.
Mr C Mounsey	Superintendent of Education (Aboriginal Education), Education Department of Western Australia.
Mr J Newby	Superintendent of Education (Curriculum), Education Department of Western Australia
Mr P Peckham	Deputy Principal, Wirrabirra Primary School
Mr B Preen	Senior Lecturer, English Studies, Churchlands College of Advanced Education

Mrs G Richards	Reading Resource Teacher, Kewdale Senior High School
Mr P Sloan	Acting Senior Lecturer, Reading Education, Claremont Teachers' College.
Mrs S Twine	Mistress (Special Duties), Special Education Branch, Education Department of Western Australia
Mr F Usher	Principal, Hamilton Hill Senior High School
Mr F Whitmore	Acting Superintendent of Education (Technical). Technical Education Division, Education Department of Western Australia.
Mrs Y Wilcox	Reading Resource Teacher, Willetton Senior High School
Mrs L Wishart	Reading Resource Teacher, John Forrest Senior High School

Appendix G

Student Statistics from the Annual Report
Education Department of Western Australia, 1946

TABLE XVI.

NUMBER AND AGES OF CHILDREN IN GRADES OR CLASSES.

TABLE A (1).--*Number and Ages of Children on Roll in Government Primary and Central Schools on last Friday in July, 1946 and 1945.*

	Age in Years.													
	Below 6.		6.		7.		8.		9.		10.		11.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Infants	1,465	1,361	2,476	2,316	557	407	106	80	36	32	14	11	9	9
Class 1	2	10	1,007	947	2,194	1,941	663	436	139	75	48	29	21	16
Class 2			7	50	826	891	2,127	1,896	657	465	145	91	54	36
Class 3					25	26	790	831	1,815	1,801	774	543	221	123
Class 4							23	20	626	719	1,644	1,685	701	540
Class 5									26	29	595	658	1,578	1,459
Class 6											19	27	538	597
Class 7													11	27
Totals, 1946	1,467	1,371	3,490	3,322	3,602	3,265	3,709	3,263	3,299	3,121	3,239	3,044	3,133	2,807
Totals, 1945	1,396	1,317	3,402	3,132	3,604	3,254	3,389	3,205	3,260	3,060	3,146	2,840	2,878	2,668

	Age in Years.													
	12.		13.		14.		15.		16.		Totals.		Grand Totals.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	1946.	1945.
Infants	6	2	3	6				1	2	2	4,674	4,227	8,901	8,925
Class 1	7	4			1		2		1		4,091	3,458	7,549	7,376
Class 2	20	17	8	9	2	4	1	1		1	3,848	3,470	7,318	7,051
Class 3	71	38	26	14	9	7	1	2	3	3	3,735	3,388	7,123	6,651
Class 4	244	159	94	48	19	8	6	2	6	1	3,363	3,182	6,545	6,405
Class 5	737	612	322	192	57	47	5	4	19	3	3,389	3,004	6,343	6,069
Class 6	1,311	1,322	738	591	155	98	12	12	24	10	2,797	2,657	5,454	5,733
Class 7	91	211	325	558	142	210	29	35	164	33	762	1,074	1,836	3,943
Class 8		4	50	162	115	268	55	77	76	13	296	524	820	2,406
Class 9			2	19	13	54	28	63	43	35	86	171	257	967
Totals, 1946	2,487	2,369	1,574	1,599	513	696	140	197	338	101	26,991	25,155	52,146	...
Totals, 1945	2,868	2,642	2,679	2,296	1,536	1,379	569	475	341	123	29,130	26,390	...	*55,520

* Of this number, three were in Class 10.

TABLE XVI—continued.

TABULATION A (3).—Numbers and Classification, 1941-1946.

