

UNIVERSITY OF CAPE TOWN

FACULTY OF EDUCATION

EDUCATORS' PERCEPTION OF SCHOOL REMEDIAL EDUCATION
SERVICES RENDERED TO PUPILS IN THE
MAINSTREAM OF EDUCATION

A dissertation
presented in fulfilment of the requirements for the
Degree of
Master of Education

Robert Roberts

JUNE 1990.

The University of Cape Town has been given
the right to reproduce this thesis in whole
or in part. Copyright is held by the author.

DECLARATION

I, Robert Roberts, declare that this work is my own original work and has not been submitted before now, in any form whatsoever, by myself or any one else, to this University or to any other educational institution for assessment purposes.

Further, I have acknowledged all sources used and have cited these in the bibliography. There has been no infringement of publishers' copyright stipulations.

I understand that any breach of this declaration may result in non-acceptance of this work by those concerned.

Date: June, 1990.

Acknowledgement

The author would like to express sincere thanks to all who assisted to make this investigation possible.

First of all to the Almighty for giving me the ability, skills and spiritual guidance to undertake this task.

Special thanks to my wife Jennifer, our children - Shaun, Sonja and Alexandra and all close relatives for their unflinching encouragement and support. To Shaun for his assistance in the laborious task of recording data- many thanks.

Thanks are due to the Department of Education and Culture (House of Representatives) for granting permission to conduct the investigation amongst principals and teachers at schools within its jurisdiction. To Mrs J Visser, Principal Subject Adviser (Remedial Education), for her interest.

My thanks to the principals and teachers of the relevant schools for the cooperation and professionalism with regard to the conduct of the investigation.

A word of thanks to Dr Q Cosford, principal at Athlone School Clinic, and to all my colleagues for their enthusiasm and assistance.

Thanks are due to Prof. I de V Heyns, former dean of the faculty of Education at the University of Cape Town for his advice concerning statistical procedure.

Many thanks go to Mr Michael Frenchman and Rev. Andrew Henderson for the meticulous setting out of tables and the typing of the manuscript on the word processor.

I would like to thank my friends, Mr Andrew Abrahams for the supply of stationery, Messrs. Thebus and Mullins for the printing and binding of copies of this dissertation.

Thanks are also extended to the University of Cape Town, Education Library personnel for their tolerance and inter-library search of research material on my behalf.

Above all, I am very much indebted to Ms Maureen Archer, my supervisor at the University of Cape Town, whose guidance and supervision throughout the research investigation have been very valuable.

Dedicated to my son Robert Bradley who bravely acted as guinea pig in my first Remedial Teaching inservice training video production. His untimely death prevents him from participating in this joyous milestone, in the flesh, but whom I believe is with me in spirit. Our mutual accomplishments always served as inspiration and motivation to each other.

CONTENTS.

v

	<u>Page</u>
DECLARATION	i
ACKNOWLEDGEMENT	ii
DEDICATION	iv
LIST OF FIGURES	viii
LIST OF TABLES	ix
ABSTRACT	x
<u>CHAPTER 1</u> : <u>INTRODUCTION</u>	1
1.1. Contextual Perspective of the Research	1
1.2. Statement of the Problem	3
1.3. Aim and Focus of the Research	8
1.4. Broad Framework of the Research	9
1.5. Theoretical Basis for the Interpretation of the Research Results	10
1.6. The Research Design	12
1.6.1. Method and Procedure	
1.6.1.1. Questionnaire Design	
1.6.1.2. Questionnaire Design vs Other Research Designs	
1.6.2. The Questionnaire	
1.6.3. Background and Procedure	
<u>CHAPTER 2</u> : <u>A REVIEW OF LITERATURE ON ISSUES IN REMEDIAL EDUCATION</u>	25
2.1. Introduction	25
2.2. Issues of Definition	28
2.2.1. Learning Disability (LD)	
2.2.1.1. Aetiology	
2.2.1.2. Definition	
2.2.1.3. General	
2.2.2. Remedial Education	
2.3. Efficacy of Remedial Education	59
2.3.1. Summary	
2.4. Assessment, Diagnosis and Evaluation In Remediation	62

2.4.1.	Introduction	
2.4.2.	Assessment and Diagnosis	
2.4.3.	Evaluation	
2.4.4.	Issues of Assessment, Diagnosis and Evaluation	
2.4.5.	Summary	
2.5.	Issues of Research Methodology	74
2.5.1.	Problems of Definition and Sampling	
2.5.2.	Experimental Procedures	
2.5.3.	Other Factors Affecting Research Methodology	
2.6.	Summary	78
<u>CHAPTER 3</u>	: <u>PROBLEMS RELATING TO THE PROVISION OF REMEDIAL SERVICES IN THE DEC - HR</u>	80
3.1.	Statement of the Problem	80
3.2.	Nature of the Problem	87
3.3.	Effects of the Problems	90
3.3.1.	On the Structure of School Psychological Services	
3.3.2.	On the Provision of Services	
3.4.	Summary	98
<u>CHAPTER 4</u>	: <u>SUPPORT FOR LEARNING FOR PUPILS WITH LEARNING DIFFICULTIES IN THE MAINSTREAM OF EDUCATION</u>	102
4.1.	Introduction	102
4.2.	What does 'Mainstream' Education Mean ?	103
4.3.	The South African Situation	108
4.4.	Pros and Cons of Mainstreaming	115
4.4.1.	Arguments in favour of Mainstreaming (Pros)	
4.4.2.	Arguments Against Mainstreaming (Cons)	
4.4.3.	Summary	
4.5.	Teacher Training Strategies and Support Services for Children with Learning Difficulties in the Mainstream	133
4.5.1.	Remedial Instruction - Support For Learning	
4.5.2.	Strategies	
4.5.2.1.	Strategies for the Pupil	
4.5.2.2.	Support and Strategies for Teachers	
4.6.	Summary and Conclusion	168
<u>CHAPTER 5</u>	: <u>REMEDIAL SERVICES AND THE ROLE OF THE REMEDIAL TEACHER</u>	170
5.1.	Remedial Services	170
5.1.1.	An Overview of the Situation Of Remedial Services in South Africa	

	Page
5.1.1.1. Education for Whites	
5.1.1.2. Education for Coloureds	
5.1.1.3. Education for Indians	
5.1.1.4. Education for Blacks	
5.1.2. Brief Overview of Development of Remedial Services in Some Developed Countries	
5.1.2.1. Britain	
5.1.2.2. United States of America and Canada	
5.1.2.3. Scotland	
5.1.2.4. Israel	
5.1.2.5. Australia and New Zealand	
5.1.2.6. Nordic States	
5.2. The Roles of the Remedial Teacher	182
5.3. Summary	190
CHAPTER 6 : THE RESEARCH RESULTS	191
6.1. Collection of Data	191
6.2. Treatment and Analysis of Data	193
6.3. Results and Discussion	197
6.4. Summary	225
CHAPTER 7 : DISCUSSION AND CONCLUSION	227
7.1. Implications and Recommendations For Further Research	227
7.1.1. Teacher Training	
7.1.2. Future Research	
7.2. Future of Education for The Learning Disabled	235
7.2.1. Some Dissenting Viewpoints about Learning Disabilities	
7.2.2. Remedial Services	
7.3. Summary and Conclusion.	249
BIBLIOGRAPHY	252
APPENDICES:	
Appendix A	281
Appendix B	284
Appendix C	285
Appendix D	286
Appendix E	287
Appendix F	288
Appendix G	289
Appendix H	292
Appendix I	293

LIST OF FIGURES

	Page
1. Figure 3.1. Structure of School Psychological Services - DEC-HR	91
2. Figure 3.2. Structure of School Remedial Services	92
3. Figure 4.1. Educational Structure of Southern Africa	109
4. Figure 4.2. Deno's Cascade Model	137
5. Figure 6.1. Schematic Presentation of Dimensions of the Roles of Remedial Teachers	221
6. Figure 7.1. Roberts Model for the Structure of Remedial Education Services in a Single Education System in South Africa.	243

LIST OF TABLES

	Page
1. Table 3.1. Pupil Enrolment for Southern Africa 1986 (Sub. A to Std. 5)	83
2. Table 3.2. Total Number of Pupils in Schools for each Race group 1976 to 2000	83
3. Table 3.3. Extrapolated figures for Coloured pupil enrolment for 1990	84
4. Table 6.1. Selection of Sample and Sample Returns	192
5. Table 6.2. Education Level of Educators	198
6. Table 6.3. Age Analysis of Educators	198
7. Table 6.4. Frequency of Contact	198
8. Table 6.5. Helpfulness of Remedial Personnel	200
9. Table 6.6. Efficacy of Remedial Teaching	203(a)
10. Table 6.7. Summary of Means for each Role	213
11. Table 6.8. Rank-order of Roles as depicted by Table 6.7.	213
12. Table 6.9. Section C - Remedial Teacher Involvement - Percentages	215
13. Table 6.10. Intercorrelations Matrix of Roles	219
14. Table 6.11. Loadings of Roles on each Factor	220
15. Table 6.12. Rank-order of Time Spent and to be Spent on each Role by Remedial Teachers	222
16. Table 6.13. Section D - Time Allocation	223

ABSTRACT

Special Education encompasses a wide field. It is an expensive form of education and is often criticized for its shortcomings. One part of Special Education is remedial teaching for children with learning disabilities. In order to provide good quality services, it is necessary to evaluate what is currently being offered and what is envisaged as desirable for the future.

This study focusses on those two factors by examining the perceptions of remedial teaching as held by educators (principals, regular class teachers and remedial teachers themselves) in fifty-two schools of the Department of Education and Culture - House of Representatives (DEC-HR). Current service provisions and the desired role of the remedial teacher are thus examined to determine whether educators perceive these as adequate and desirable.

A study of the literature was undertaken and guided by those insights a questionnaire was drawn up. This was distributed to educators and the information was verified and augmented by personal interviews with remedial educators.

Three hundred and twenty questionnaires were distributed. The views of principals, regular class teachers and remedial teachers were surveyed in those primary schools served by a remedial teacher .

Descriptive statistical analyses were used to arrive at both quantitative and qualitative assessments of the position of Remedial Services in the Department of Education (House of Representatives). The study revealed a strong correspondence between the three groups of educators regarding their perception of remedial services.

The author endeavours to illustrate that the lack of consensus about criteria for definition and classification of Learning Disability and consequently Remedial Education, leads to confusion of the role(s) remedial teachers are expected to fulfill. This affects the provision of adequate and effective remedial services to pupils in need of such specialised educational facilities.

Results from this study led the author to draw up a proposed structure for Specialised Education, in particular, Remedial Education, in a unitary Education System in South Africa.

CHAPTER 1

INTRODUCTION

1.1. CONTEXTUAL PERSPECTIVE OF THE RESEARCH

If in South Africa the cumulative effect of the socio-political and economic suppression of the past and the traumas of future social and political transition are to be meaningfully addressed by remedial education, regular class teachers and school principals need to be knowledgeable about the needs of the individuals experiencing special learning problems.

A large sector of the South African population, because of their political and economic backlog, can be described as having a Third World standard of development. However, pupils from this sector of the population are expected to achieve a First World standard of education. This has led to many pupils experiencing learning difficulties of diverse nature.

Pupils may be described as "learning disabled" (L.D.), i.e. his/her learning problem may be inherent (intrinsic) or he/she may be experiencing learning (scholastic)

difficulties as a result of extraneous factors e.g. sociological and economical. These may include : poverty and malnutrition; poor teaching, poor teacher training; poor educational facilities. These are all a direct or indirect outflow of the present political system in the country.

From the outset, therefore, a clear distinction should be made between a learning disability (L.D.) and learning problems (difficulties) experienced by a pupil. As will be discussed in Chapter 2 (paragraph 2.2.1.1.) L.D. is psychoneurological in nature whereas a variety of other learning problems may be due to extraneous factors as discussed above. The literature also distinguish between the two concepts by referring to L.D. as being clinical and learning difficulties as didactical.

The question, however, arises : "Can one really tell the difference between the types of learning disabilities?" In the South African situation as discussed above, causal and contributory factors of L.D. appear intertwined.

In Chapter 3 extrapolated figures of available data will indicate the high prevalence of pupils experiencing learning difficulties in one form or another and in differing degrees. This exerts pressure on available services and on how these services should be allocated to regular and

specialized education. This problem, as experienced in the DEC - HR needed research.

1.2. STATEMENT OF THE PROBLEM

The concept of "specific learning disability" (L.D.) is becoming increasingly recognized today as a major social, educational and mental health problem. Within the framework of this study the term "learning disabled" refers to what is known in the Republic of South Africa as the 'remedial pupil' (vide. chapter 2). The education of the specifically learning disabled pupils, therefore, in the South African context means the remedial pupil in the mainstream education.

Remedial education of pupils with learning disabilities (L.D.) constitute a relatively recent addition to Special Education. Judging from statistics (Tansley and Panckhurst, 1985; Cosford, 1988), the incidence of specific learning disabilities is prevalent and on the increase.

The seriousness of the problem has also been emphasised by Yule and Rutter (1985) in Britain, and Bender (1987) in South Africa. Cruickshank (1987) stated that : "...today we see the whole field of learning disabilities in children,

youth and adults in nothing short of a crisis state" (p.574).

Many of these pupils are to be found in the mainstream education classroom. Regular classroom teachers, owing to possible lack of time and the necessary skills find it difficult to give these pupils the attention they need. In the Department of Education and Culture (House of Representatives) - DEC-HR, focus of this investigation, it has been found that school failure leads to an alarming school drop-out rate (Reddy, 1970).

The integration of special- with mainstream- education has been universally advocated in most developed countries, (Warnock, 1978; Henderson, 1989). Some, notably the United Kingdom (UK) and the United States of America (USA), passed specific laws to that effect.

The 1981 Education Act (Special Education Needs) was passed in the UK in 1981. The law required the identification and assessment of pupils. Each local education authority has to undertake this in its own area. Records of pupils' needs have to be maintained and reviewed on a regular basis. The Education of all Handicapped Children's Act (also known as Public Law 94-142) had been passed in 1975 in the USA. This law specified similar provisions to those of the UK law.

In South Africa the Report of the Committee of Inquiry into the Education of Children with Minimal Brain Dysfunction, 1969, also known as the Murray Report, heralded the beginning of official investigations into the appropriate identification and placement of pupils experiencing specific learning difficulties. The Murray Report identified three categories of pupils. The Human Sciences Research Council (HSRC), in 1981, undertook an in-depth investigation into all aspects of education in the country. The investigation identified and pointed out the shortcomings of education for pupils with special educational needs. With reference to education of children 'other than white' it was stated:

"...There is also an urgent need for many more full-time remedial classes to be given for 'Black' and 'Coloured' pupils.

...Educationists find it impossible to pay the necessary attention to compiling auxiliary programmes, holding consultations with and providing the necessary guidance for remedial teachers and class teachers".

(HSRC, 1981:143)

A strong recommendation was made for remedial assistance to L.D. children within the mainstream education. The

relatively recent introduction of remedial education into mainstream DEC-HR schools, the fact that it is categorized as a sub-section of special education, the lack of clarity of definition of L.D. and remedial education, the lack of clarity of the remedial teacher's role in the school, have contributed to the fact that different educators have differing perceptions of the field of L.D. and remedial education, in particular.

What has emerged from studies in the UK, USA and the HSRC investigation in South Africa is the lack of trained personnel to identify, assess and diagnose L.D. and implement teaching (remedial) programmes; the burden of administrative requirements e.g. detailed Individualized Education Programmes (IEP's); lack of appropriate resource material and remedial aids; financial constraints.

Some researchers and writers have concluded that the provision of Specialized Education e.g. Remedial Education, to children diagnosed as L.D., leads to improved reading and language skills. However, it appears many educators (also those from DEC-HR schools interviewed by the writer), from practical experience, differ from these views. The long-term efficacy of remedial instruction is questioned by sociologists and educators like Tomlinson (1982) and Franklin (1987).

With specific reference to DEC-HR schools, taking into account the amorphous state of education as far as subject content and resources are concerned, a closer look needs to be taken at the problems encountered by educators in the field. An indication of problem areas, as perceived by educators at the inter-face level, need to be identified and addressed. Teacher training institutions would appreciate which aspects of remedial education, as perceived by educators in the field, they should concentrate or lay more emphasis upon.