			1941.	1942.	1943.	1944.	1945.	1946.
Grade I.	(Infants)	... ..	8,497	8,297	8,754	8,872	8,925	8,901
"	II. (Class I.)	... ..	6,544	6,612	6,738	6,859	7,376	7,549
"	III. (" II.)	... ..	6,586	6,387	6,479	6,668	7,051	7,318
"	IV. (" III.)	... ..	6,782	6,665	6,383	6,419	6,651	6,123
"	V. (" IV.)	... ..	7,039	6,559	6,509	6,147	6,405	6,545
"	VI. (" V.)	... ..	7,214	6,953	6,337	6,306	6,060	6,343
"	VII. (" VI.)	... ..	6,333	6,274	5,964	5,618	5,733	5,454
"	VIII. (" VII.)	... ..	4,202	4,236	4,236	4,162	3,943	1,836
"	IX. (" VIII.)	... ..	2,126	2,108	2,207	2,359	2,406	820
"	X. (" IX.)	... ..	671	655	733	823	967	257
"	XI. (" X.)	... ..	7	...	...	48	3	...
"	XII. (" XI.)	... ..	...	...	...	1	...	...
Totals			56,001	54,746	54,340	54,282	55,520	52,146

TABULATION B (1).—Number and Ages of Children in Government High Schools and Schools of Agriculture on last Friday in July, 1946.

	Age in Years.														1946.		1946.	1945.	
	Under 13.		13-14.		14-15.		15-16.		16-17.		17-18.		Over 18.		Totals.		Totals.	Totals.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.			
Year 1	373	327	1,022	937	308	224	58	12	17	1	1	...	1,838	1,501	3,339	724
" 2	5	2	304	260	664	573	137	88	20	4	...	...	1	...	1,135	923	2,058	676
" 3	...	...	3	1	150	162	365	277	62	30	3	1	...	...	583	471	1,054	454
" 4	...	...	...	6	4	60	42	95	77	11	6	2	1	174	130	304	372	
" 5	...	...	...	...	...	4	1	53	52	110	80	22	4	189	137	326	247	
Totals, 1946	378	329	1,329	1,108	1,188	963	624	420	247	169	128	87	25	5	3,919	3,162	7,081	2,473	
Totals, 1945	91	86	286	281	346	256	325	226	233	146	111	65	15	6	1,407	1,066	2,473	...	

TABULATION B (2).—Total Numbers showing Average Age and Normal Grade for Age with Retardation and Acceleration from Average Government High Schools and Schools of Agriculture, 1946.

	Age in Years.							Totals.	Percent- age in each Grade.	Average Age.	Percentage of Retardation.		Percent- age of Normal Grade for Age.	Percent- age of Accelera- tion.
	Under 13.	13-14.	14-15.	15-16.	16-17.	17-18.	Over 18.				1 year.	2 years and more.		
Year 1	700	1,959	592	70	18	...	1	3,339	47.15	13.53	17.73	2.63	58.67	20.97
" 2	7	564	1,237	225	20	4	...	2,058	29.08	14.36	10.93	1.21	60.11	27.75
" 3	...	4	312	642	92	4	...	1,054	14.88	15.29	8.73	.38	60.91	29.98
" 4	...	...	10	102	172	17	3	304	4.29	16.18	5.59	.99	56.58	36.84
" 5	...	...	...	5	105	190	26	326	4.6	17.23	7.98	...	58.28	33.74
Totals	707	2,527	2,151	1,044	407	215	30	7,081	100%	...	...	...	...	...

Appendix H

THE NJCLD POSITION PAPERS (I-IV)

Jim Leigh

Abstract. In response to the large number of requests from CLD members for information concerning the National Joint Committee on Learning Disabilities (NJCLD), the Learning Disability Quarterly is publishing the four position papers prepared by the NJCLD during the past two years. As Chairperson of the CLD National Liaison Committee, Dr Jim Leigh has represented CLD on the Joint Committee for three years by serving on the NJCLD's writing subcommittee which develops the initial drafts of position papers for consideration by the entire committee. Other CLD representatives who contributed to the development of one or more of the position papers include Drs. Donald Hammill, Stephen Larsen, and Gaye McNutt. The following introduction and commentary by Jim Leigh contains a description of the objectives and operating procedures of the NJCLD, in addition to a recommendation for use of the position papers.