Because of, amongst other causal and contributory factors, deprivation, low socio-economic levels and subcultural conditions, many children in the DEC-HR schools are not exposed to the experiences necessary for successful learning and progress at school. (Behr, 1988). The diverse nature of pupils' learning problems make it absolutely necessary that educators and all those concerned with remedial education be well versed in the exact roles of remedial teachers in the field.

Remedial teachers should have the skills to respond to the roles expected of them. Considering the previously stated diverse nature of DEC-HR pupils' learning problems, remedial teachers are expected to fulfill a wide variety of roles.

Such roles may include : assessment, prescription, teaching and therapy, support for colleagues, liaison with support services, parents and the community at large, (Laskier, 1985). In DEC-HR schools different emphases may be placed on different roles, depending on the need.

1.3. AIM AND FOCUS OF THE RESEARCH

This research focuses on the controversial field of specific learning disabilities with reference to educators' perceptions of the remedial services provided for learning disabled pupils. It examines how educators in mainstream primary school in the DEC-HR, perceive the function of their remedial teachers and remedial services in general, and how these perceptions differ according to components of the services and the groups of educators.

The apparent inability of Remedial Education to address the problems associated with a learning disability has also been severely criticized by teachers and principals in the field of education. This research will attempt to investigate the above-mentioned perceptions and also to what extent the political and economic factors in South Africa have an influence on the situation.

The interaction of past and current political and economic considerations and its consequent influence on mainstream education and the adequate provision (resources, teacher training, recruitment of teachers and working conditions of remedial teachers) will be examined.

The special needs of L.D. pupils as expressed by writers like: Martin (1974), Jordan (1974), Heron (1978), Dee (1978), Chandler (1981), Prillaman (1981) and Heron (1985) will be focussed upon and compared to the unique needs of the ecologically disadvantaged pupils in the South African political system, as espoused by Laubscher (1984) and Perold (1984).

1.4. BROAD FRAMEWORK OF THE RESEARCH

The National Joint Committee for Learning Disabilities (NJCLD) (1988), suggested content areas for inservice training programmes of Learning Disabilities teachers. The framework for this dissertation and the roles of Remedial Teachers as discussed in this study are based on the needs of Remedial teachers and pupils experiencing learning problems, as assessed in the NJCLD paper, namely:

1. The Manifestation of Learning Disabilities.
2. Identification and assessment of individuals with L D.

3. Controversial Issues in Learning Disabilities.
4. Teaching Methods and Strategies in Learning Disabilities.
5. Service Delivery Models in Learning Disabilities.
6. Human Growth, Development and Social Awareness problems in Learning Disabilities.
7. Curriculum issues.
8. Issues related to the long term nature of LD and the necessity for the development of a continuum of educational services (e.g. pre-school, primary, secondary and tertiary).

1.5. THEORETICAL BASIS FOR THE INTERPRETATION OF THE RESEARCH RESULTS

For this study the author adopted the Local Theories approach as discussed by Schibeci and Grundy (1987). The notion of local theory appears, in the context of this study, to be the appropriate approach to educational research within the quantitative research tradition.

'Local Theories' refer to "theories that apply within the restricted contexts such as a school or a school system, but not necessarily to other schools or school systems", (Schibeci and Grundy, 1987). The unique South African education situation, whereby people are segregated along racial lines, does not allow researchers to generalize

research findings of research conducted in a restricted context of a specific subgroup of the population to the whole population.

The unequal distribution of resources amongst the racially segregated education departments in South Africa also make for differing perceptions of the efficacy of education services e.g. Remedial, as in this study. The researcher in such research would therefore "look within his data for local effects", (Cronbach, 1975, quoted in Schibeci and Grundy, 1987). The writers quote evidence in research literature that suggests that particular communities or small groups of schools (as in this study) could profitably be studied for local effects which could have important influences.

Research conducted by Schibeci in 1984 (cited in Schibeci and Grundy, 1987) clearly showed that environmental variables exert different influences on problems/concepts under investigation. According to the writers (ibid.) it appears reasonable to suggest "that a nomological framework will apply in one context but not in another".

The Local Theories approach in educational research therefore, has the potential to provide valid findings.

within both qualitative and quantitative paradigms in a contextual framework. Unlike a 'universal theory' that would apply in all instances, local theories apply in a particular context and do not claim applicability beyond that context. It thus provides strength to situation-specific forms of research e.g. educators' perceptions of remedial education in DEC-HR schools. At the same time it preserves the major strengths of the quantitative paradigm which is the basis of this study.

The results and recommendations of the study are therefore of universal relevance only in so far it is applied to similarly culturally deprived and disadvantaged communities with an educational system at the same level of development as the population upon which the present study was carried out.

1.6. THE RESEARCH DESIGN

1.6.1. METHOD AND PROCEDURE

For this study the author decided to use the questionnaire design as the research methodology. This design best meets the aims and objectives set for this study. The purpose of the study is essentially one of a fact finding nature and trying to describe the school remedial services situation in

the DEC - HR. The descriptive, exploratory and enumerative nature of the questionnaire design suits this study.

1.6.1.1. QUESTIONNAIRE DESIGN

Questionnaires provide the researcher with information directly given by a person (subject) that can be converted into data. Items on a questionnaire make it possible to - measure "what a person knows (knowledge or information), what a person likes or dislikes (values and preferences), and what a person thinks (attitudes, perceptions)", Tuckman (1987: 196).

Information can thus be transformed into numbers or quantitative data by using e.g. a rating scale technique, as described in paragraph 1.6.2. of this study. The number of respondents who give a particular response can also be counted, thus generating frequency data as used in this study.

The question/item format (primarily statements) was decided on the basis of the response mode the author envisaged. The author desired interval data for parametric statistical analysis purposes. For this reason scaled responses were regarded as the most appropriate mode. The 'statement'

format of items was selected in preference to 'questions' format which do not adequately allow for the use of scaled responses and consequent interval data.

This questionnaire/survey design is thus "a distinctly quantitative method that involves the planned collection of data from or about subjects in a standardised format, as a guide to future action..." (Smith, 1983). This type of design allows for groups (e.g. educators as in this study) to be studied and can be conducted over a given period of time (e.g. 3 months - October to December 1989 - as in this study).

The questionnaire design was used as it is believed it would give the author (investigator) an overall perspective of the field, compared to, as Smith (op.cit.) argues, the microscopic view emerging from the more intensive smaller-scaled controlled experiment design , for instance.

The literature survey (Moser and Kalton, 1972; Babbie and Anderson ,1975; Sonquist and Dunkelberg, 1977) indicate the following advantages of the questionnaire design, as summarized by Smith (1983) and applicable to this study :

- i. It provides for rigorous testing and examination of complex situations concerning a number of hypotheses and

involving several variables;

ii. It provides an overall perspective and facilitates generalized conclusions being drawn (e.g. opinion of educators with regard to remedial services);

iii. The data can be analyzed in different ways to test various hypotheses;

iv. It provides empirical verification for the state of conditions or situations, which the investigator may suspect;

v. Replication of the study at later stages is made possible, where different samples or populations as suggested in Chapter 6 can be used;

vi. The method appears to be the best to use when investigating an aspect of human subjects within their natural environment (e.g. the school or classroom);

vii. A high degree of objective and quantifiable data can be obtained from human subjects using this methodology.

Bias

As this research design (questionnaire) makes the researcher dependent upon the respondents' verbal or written reports, the accuracy of interpretations of the situation (remedial education services, in this instance) may be affected. The situation is thus open to respondent bias. "Such bias can be

subjective, in that every respondent is affected by the mere fact that he is being investigated, or he may wish to shock, impress or distort the truth" ,(Smith, 1983). The author of this study has attempted to provide for the integrity of responses, thereby off-setting bias, by calling on respondents to remain anonymous, to encourage participation and candid responses, and by sampling different groups of educators for comparative purposes.

Standardisation

Care was taken to adhere to the principal of standardisation which would allow for valid conclusions being drawn, generalizations made and later replication made possible. Data were collected in such a way that all respondents were faced with situations which were as near identical as possible - all were exposed to remedial education services for at least 6 to 9 months (a permanent remedial teacher is attached to each school sampled). By using a rating scale (likert -format) care could be taken to elicit uniform responses from all respondents.