INTRODUCTION AND COMMENTARY

Jim Leigh

During the current era of increasing competition for resources and organizational membership and the subsequent territoriality among professional disciplines, the National Joint Committee on Learning Disabilities (NJCLD) embodies the spirit of cooperative effort and mutual trust and respect which too often is conspicuously absent from multidisciplinary endeavors in education. Thus, the NJCLD was instigated in 1975 for the purpose of fostering greater inter-disciplinary communication by representatives from the Council for Learning Disabilities (formerly the Division for Children with Learning Disabilities) and the Disabled Reader Committee of the International Reading Association. The NJCLD now comprises representatives from the governing boards of six organizations with interests in the area of learning disabilities: the American Speech-Language-Hearing Association (ASHA), the Association for Children and Adults with Learning Disabilities (ACLD), the Council for Learning Disabilities (CLS), the Division for Children with Communication Disorders (DCCD), the International Reading Association (IRA), and The Orton Dyslexia Society. Because these six organizations represent a collective membership of approximately 200,000 individuals, the NJCLD has a singular opportunity to provide strong advocacy on behalf of persons with learning disabilities.

JIM LEIGH, Ph.D., is Associate Professor, Dept. of Special Education, University of Missouri, Columbia.

The entire NJCLD typically convenes two times each year, although its subcommittees may meet more frequently during the national conventions of the member associations. In addition, NJCLD representatives are often invited to present at national conferences sponsored by participating organizations. At its meetings, NJCLD activities are derived from its stated objectives:

- . to facilitate communication and cooperation among the member organizations,
- . to provide an interdisciplinary forum for the review of issues for governmental agencies and act as a resource committee for those agencies and other interested groups,
- . to provide a unified response to national issues in the area of learning disabilities when and as the need arises,
- . to seek agreement on major issues/problems pertinent to the area of learning disabilities,
- . to prepare and disseminate statements to various publics so as to clarify issues in the area of learning disabilities, and
- . to identify research and service delivery needs in learning disabilities.

One of the most significant activities of the NJCLD has involved the preparation and dissemination of position papers on each of the major topics addressed. The process followed in generating each position paper is lengthy yet effective. After the NJCLD members reach agreement on the topic to be considered, input is actively solicited from individuals with expertise related to the issue among the general membership of all six associations. A designated representative to the NJCLD from each association assumes the responsibility for sharing the obtained information with a writing subcommittee, which, following an exhaustive review of the available literature, prepares an initial draft of the position paper. The content and format of this draft are then discussed and debated by the entire NJCLD and, subsequent to any necessary compromise and revision, a final position paper is approved by a vote of the NJCLD members. The resulting document is then subjected to review by the governing boards of each of the six member associations. Final adoption of documents as official positions of the NJCLD is contingent upon approval of the governing boards of all six member organizations. Any position paper which does not receive unanimous approval by all six organizations may still become an official position of each individual member organization endorsing the document.

And this time it seems appropriate to publish as a set the four position papers recently developed by the NJCLD. The initial and perhaps most significant paper pertains to the new definition of learning disabilities. This definition, which was developed and approved by the NJCLD, has now been endorsed by five of its six member associations. The unprecedented consensus of the definitional issue made it possible for the NJCLD representatives to collaborate successfully on papers concerning three other major topics: inservice programs in learning disabilities, service delivery to individuals with learning disabilities,

and preparation of professional personnel in the area of learning disabilities. In contrast to several position papers to be developed by the NJCLD on significant but relatively narrower topics, each of the following four papers pertains to broad issues which demand immediate attention in the field.

It should be emphasized that the NJCLD did not intend to generate long, scholarly treatises on the issues addressed. Instead, the NJCLD has attempted to provide, within a concise and readable format, statements of basic premises to be employed as guidelines to enhance the quality of services in the area of learning disabilities. Admittedly, many of these premises cannot be characterized as particularly revolutionary or even creative. However, one only has to examine objectively the existing state of affairs in public and private schools, clinics, and teacher training programs to realize the dramatic improvements that would result if the NJCLD recommendations were implemented to an appreciable extent. The recommendations are especially deserving of consideration since they evolved not from a partisan perspective but rather from the comprehensive, multidisciplinary focus previously described. In this sense, the papers reflect the combined expertise of organizations representing special education teachers, parents, diagnosticians, researchers, teacher trainers, speech and language clinicians, reading specialists, neurologists and pediatricians, educational administrators, and individuals with learning disabilities.

Ultimately, neither committees nor position papers can directly influence the quality of learning disabilities programs. Such improvement can occur only if dedicated and concerned individuals are willing to expend the time and energy required to implement those ideas which are deemed worthy. The NJCLD position papers were prepared in the hope that professionals and parents will use the stated premises as standards for evaluation of existing programs. While intended to be practical and feasible, the recommendations still must be operationalized within the context of individual programs with differing resources and objectives. Accordingly, readers are encouraged to reproduce and share the position papers with school personnel, administrators, university faculty, clinicians, parents, state department consultants, and other persons and groups who are in positions to exert a positive influence on policy and practice in the field of learning disabilities. In the final analysis, the significance of the NJCLD's activities must be judged by the extent to which such sharing and implementation occur.

1. LEARNING DISABILITIES: ISSUES ON DEFINITION

A Position Paper of the
National Joint Committee on Learning Disabilities
January 30, 1981

The enactment of P.L. 94-142 has mandated changes in the assessment and education of individuals with varying handicapping conditions. The law has provided the basis for securing a systematic methodology for the identification, assessment, and education of children with handicaps. Of specific interest to the National Joint Committee on Learning Disabilities (NJCLD) are those individuals identified categorically within the law as having learning disabilities.

The federal law states that an individual may have a learning disability when a severe discrepancy exists between achievement and intellectual ability in one or more of the following areas: oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematical calculation, and mathematical reasoning. While the law has specified the areas of deficits that constitute learning disabilities, there remain widespread problems with the definition, methods for identifying the individuals to be served, and delineating the assessment team's membership and responsibilities. The following position paper of the NJCLD addresses problems resulting from the current definition of learning disabilities.

The Definition of Learning Disabilities

In 1967 the National Advisory Committee on Handicapped Children (NACHC) developed a definition of learning disabilities, a definition that is quoted widely and is included in P.L. 94-142. While other definitions of learning disabilities exist among different professional organizations and state education agencies, it was the NACHC definition that provided the basis for legislation and funding that resulted in the establishment of education programs for children with learning disabilities and programs for the training of professionals. Numerous positive effects have been realized through the definition and general goals of P.L. 94-142. However, interpretation of the definition has resulted in a series of problems that have affected theoretical and service-delivery issues in learning disabilities. Some of these issues include the following:

1. The current definition frequently has been misinterpreted. This has led many people to regard those with learning disabilities as a homogeneous group of individuals. This conclusion is clearly erroneous. It has led to the belief that a standard approach to assessment and educational management exists for individuals with learning disabilities. The practices of identification, assessment and remediation were keyed to this interpretation of the definition with resulting confusion in these areas.

The NJCLD urges that "learning disabilities" be recognized as a general term referring to a heterogeneous group of disorders. These disorders are realized as significant difficulties in the acquisition and use of one or more of the following functions: listening, speaking, reading, writing, reasoning and mathematical abilities. Individuals with such disabilities may also evidence problems in their ability to self-regulate behaviors and demonstrate altered patterns of social perception and social interaction. Furthermore, the fact that the learning disabled population includes different subgroups of individuals can no longer be ignored. An integration of the results of past and current research and clinical-educational experience related to these subgroups is essential to identifying the "who" in learning disabilities.