Sampling

The strategy of stratified random sampling was used. This

technique reduces the variability of the sample. The population was defined as educators at primary schools with a remedial teacher on the staff. Of these, only educators at schools with either (i). a qualified remedial teacher in an approved remedial post at the school or (ii). an 'underqualified' remedial teacher in a remedial post but in close proximity to a school clinic, were sampled.

'Underqualified' remedial teachers refer to those teachers who: (i) have had modules of remedial education as part of their teacher training or (ii) are presently in training (having completed theory modules) with the University of South Africa or (iii). occupied a remedial post for the past three years and have received regular in-service training at School Clinic in-service training sessions. A total of 52 remedial teachers was thus identified. Stratified random sampling secures a major advantage for researchers as the basis for stratification does in fact relate to the 'characteristic(s)' being measured e.g. perceptions of remedial service - all sample members have had exposure to remedial services.

According to Moser and Kalton (1972) and Smith (1983) the correct timing of this type of investigation can play an important role in determining the validity of the results.

In this instance, the investigation was conducted during the last school term of 1989. Educators, by that time of the year, would have had fair contact with remedial education personnel and the services offered by them. Every effort was thus made to make the chosen research methodology satisfy all the requirements for a valid questionnaire design.

1.6.1.2. QUESTIONNAIRE DESIGN vs OTHER RESEARCH DESIGNS

A. Controlled Experiment Design

This type of design provides for controlled and objective measurement, classification and interpretation of data in relation to hypotheses and theories. In the present study no major hypotheses or theories are tested to obtain results from which conclusions are to be drawn. The controlled experiment design can also only be conducted on a small sample of subjects and is therefore not suitable for this study.

B. Case Study Approach

The case study approach does not provide a "tidy and academically respectable procedure", (Millar, 1983). The case study approach is also a highly subjective form of

inquiry. The scope for distortion of evidence or facts and the risks to which subjects are exposed in providing such evidence is another reason why the case study approach is unsuitable for the present study. Case study research has been found to "lack succinctness in the conclusions of such studies and the amount of time required for participants to arrive at a consensus about the meaning of the conclusions and the form of subsequent action", (Schibeci and Grundy, 1987).

C. Action Research

The procedure of action research is often described as : ACTION - REFLECTION - FURTHER ACTION. This would therefore involve an active attempt to change the present situation and measuring the subsequent result. As the author does not intend to actively intervene at this stage in this study, to bring about any 'changes' in the present system, this form of research design is not appropriate for this study.

The procedures and methods of action research, "are relatively amorphous and leave the researcher a great deal of room for interpretation, selection and distortion", (Morphet, 1983:100). This 'weakness' of action research would therefore not provide the researcher in this study and the authorities to whom it may be of value, with the

necessary strength of significance, compared to the questionnaire design.

1.6.2. THE QUESTIONNAIRE

The instrument used in this research survey is a questionnaire: School Remedial Services Questionnaire (appendix A). This was developed by the writer from information culled from a comprehensive study of the literature: (Dembinski and Mauser, 1977; O'Hagan, 1977; Ferguson and Adams, 1982; Smith, 1982; Jeffs, 1984; Clunies-Ross, 1984; Daniels, 1984; Hill, 1985; Abel and Burke's School Psychological Services Questionnaire, 1985, - with written permission from the authors to the writer; Skuy and Perold, 1986; Visser, 1986; Carl, 1987).

All rating items (Sections B and C) have a 5-point Likert format. Numerical scales from 1 (low) to 5 (high) for Section B (items 1 to 9) and Section C, with accompanying verbal cues were used. The 5-point Likert format is a scale whereby the intervals between each point is assumed to be equal. "Analysis of data from Likert scales are usually based on summated scores over a number of items, the equal interval assumption being workable", (Tuckman, 1978: 179). This format allows the subject to register his extent

of agreement or disagreement with the statements of judgement (perception) in an as objective a manner as is possible. The scale for this study was built by the author having (over a period of 15 months) carefully identified attitude areas included within the main topic to be researched.

Agreement on the content of items of the questionnaire was reached by consensus during meetings with Dr J. Bester, former Head of Psychological Services, and Mrs J. Visser, Principal Subject Adviser (Remedial Education), in the DEC-HR. The questionnaire elicits responses to selected variables highlighted in the literature and from personal interviews and discussions with educators, as being potentially relevant to educators' perception of the functions and practice of remedial teachers and /or teaching. Demographic information, perception of general effectiveness of services provided, recommended service involvement in certain school-related functions and time spent on these functions were requested from respondents.

1.6.3. BACKGROUND AND PROCEDURE

The questionnaire was pre-tested (pilot study) on colleagues of the author at the two School Clinics in the Western Cape

(Athlone and Mitchell's Plain) and University of South Africa Remedial Education students supervised by the author during 1987 and 1988. This was done to determine the time necessary to complete the questionnaire and the relevancy of questions. The pilot study enabled the author (with the aid of his supervisor, Ms Archer, and the statistical technique of item analysis) to shorten the questionnaire and rearrange the sequence of the various sections.

Questions / items were made more pertinent and specific to the goals and objectives of the study and have a distinct relationship to the problem under investigation. As far as possible, simple language and words familiar to all respondents were used; only one aspect is covered per question/item; the period in items pertaining to past experience is precisely defined (January 1988 to date of completing questionnaire). Other features of the questionnaire are that it is relatively easy to complete and is not too time consuming.

Permission for conducting the survey in DEC-HR schools was initially requested by the writer on 26 January 1989 (appendix B). Acknowledgement of receipt, after numerous enquiries, was received on 20 July 1989 also at the same time requesting certain amendments to the questionnaire.

The amended questionnaire was resubmitted for approval on 26 July 1989 (appendix C). Permission was finally granted on 16 August 1989 (appendix D). The questionnaires were then distributed to primary schools, within the jurisdiction of the DEC-HR, as described in paragraph 1.6.1.1 (sampling), and requested by written correspondence to participate in the survey (appendix E).

At the end of October 1989, telephonic follow-up to principals was made. At the same time the author provided further explanations where requested to do so. Principals and /or remedial teachers on these occasions provided valuable extra information about the remedial services in general which they could not record in the limited space provided on the questionnaire.

During January and February this year (1990) an attempt was made in writing to sample non-respondents, without any success. The double sampling method, a technique in which a second sample is drawn from the non-respondents from a follow-up mailing could therefore not be used. This enables the researcher to draw a comparison of the results obtained from the first and second samples allowing for a check on non-respondent bias.

All raw data were appropriately recorded and tabulated for treatment and analysis. In view of the nature of the survey, analysis of data lends itself primarily to descriptive statistical analysis. For that reason the mean scores and percentages of the raw data were calculated and tabulated accordingly, to allow for an 'illuminating evaluation' of the data. "The major aim of science is to provide sound propositions about people in general or about specific groups of people e.g. educators". (Neale and Liebert, 1980: 62). Research in the social sciences cannot provide accurate empirical data from which valid interpretations can be made.

It is not always possible to measure constructs such as feelings, attitudes or perceptions, for example, with scientific precision and objectivity. However, by utilising statistical techniques and an appropriate research design, as discussed in this chapter, the investigator can attempt to control such nuisance variables as respondent and/ or investigator bias, subjectivity, and distortion of facts.

CHAPTER 2

A REVIEW OF LITERATURE ON ISSUES IN REMEDIAL EDUCATION

2.1 INTRODUCTION

The urgency to understand the peculiar problems of the L.D. according to Chisholm (1983) provided impetus for new research on how people learn. Research in this area has contributed to the perception of learning, special education and remedial education. The information thus gained is of great value to remedial teachers in the field. However, due to the influence of many factors, the validity and consequent application of research findings appears questionable.

In the view of McNicholas (1976), research in Remedial Education can be viewed only in the context of the general aims of education. This (the aim of education) may differ according to the viewpoint or ideologies to which the researcher may subscribe, e.g.:

Christian Nationalist - the aim of education is adulthood as the first and natural destination of the educand (Van Vuuren, 1976; Oberholzer, 1979); self-realization or good disposition (Kriekemans, 1965); attaining physical and above all, mental independence

(Perquin, 1965); to make a success of educative assistance (Landman, 1974);

Liberalist - the aim of education is the development of the individual to his full potential which involves the promotion of the individual's autonomy; to encourage the growth of the whole child, primarily for his own sake but also for the sake of his fellow man (for society's sake) - Transvaal Teachers' Association document (1980) quoted in Ashley, 1989;

Liberation Socialist - the aim of education involves the transformation of the institutional setting into one whose features reflect those of the future, desired society (in South Africa this means a non-racial, majoritarian socialist state with multiculturalism and multilingualism being essential elements in the schools).