2. The use of "children" in the current definition limits the applicability of the term "learning disabilities". This results in a failure to recognize the developmental nature of learning disabilities. Indeed, learning disabilities must be viewed as a problem not only of the school years, but of early childhood and as continuing into adult life.

3. The etiology of learning disabilities is not stated clearly within the current definition but is implied by a listing of terms and disorders. The NJCLD urges that the disorders represented by the

collective term "learning disabilities" are understood as intrinsic to the individual and that the basis of the disorders is presumed to be due to central nervous system dysfunction. While the NJCLD supports the idea that failure to learn or to attain curricular expectations occurs for diverse reasons, learning disabilities have their basis in inherently altered processes of acquiring and using information. It is essential to understand this notion if one is to appreciate the resultant interaction between the learner and the learning environments. An understanding of this interaction facilitates the development of effective service-delivery models and adaptive curriculum. This also leads to a clearer understanding of the ways in which individuals with learning disabilities may interact in a life-long social and cultural milieu.

The NJCLD believes that the idea of central nervous system dysfunction as a basis for learning disabilities is appropriate. This must not, however, restrict the identification of a learning disability to the physician. In fact, many individuals with manifest central nervous system dysfunction, such as individuals with cerebral palsy, do not necessarily evidence learning disorders. For individuals with learning disabilities, evidence of central nervous system dysfunction may or may not be elicited during the course of a medical-neurological examination. The critical elements in the diagnosis of learning disabilities are elicited during psychological, educational and/or language assessments.

An understanding of etiological mechanisms (a) facilitates a determination of prognosis, (b) provides information to individuals and their families that helps to clarify their understanding of the manifest disorder(s), and (c) provides direction for research studies that will influence educational practice.

4. The wording of the "exclusion clause" in the current definition of learning disabilities lends itself to the misinterpretation that individuals with learning disabilities cannot be multihandicapped or be from different cultural and linguistic backgrounds. It is essential to understand and recognize learning disabilities as they might occur within varying handicapping conditions as well as different cultural and linguistic groups. Individuals within these groups frequently have received inappropriate assessment, planning and instruction.

The NJCLD supports the idea that learning disabilities are not the primary and direct result of other handicapping conditions and should not be so confused. However, the NDCLD notes specifically that learning disabilities may occur concomitantly with other handicapping conditions. While learning disabled individuals may be served educationally through different service modes, a denial of the existence of significant learning disabilities will result in inappropriate assessment and educational instruction and can result in the denial of direct or indirect professional services.

In light of the preceding discussion, the NJCLD recommends the following definition of learning disabilities.

Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the

individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g., sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g., cultural differences, insufficient/inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences.

The National Joint Committee on Learning Disabilities is a committee of cooperating organizations concerned with individuals with learning disabilities. Organizations represented and representatives for the January, 1981 meeting included:

Association for Children and Adults with Learning Disabilities, Robert C. Reed, Sylvia Richardson, Alice Scogins, Shari Sowards

American Speech-Language-Hearing Association, Anthony Bashir, Katharine G. Butler, Stan Dublinske, Hal McGrady

Council for Learning Disabilities, Donald D. Hammill, Stephen C. Larsen, James Leigh, Gaye McNutt

Division for Children with Communication Disorders, Council for Exceptional Children, Clare Maisel, Joel Stark, Rhonda Work

International Reading Association, Jules Abrams, Jack Cassidy, Ralph Staiger

The Orton Dyslexia Society, Drake D. Duane, William Ellis, Mary Lee Enfield, Linda M. Frank

This is a final draft copy of a position paper of the NJCLD. This copy has been forwarded for final approval and adoption to the governing body of the member associations. All member associations except ACLD have approved this position paper.

Permission is hereby granted to reproduce this final paper in its entirety, including the above explanation.

Reference as:

The National Joint Committee on Learning Disabilities. Learning Disabilities: Issues on Definition. A position paper of the National Joint Committee on Learning Disabilities, January 30, 1981.

For a copy of this paper address requests, with the title of the paper,
to:

NJCLD
The Orton Dyslexia Society
724 York Road
Baltimore, Maryland 21204

NOTE: From Learning Disabilities Quarterly, (1983), 6, 40-44.

APPENDIX I

List of Recommendations

RECOMMENDATION 1.

The Education Department should take early and positive action to review the findings of the research reports, Weak Readers in Primary Schools, (1983), and 'Underachieving' Readers (1983), and to implement procedures to improve the teaching of reading in primary schools, especially the provision of adequate remedial reading programmes throughout Western Australia.

RECOMMENDATION 2.

The Education Department should take early and positive action to review the findings of the research report, Weak Readers in Secondary Schools (1983) and to implement procedures to improve significantly the teaching of reading in secondary schools, especially the provision of adequate remedial reading programmes throughout the secondary schools of Western Australia.

RECOMMENDATION 3.

The Education Department should develop procedures for the identification of children with learning disabilities. These procedures should be initiated in the pre-school year (where presently more than 90% of children who will commence school the following year are enrolled) and continue through the primary school and the secondary school programme.

RECOMMENDATION 4.

Procedures for the identification of learning disabilities should be initiated by teachers and supervised by guidance officers and other professional staff trained in diagnostic assessment.

RECOMMENDATION 5.

Principals of primary and secondary schools should have specific responsibility for the referral of students with severe reading disabilities to guidance officers and regional directors.

RECOMMENDATION 6.

Guidance officers should have a major responsibility in the diagnosis of severe reading disabilities and should work co-operatively with parents, principals, teachers and special education staff in planning and providing suitable educational programmes.

RECOMMENDATION 7.

The Research and Curriculum Branches of the Education Department should continue to develop sets of standardised or calibrated reading tests for use in Western Australian schools to assist the monitoring of levels of reading achievement and the incidence of reading disabilities.

RECOMMENDATION 8.

Towards the end of each school year a set of standardised or calibrated reading tests should be administered to all students in Year One, Year Three and Year Six in primary schools, and at the beginning of Year Eight and Year Ten in secondary schools. Principals, regional superintendents and guidance staff should be directly responsible for the selection of suitable tests, the organisation of the recommended survey, testing and follow-up procedures.

RECOMMENDATION 9.

Data from these periodic survey tests and the results of other relevant achievement tests should be used to identify students in need of more intensive diagnostic assessment and as a basis for the planning of appropriate reading programmes.

RECOMMENDATION 10.

Principals should inform parents in writing as soon as it is apparent that a reading problem is of such a severe nature that it is inhibiting the child's progress. Parents should be invited to the school to discuss all associated matters including what action is being taken to try to improve the child's reading skills.

RECOMMENDATION 11.

Students diagnosed as having specific reading disabilities should be provided with one, or more, of the following programmes:

- (a) corrective instruction within the classroom;
- (b) remedial instruction with modified teaching in individual tutorial situations, or in small groups, outside the regular classroom;
- (c) adaptive instruction with modified teaching in special classes;
- (d) some form of special instruction that contains elements of types (a), (b), and (c) as set out above.

RECOMMENDATION 12.

Comprehensive records should be kept on the reading attainments of all children within the school, particularly those receiving corrective or remedial instruction. At least every six months the principals of all primary and secondary schools should review the records of students receiving corrective or remedial instruction and forward the results of such reviews to the appropriate Regional Director so that senior staff have up-to-date information to guide their decision-making.

RECOMMENDATION 13.

The Education Department should review the policy of appointing support teachers to schools so as to ensure that they are used directly in the educational programme, with a high priority given to remedial reading.