In contrast, to the above, Bell (1977) answers the question: 'What are the aims of education?' by stating that "there aren't any, any more than there are aims of life". The writer argues that "if something is valued, there is pointlessness about asking what the purposes of valuing valued values are, which is what asking questions about the aims of education amounts to". Bell (1977) quotes R.S. Peters (1972) as describing four conditions appropriate for being described as an educated person, viz, worthiness, intentionality, knowledge and understanding in depth and breadth, moral acceptability.

Certain implications can be drawn for remedial education. It seems clear that both education and remedial education, "must conform to the conditions or criteria which govern the application of the concept of education in its specific sense", (Bell, 1977). In summary it could be said that one of the aims of remedial education is to be 'fair' to children. To educate, therefore, is to respect a learner as a person and getting him to learn in a manner which is morally acceptable. Therefore, "...remedial education should not be divorced from the aims of education in general", (McNicholas, 1976).

The value of appropriate, informative and applicable statistical research in remedial education, in particular, depends on agreed definitions of the aims of education. From the above, in the view of Logue (1979) such research is not possible in the area of learning disabilities. The result has been that satisfactory sampling of experimental and control groups has not really been possible. This view is supported by Dykeman et al. (1983), stating that most L.D. studies lack homogeneity. This is related to the grouping together, in one sample of children with varying degrees or types of L.D. According to Dykeman et al. (1983) one of the perplexing problems of much of the research on children is that although hypothesised differences are always clearly found between a given clinical group and controls only rarely can specific clinical groups be discriminated, for example, solely hyperactive or solely L.D. etc.

2.2 ISSUES OF DEFINITION:

2.2.1. LEARNING DISABILITY (L.D.)

The root cause of the controversy concerning viability of the concept of learning disability lies in the lack of a satisfactory definition of exactly what constitutes a learning disability (Eisenberg, 1978; Vellutino, 1978; Yule & Rutter, 1985).

2.2.1.1. AETIOLOGY

Learning Disabilities according to Hammill et al. (1987) 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 disabilities are intrinsic to the individual and presumed to be due to nervous control dysfunction. Hammill, therefore, appears to concur with earlier research findings by Johnson and Myklebust (1967) and later Cruickshank (1983) who indicated that the concept of learning disability implies a neurological dysfunction.

Similar sentiments were expressed by Lerner (1976), who discusses various dimensions to the problem of aetiology and

consequent definition which include neurological dysfunction and uneven growth patterns. Tansley and Panckhurst (1985: 36) summarized the systems of aetiology postulated by various writers which have elements of communality as follows:

- a. Brain damage involvement.
- b. Maturation lag, delay.
- c. Genetic, constitutional, inherited.
- d. Neurological organization; brain function.
- e. Perceptual / motor difficulties.
- f. Cognitive difficulties.
- g. Secondary to environment.
- h. Sensory defects.

Newton et al. (1979) in their book, Readings in Dyslexia, as quoted by Tansley and Panckhurst, were concerned about highlighting the aspects of aetiology which stress the interaction of developing individual skills with a highly structured written language system. Newton et al. excluded extraneous systems, such as systems 'secondary to environment' and 'sensory defects' (points g and h above). These were replaced by 'written language' as a cause of dyslexia (a specific learning disability). Their system is thus constituted as follows :

- a. Brain Function.
- b. Perceptual Abilities.
- c. Cognitive Abilities.
- d. Learning Style and Written Language.

In their review of research findings in the field of L.D., McLoughlin and Netick (1983) identified the following intrinsic factors most frequently associated with learning problems :

- a. Oral and/ or written language.
- b. Different types of learning.
- c. Neurological disorders.
- d. Diet, allergies, biochemical agents (drugs), heredity.

There appears to be many common elements amongst the above systems as postulated by different writers and researchers in the field of L.D.. Tansley and Panckhurst (op. cit.) classified the aetiological findings into three main groups, namely :

1. Primary or constitutional specific learning difficulties. These include : neurological functions, neurological dysfunctions, maturational lag and genetic factors. (This resembles Newton et al.'s 'Brain function' category).

2. Secondary correlates, including perception, cognitive style, attentional deficit, physical environmental and emotional correlates, together with drug studies. These are seen by the writers (Tansley and Panckhurst) as being concomitants of specific learning difficulties and to include Newton et al.'s 'Cognitive abilities' and Perceptual/ motor skills' categories.

3. Reading and non-reading difficulties. This group, in turn, is similar to Newton et al.'s 'Written language' category. In an attempt to provide a more precise description of the field of investigation it focuses on language and reading sub-skills associated with specific learning disabilities such as spelling, writing, arithmetic and speech. (Tansley and Panckhurst, 1985: 37 and 38).

1. Primary or Constitutional Learning Difficulties.

A. Neurological Functions.

Considerable interest has been shown by recent research in the area of neurological functions, especially in cerebral dominance (including hemispheric specialization) and information processing.

In South Africa, Naude and du Preez (1988) found that research in neuropsychology suggests hemispheric

specialization as a possible explanation for learning problems. From their point of view, therefore, children with learning problems should be regarded as children who learn differently rather than as learning disabled. It is contended that, children with a holistic cognitive style, which is relatively more dependent on right hemispheric functioning, are inclined to develop spelling, reading and writing problems.

In the view of the authors (op. cit.) it can therefore be hypothesised that such learning problems could be due to the ineffectiveness of a holistic approach to tasks which essentially require an analytic-sequential style which is predominantly left hemispheric. Research has shown, however, that these children are often superior in constructive tasks, for example, building models. Naude and Du Preez make a plea for a thorough scientific evaluation of the connection between hemispheric specialization and learning problems.

Apart from specialised functions of each hemisphere, as enunciated by Naude and du Preez, increasing attention has been paid in the literature to the interconnections between hemispheres. Farnham-Diggory (1978) illustrated the fact that reading and writing for instance, clearly involves both hemispheres. She gives an example of co-ordinated hemisphere

exchange as the informal model of the writing task :

	<u>Hemisphere</u>
Step 1. Choose a word	left
Step 2. Hold its overall sound in mind	left
Step 3. Select a sound particle	left
Step 4. Find a letter pattern in semantic memory	right
Step 5. Write the letters	left, for the motor action; right for the configuration of letters
Step 6. Test: do I recognize the letter pattern?	right
Step 7. Test: word finished ?	right

(Source: Farnham-Diggory, 1978: 159 - 160).

From the above she suggests that it would make no sense to say that tasks are predominantly left-hemispheric or right-hemispheric. However, as far as the problems L.D. are concerned, incorrect interconnections may occur in at least three different areas:

Problem 1. - There may be a task-specific problem with one of the hemispheres so that it performs inadequately when it is supposed to take its turn.

Problem 2.- There may be a task-specific problem in moving information from one hemisphere to another.

Problem 3.- There may be a task-specific problem of overall control by the left hemisphere.

(Farnham-Diggory, 1978: 160 - 161).

B. Information Processing

Although a learning disabled child may have problems with some aspects of information-processing, he/she is not necessarily deficient in all its aspects. A person has the ability to pick up information of different kinds - visual, auditory and tactual, for instance. Information is processed by the different senses in stages. A defect of any form along the processing chain of stages e.g. short or long memories, can cause a breakdown in the information processing, resulting in an inability to produce correct responses.

Children whose visual or auditory processing is deficient might be exposed to technological aids to counteract their deficits. According to Tansley and Panckhurst (1985: 81) it is by no means generally agreed that deficiencies in information-processing are responsible for reading problems for instance.

C. Neurological Dysfunction.

Brain damage or dysfunction of some form is frequently suggested in the literature as might be wholly or partly responsible for specific learning disabilities experienced by many children. There appears, however, no consensus in this regard as expressed by writers like Robert Cohn who pointed out that, "the basic reason for the present lack of consensus in following the neurological pathology or etiology approach is the lack of definite correlations of brain pathology with inability to learn readily, to retain the meaning of what has been learned, and to recall that which is stored" (Cohn, 1967).

Tansley and Panckhurst (1985) quote different writers as attaching more or less similar terminology of a fundamental nature to the term 'learning disabilities'. These include: neurological impairment; neurological in origin; possible cerebral dysfunction and/or emotional and behaviour disturbance. The measurement of neurological dysfunction is problematic. In the absence of positive signs of neurological disorder, it is assumed that some kind of underlying neurological dysfunction may be responsible for a manifested L.D..

D. Maturation Lag

Evidence in the literature suggests "that not all functions of the brain develop simultaneously and that L.D. children,

may suffer from delays in the development of specific areas or functions" (Tansley and Panckhurst, 1985). The writers quote a number of researchers and authors who offer supporting evidence in support of the concept of maturational lag as a possible cause of L.D.. However, although the concept possibly explains some of the puzzling features of L.D., the evidence is regarded as being confusing and conflicting. Consequently, no firm conclusions can really be drawn and the concept of maturational lag as a causal factor in L.D. thus remains in doubt.

E. Genetic Factors

A large number of studies, according to Tansley and Panckhurst (1985), have found increased incidence of reading difficulties in the family history of poor readers. However, whilst there is an increased incidence of a family history of poor readers amongst children with reading disabilities this, according to the writers, does not necessarily imply genetic causation. They (op. cit.) quote writers Yule and Rutter (1976) as believing that "there is mounting evidence for the concept of social transmission in that a family history of reading retardation is much more common in large families, and that reading attainment is regionally variable and varies with the interest of the parents" (p.95).

There appears to be general consensus in the literature about available findings in the field of generic correlates of reading disability, namely, a lack of clarity in defining and measuring its behavioural parameters.

2. Secondary Correlates

A. Perception

These would include: auditory perception; vision and visual perception; integration of the senses; spatial ability and form perception. Attention in literature focuses more on memory and sequencing aspects of perception and the importance of integration. There thus appears to be a shift from measures of perceptual discrimination as in the past.

It is thought that perceptual difficulties may be associated with reading disability in some cases, but not all, and that perceptual deficits may be a contributory but not a determining cause of reading problems. There is an ongoing debate in the literature concerning the hypothesis that perceptual abilities are subject to maturational development and may be of more importance in the early learning situation of the child. (Tansley and Panckhurst, 1985).

B. Cognitive Style

As has previously been stated in discussion on hemispheric function, many writers suggest that L.D. children either have some deficit in some respect or are different from normal children with regard to brain organization. These children thus have a different style of cognitive functioning.

"The result from experimental studies suggests that many of the difficulties described as dyslexia fit into a (particular) model of learning... the particular kind of brain organization characterizing dyslexics include a predisposition towards 'spatial' thinking abilities combined with poor performance at skills such as sequencing, blending sounds, associating sound and arbitrary symbol, etc." (Newton et al., 1979 quoted by Tansley and Panckhurst, 1985).

In terms of cognition and perception the 'predisposition' referred to above may be described as a 'learning' style. The skills mentioned are exactly the skills required for adequate reading, spelling and writing and a child with such learning problems would thus need a different learning style in order to master these skills than the universally acceptable system.

The cognitive-functional approach to determine learning difficulties was proposed by Meichenbaum (1976). He suggests

that by this method a psychological analysis can be conducted of the cognitive requirements of tasks on which the L.D. child's performance has been found to be below the expected level. Inappropriate cognitive strategies can thus be identified for appropriate remedial teaching.

C. Environmental Correlates

These are generally not regarded as primary agents in the aetiology of specific learning difficulties. However, in the South African situation and in particular DEC-HR schools they are important components which have been found in the literature (e.g. Skuy and Perold, 1986 ; Metcalfe, 1987 and Cosford, 1987) to exert a variable influence on the learning ability of children.

The literature identifies such environmental factors, that may contribute to L.D., as inappropriate teaching methods (Crabtree, 1976), social background, motivational and emotional factors (Vernon , quoted by Tansley and Panckhurst, 1985), socio-economic class, social/cultural deprivation, poverty, malnutrition, maternal employment, large numbers in class (30 - 40 in many DEC-HR schools).

The precise influence of environmental factors on L.D. has as yet not been satisfactorily established, although it is generally assumed to have a detrimental effect on learning.

For this reason they are regarded as "secondary or aggravating conditions, except in a minority of cases where they may assume greater importance" (Tansley and Panckhurst, 1985 : 125).

Other secondary correlates mentioned by the writers (op. cit.) are attentional correlates, physical correlates, emotional correlates and drug correlates which relate positively to the cause of L.D. in most children.

3. Reading and Non-reading Difficulties

Impairment in the related areas of reading, spelling and arithmetic is not always equal. They are, however, all involved in L.D. in view of the fact that all three involve symbolization. There is some dispute in the literature as to the degree to which each area is affected by any form of impairment.

There appears to be evidence that speech problems and especially delayed speech are associated with reading disability. Although this has been found evident in many cases there has been no investigation that clearly indicates whether these problems may be specific or part of a more general deficit. The unanswered question is thus "is there only one type of reading disability which is of a specific

kind or are there several reading disabilities which may or may not be related to impairments in spelling, writing, arithmetic and speech?" (Tansley and Panckhurst, 1985).

In summary then, the aetiological findings of L.D. discussed in this section show a certain amount of overlap between and within categories. Aetiological studies of L.D. although not clearly delineated, has however formed the platform upon which the causes of learning problems and the various definitions of L.D. are based. Remedial practitioners should take cognizance of aetiological factors as their remediation role(s) for each individual case could be determined by such factors.

2.2.1.2. DEFINITION

To date there has been little consensus or even adequate definition of what constitutes a learning disability (Cruickshank, 1977; Rutter, 1978; Tansley & Panckhurst, 1985; Tucker et al., 1983; Cruickshank, 1983; Vellutino, 1985; Yule & Rutter, 1985). In a study undertaken by Epps et al. (1985), three kinds of definitions were examined to determine the extent to which there was common variance between them. These were :

- (a). ability - achievement discrepancy;
- (b). low achievement ;

(c). scatter.

In the Epps et al. study the subjects were 48 school-identified L.D. children and 96 non-L.D. children. Both samples had previously been administered a battery of psycho-educational tests. These data were used to classify each child as L.D. or non-L.D. according to each of 14 operational definitions. A factor analysis resulted in two distinct groupings of L.D. students : low achievement accounted for over four times as much variance as ability-achievement discrepancy. Inter-test scatter did not, independently, contribute to classification.

Historically, diagnosis of L.D., by researchers, has focussed on a number of isolated variables. Deficits and strengths within the child were identified and labelled; task analysis has been used to determine level of skills; learning styles have been analyzed and matched with supposed teaching models; motivation, interest and attitudes have been listed; attention has been given to the significance of parents, siblings and the home environment. Rewilak and Jansen (1982) assert that "no one could question the importance of each of the variables assessed. However, rarely are they all given to reach a diagnosis of L.D. Taken singly they provide little information".

The National Joint Committee for Learning Disabilities (NJCLD), in the U.S.A., has made an attempt, in 1981, (McLoughlin and Netick, 1987), to resolve some of the confusion regarding definition, particularly in relation to the distinction between learning problems and Learning Disabilities. It is stated that there are many different kinds of reading and learning problems but there are also different types of reading and learning disabilities.

The NJCLD definition reads as follows :

"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" (NJCLD, 1981).

The NJCLD agreed that the definition "was basically a theoretical statement that specified the delimiting characteristics of conditions called L.D. and was not meant to be a set of specific operational criteria for identifying individual cases" (Hammill et al., 1987). McLoughlin and Netick, (1983), made observations about the NJCLD definition :

(i). The absence of a specific mention of discrepancy between expected and actual performance is noticeable. This appears to be in contrast to Lerner (1981).

(ii). An often-made statement about L.D. students is that they have noticeable success as well as weakness in learning. McLoughlin and Netick (1983) have found that this assumption "has been virtually ignored in current implementation practices". The result, according to these authors, has been that the term Learning Disability has become synonymous with underachievement. This appears consistent with the criteria for pupils being classified L.D. and in need of remedial services i.e. being of average intelligence but underachieving generally or in specific subjects.