RECOMMENDATION 14.

When staffing remedial programmes in schools, the Education Department, the Catholic Education Commission and private schools should give preference to teachers who have gained graduate level qualifications in remedial and special education.

RECOMMENDATION 15.

No person should be offered a permanent appointment as a teacher in remedial or special education unless he or she has obtained a relevant graduate qualification.

RECOMMENDATION 16.

The present diversity of provision of remedial facilities such as district or regional reading clinics, district remedial centres, school based remedial classes and mobile clinics should be continued and expanded to serve a greater number of children in need of special help.

RECOMMENDATION 17.

The Education Department should experiment with additional schemes of remedial reading education, such as reading resource centres.

RECOMMENDATION 18.

The Education Department should give a high priority to a research programme to evaluate the use of computer-assisted instruction in remedial education. This research programme is a necessary base to establish evidence on which to develop software for use in remedial reading.

RECOMMENDATION 19.

The Education Department should allocate resources both for the proposed research project and for the development of remedial reading software, which should be the direct responsibility of professionals concerned with remedial reading.

RECOMMENDATION 20.

Immediate steps should be taken to ensure the concentration of significant remedial reading programmes in the early primary years. Further there should be a continuation of adequate remedial reading programmes for older students, including adults.

RECOMMENDATION 21.

Early action should be taken to establish well-housed and well-equipped remedial reading centres and/or resource rooms in all secondary schools. These centres should be staffed by qualified and experienced teachers who have graduate level qualifications in remedial or special education and who have career prospects equal to other categories of secondary teachers.

RECOMMENDATION 22.

All student teachers in early childhood, primary and secondary pre-service courses should be given a thorough grounding in current methods of teaching reading, in the psychology of reading and in the principles of remedial reading. These courses should contain both practical and theoretical content relevant to the classroom situation.

RECOMMENDATION 23.

The employing authorities, when considering new graduates for employment should satisfy themselves that each beginning teacher has completed an adequate range of courses in the teaching of reading.

RECOMMENDATION 24.

The employing authorities, particularly the Education Department, should give high priority to in-service programmes which encourage primary and secondary teachers actively to develop effective remedial reading programmes.

RECOMMENDATION 25.

The Education Department should ensure that its guidance officers are given adequate specific courses in the diagnosis and remediation of reading disabilities in their pre-service courses and that adequate provision be made through in-service education to keep them abreast of developments in remedial teaching.

RECOMMENDATION 26.

Graduate level courses in special and remedial education should be concentrated on one campus of the Western Australian College of Advanced Education. These graduate-level courses should be taught by staff holding at least a Master's degree in an appropriate field, who also have had substantial experience teaching in schools.

RECOMMENDATION 27.

The Education Department should review thoroughly the teaching of reading in secondary schools and should take action to ensure that the programme is adequate and related to the needs of all students.

RECOMMENDATION 28.

The Education Department should review thoroughly the curriculum on the teaching of reading, particularly remedial reading programmes, with the aim of developing an overall policy and a fully integrated programme.

RECOMMENDATION 29.

The Education Department should appoint a specialist superintendent of remedial education in the Division of Guidance and Special Education who should be responsible for overall policy and a fully integrated programme for all students from pre-primary to Year 12. This superintendent should be responsible for working

closely with regional directors, superintendents and the staff of Guidance and Special Education Branches, and should also be responsible for a total programme of in-service education related to remedial reading.

RECOMMENDATION 30.

The Education Department should provide additional resources for the development of curriculum materials suitable for use in remedial and corrective education programmes at all levels.

RECOMMENDATION 31.

The Education Department should formally recognize the existence of sighted, print-handicapped students and should make a fresh assessment both of what is being done for these students and what should be done.

RECOMMENDATION 32.

The Education Department should foster the development of learning programmes using non-print media for students who have severe reading disabilities.