(iii) Attention is given to both the acquisition and use of basic skills, recognizing "that problems may be encountered by adolescents and adults as well as young

children", (McLoughlin and Netick, 1983) and making an effort to assist them to realize their potential. This may be significant, seen in the light of the aims of education as defined by some educationists (vide. 2.1).

(iv) The focus of the NJCLD definition is clearly the inherent nature of the learning problem. This intrinsic and presumed neurological direction appears to be a swing back to earlier approaches taken in the field (e.g. Lerner, 1976; Cruickshank, 1977; Anderson, 1980).

An important point to bear in mind is that for these intrinsic/ inherent factors to be contributory factors in learning problems they should be directly affecting specific areas of underachievement.

(v) The point is made that a learning disability can never be said to be caused by other handicapping conditions such as mental retardation, behavioural disorders or environmental factors. The NJCLD definition, however, admits the possibility that such handicapped persons may have a learning disability. Renewed interest in the role of adaptive behaviour and coping skills in different settings together with improved diagnostics "promises to facilitate distinctions of learning disabilities from other severe handicapping conditions" (McLoughlin and Netick, 1983).

(vi) The definition carries the message that "learning disabilities are truly a handicapping condition and a heterogeneous group of learning problems" (op.cit.). Learning disabilities are persistent and present significant difficulties evident in basic learning skills. It has also been shown that "L.D. cannot be dismissed as temporary situational problems experienced by most underachievers. Most of all, they are different and distinct from other handicaps and environmentally - induced conditions, and not a convenient synonym for the 'mildly' handicapped" (op. cit.).

John McLeod (1983) argues that "attempts to define learning disability have been bedeviled by confusing definition with diagnosis, by trying to reconcile disparate views from different vested interested groups and by reacting irrationally to the concept of discrepancy between actual and expected achievement". McLeod regards the establishment of a valid basis for replicatable research as one of the major reasons for developing a suitable definition of L.D. The uncertainty of the professional acceptable definition of L.D. is confirmed in surveys conducted by Torgesen and Dice (1980) and also by Mann (1983).

Mann (1983) envisaged the use of "learning disability as a generic, non-stigmatising term for all mildly handicapped

students". The author is of the opinion that such a generic term can be sub-classified into 'learning disability with cultural deprivation', 'learning disability with neurological problems' etc. McLeod (1983) concurs with Mann (1983) in his views and procedures advocated to define L.D. McLeod, however, prefers the term "underachievement" as a more objective term to Mann's 'learning disability'.

The Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM III), (NJCLD, 1981), has eliminated many of the labels that were previously used to describe learning disability. In their place the DSM III identified syndromes that adequately define learning disability. The NJCLD concurs with these definitions and briefly describes the syndromes as follows :

(a). Problems in the Control and Regulation of Impulses and Stimuli.

These children show lability for poor motor control e.g. hyperactivity, hyperdistractibility, hypoactivity, perseveration and disinhibition. The DSM III category most closely approximating this syndrome is Attention Deficit Disorder with hyperactivity. In the classroom these

children's attentional difficulties and impulsivity are evidenced by their problems in staying on task and completing their work.

Cruickshank (1977) believes it is important to trace the concept of learning disability back to its neurological origin. He states that, "Learning disability, specifically defined, is a manifestation of a perceptual processing deficit. It is important to differentiate between the concept of sensory perception leading to normal vision or hearing and processing of a perceptual nature, which not only involves the appropriate recognition of form or sound, but also includes the attachment of learned meaning, or appropriate motor responses to whatever stimulus is received".

He (op.cit.) is therefore of the opinion that by adopting the above line of reasoning, L.D. would be conceptualized more accurately as a 'perceptual processing deficit'. The lack of the control or regulation of impulses and stimuli on the part of the child thus involves perception of perceptual processing. It would therefore logically follow, according to Cruickshank (op.cit.), "that one is dealing with a neurological dysfunction of some sort".

(b). Problems in Integrative Functions and / or
Developmental Delay.

These children experience difficulty in concept formation. They are usually able to read reasonably well, but are unable to engage in any inferential reasoning. They are able to deal adequately with specifics and that which is concrete, but aspects of abstract conceptualization or generalization appears beyond their capability. Interestingly enough, in most cases, as has also been found by the writer and his colleagues at the Athlone School Clinic, the Verbal IQ is significantly superior to the Non-verbal IQ. The DSM III category most closely related to this syndrome is the Attention Deficit Disorder without hyperactivity.

Anderson et al. (1980) state that L.D. children experience a delay in developing certain concrete operations. In their view it is certainly possible that many L.D. children who appear academically able in some respects may lag scholastically because they are 'cognitively immature'. They further hypothesised that "L.D. children have learning problems because they experience a developmental delay and thus lag academically because they do not yet use some of the cognitive operations routinely used by their peers" (Anderson et al., 1980).

(c). Specific Reading, Language and Number Disability

One of the major problems here is the recognition of the printed symbol. Since reading, especially, is a process of association, difficulty in this area means that the child will frequently encounter many problems in acquiring a sight vocabulary.

In this regard, Sigmon (1987) states that "L.D. definitions are by design so broad, they subsume all the academic skills such as reading, spelling, writing and arithmetic, but also include speech and language disorders". Sigmon argues further that a more severe L.D. could therefore logically affect more than a single specific area, and would be a more pervasive problem in terms of educating an individual. However, since reading is such an important aspect in the curriculum of modern literate societies, it has naturally received the most attention within the L.D. field and contemporary education as a whole, (p. 47).

An overwhelming percentage of publications of research investigations focus on the topic of reading disability. Such research deals either on general reading backwardness or on specific reading retardation which is also sometimes called developmental dyslexia (e.g. Papers in Benton and Pearl, 1979). Recently, there have been studies published concerning spelling and mathematics, (Yule and Rutter, 1985).

The DSM III classification roughly corresponding to this syndrome is Specific Developmental Reading Disorder. In many cases the Non-verbal IQ is superior to the Verbal IQ. The major presenting symptom is the tremendous difficulty in decoding. Because of his poor reading ability, his language suffers and he is unable to solve 'problem sums' (word sums). If the material is read to the child it has been found in 'studies' at the Athlone School Clinic, that the child does much better.

(d). Educational/Scholastic Underachievement/Impairment.

"The commendable and unarguable aim of any self-respecting educational system is to help children realize their potential to the full" (McLeod, 1979). Any child who does not achieve scholastically in terms of his potential, is classified as L.D. Such children are, usually, of average intellectual functioning. Their performance is below that of their peers in some areas of academic achievement. They may experience difficulties in areas associated with memory and perception. The learning disability can be present on the one hand as underachievement in scholastic skills (e.g. reading, spelling, writing, arithmetic) and on the other as underachievement in specific subject groups (e.g. content subjects, languages, natural science subjects. They thus exhibit some educational / scholastic strengths and

weakness. This research therefore also has as one of its aims to determine how educators perceive the role of the remedial personnel with respect to tuition across the school curriculum.

According to Ryan et al. (1986), L.D. children as a group have been characterized as heterogeneous. L.D. children display quite varied academic profiles in terms of patterns of strengths and weakness. The authors quote research which indicates that the one common characteristic shared by L.D. children is the presence of a significant discrepancy between their expected achievement predicted by IQ and their actual achievement.

In the view of Mcleod (1979), to equate expected academic achievement with measured IQ level is invalid. A research study undertaken by the writers (op.cit.) showed that the statistical regression effect should be taken into consideration before making judgements about IQ - achievement discrepancies.

He contends that not all children work up to their capacity and that it is not possible to achieve beyond capacity. However, the average IQ is 100, and the average reading quotient, arithmetic quotient and spelling quotient are also 100. Therefore, he argues, for the population as a whole, the average difference between measured IQ on the one hand

weakness. This research therefore also has as one of its aims to determine how educators perceive the role of the remedial personnel with respect to tuition across the school curriculum.

According to Ryan et al. (1986), L.D. children as a group have been characterized as heterogeneous. L.D. children display quite varied academic profiles in terms of patterns of strengths and weakness. The authors quote research which indicates that the one common characteristic shared by L.D. children is the presence of a significant discrepancy between their expected achievement predicted by IQ and their actual achievement.

In the view of McLeod (1979), to equate expected academic achievement with measured IQ level is invalid. A research study undertaken by the writers (op.cit.) showed that the statistical regression effect should be taken into consideration before making judgements about IQ - achievement discrepancies.

He contends that not all children work up to their capacity and that it is not possible to achieve beyond capacity. However, the average IQ is 100, and the average reading quotient, arithmetic quotient and spelling quotient are also 100. Therefore, he argues, for the population as a whole, the average difference between measured IQ on the one hand

and educational achievement on the other is zero i.e. 100-100 (that is, for those working up to capacity) or positive i.e. 100-90 = +10 (that is, the underachievers). In his opinion, therefore, it is illogical to define L.D. as a discrepancy between score on a test of measured intelligence and the score on a test of measured educational achievement in areas such as reading, spelling or mathematics.

It should be pointed out that L.D. more often than not bear some relation to problems in the educational situation of the learner. L.D. children, usually, have no significant visual, hearing or emotional problems but, as shown by research, may be educationally disadvantaged (HSRC, 1981; Skuy and Perold, 1986; Metcalfe, 1987).

Consistent with the above the Human Sciences Research Council (HSRC), in the Republic of South Africa, regards the term 'scholastically impaired' to be more applicable to a great majority of pupils being schooled in the DEC - HR (HSRC, 1981). " The term is broader and more relevant than 'learning disabled', since the latter suggests that the scholastic difficulty is caused by a problem within the individual. The term 'scholastically impaired' , on the other hand , simply indicates that the individual is experiencing difficulties in the school situation, and places the onus on the education system and methods of instruction for determining the success or failure of the

pupils within it", (Skuy and Perold, 1986). Metcalfe (1987) concurs with this view in suggesting that any attempt to describe, identify or define L.D., cognizance must be taken of both personal and environmental variables as these interact with each other.

In this regard the growing awareness of and concern for the large number of children in South Africa who have above average mental ability but are in educational distress have led to a shift in emphasis in remedial education, from intensive work with individual pupils to a wider role in the prevention of academic failure.

Prevention of academic failure by pupils of above average mental ability implies specialised instruction in the mainstream i.e. the regular classroom. This has further implications for the remedial teacher. The role of the remedial teacher, in South African, and in particular DEC-HR schools, will increasingly be one of consultant to regular class teachers, generally sharing expertise and resources with colleagues.

Abroms and Meeker (1980), in contrast to other researchers, present L.D. as a construct supported by psychoeducational, socio-emotional and physiological data. They propose that a definition of L.D. must include the absence of specific L.D. and it should only indicate relationships between mental

abilities and academic performance.

Generally, depending on aetiological criteria, pupils in need of remedial teaching are classified as either clinical remedial cases - i.e. pupils whose L.D. is organic (intrinsic/inherent) of nature - or didactical - i.e. pupils whose learning difficulties are of an ecological nature.

Two sub-categories of learning disabilities are accepted in DEC-HR schools, namely, general and specific learning disabilities. A specific learning disability refers to the ability of pupils to pass some subjects but fails others e.g. he/she may pass all subjects but keeps on failing mathematics or he/she may be good at mathematics but fails other subjects that require skills in reading or spelling. A general learning disability on the other hand refers to the phenomenon where the pupil finds all school work difficult even though his intelligence is within the normal range. Although these pupils are often called 'lazy' it is not true since "the child with a general learning disability genuinely finds learning difficult", Cosford (1982).

2.2.1.1. GENERAL

In research surveys undertaken by Tucker et al. (1983) with fully trained persons at the 'cutting edge' of L.D. programming, L.D. was generally endorsed as a viable

classification and asserted that L.D. is identifiable by a specific symptom or a syndrome of symptoms. There was considerable variability in responses at which age L.D. can be identified with assurance.

This is an indication of the diverse nature of L.D., the various perceptions thereof by different persons and the consequent difficulty in pinpointing an accurate, pinpoint, educationally accepted definition. The field of L.D. can be described as being characterized by a lack of consensus on basic issues of identification and definition. This places researchers in the field of L.D. in quite a dilemma. As a possible means of overcoming this dilemma, Anderson et al. (1980) proposed that research to define L.D. should concentrate on quantitative differences rather than qualitative differences, as a means of arriving at a clear definition.

Ysseldyke (1983) is of the opinion that no matter what one's views are, L.D. is a relative condition. Individuals are considered L.D. relative to others. They (learning disabled) are said to have more significant deficits, disorders, disabilities or dysfunctions than others, (p.226).

Thus various theoretical perspectives and several major disciplines have contributed to the different types of definitions of L.D. that have been developed since the

category was first recognized. The term was first introduced in 1963 when a group of concerned parents and educators met in Chicago, U.S.A., to consider organizing a cohesive entity from several separate and isolated groups that had been formed throughout the country, (Lerner, 1976). Samuel Kirk was the first writer to use it in the literature, in 1963. (Gerber, 1989). It has since had a profound effect on the provision of compensatory education e.g. remedial education and the role(s) of those persons providing such services.

2.2.2. REMEDIAL EDUCATION

As in the case of L.D., there appears, at present, to be as many definitions of remedial education as there are practitioners. Remedial education has often been used with 'special education' and 'compensatory education'. The National Association For Remedial Education (NARE), in Britain, has come up with a broad-based definition which appears to satisfy most people :

"Remedial education is part of education which is concerned with prevention, investigation and treatment of learning difficulties from whatever source they may emanate and which hinder the normal development of the student".

(NARE , 1977).

The above definition acknowledges the traditional elements of remedial work. These include, the investigation and treatment of L.D. The definition does not attempt to categorize children. 'From whatever source' indicates a concern with the , social development and environmental factors affecting the child's learning difficulties. It has long been recognized that there is a high correlation between learning failure and emotional and social disturbance (vide. chapter 4 of this research).

The DEC - HR has adopted the following criteria for defining remedial education and selecting pupils for remedial teaching. The remedial pupil, put simply, is not the slow learner, but the pupil who is not achieving scholastically, but :

- has an average to above average intelligence;
- is not physically disabled;
- is not deaf, blind or partially sighted;
- does not have severe emotional disturbance;
- talks as sensibly and well as other pupils of his/her age, although his schoolwork is weak
- finds school difficult and dislikes scholastic tasks but has other interests;
- can usually hold his own in an argument or debate.

The most recent research, (Visser, 1986; Dyer, 1988), indicate a re-fashioning of approaches to the stream of pupils once classified 'remedial'. The term 'support work' has now come to the fore. The description is applied in such titles as Support Department, Support Teacher, Learning Support, Curriculum Support and Special Needs Support. Dyer (1988) states that the term has now come to supplant the once current ethos of remedial education. Remedial education, it is felt by NARE, implies almost a status: a distinct type of education with the possibility of its own rules of judgement and even curriculum. Support for learning, shifts the syntax into the active mode and implies interventionist strategies at the point of delivery where teaching and learning meet, (Dyer, 1988).

A survey of research literature shows that, to date, it appears that the change in terminology is only used in Britain. The fact that the term 'support for learning' subsumes a whole-school approach to remedial education may encourage other countries to also adopt this all embracing term.

2.3. EFFICACY OF REMEDIAL EDUCATION

Many researchers have examined projects to help failing school children, or remedial groups in schools or remedial

teaching in a child guidance centre (Topping, 1977; Sewell, 1982; Adelman & Taylor, 1983; Licht, 1983; Horn et al., 1983; Read, 1987).

A review of research literature concerned with remedial education indicates that short term improvements were made but that results failed over time, (Freyman, 1980; Sewell, 1982). Sewell, 1982 believed that remedial education offered many children short term benefits, that a few were 'harmd', and that it made "little difference in the long term." Sewell (op.cit.) also suggests that classroom support was more effective than withdrawal support.

Read (1987) undertook a follow-up study by in 1984 to see how 46 children who had received remedial education by the author between September 1979 and November 1981 were coping in class. The children were seen in three different settings: 22 at a first school, 11 at a middle school and 13 at a guidance centre. The 33 children from schools were taught in withdrawal groups of four or five, for two or three and a half hour sessions per week.

The 13 guidance children centre children were taught on a one-to-one basis for one session of one hour per week. The tentative results obtained by the author appear to indicate that the one-to-one treatment in- and-out of the school environment catered more successfully for individual needs.

Better co-operation from parents were also received which was not the case with 33 "school taught children". 63 percent (7 out of 11) of the 'centre' children were coping at follow-up. By contrast only 13 percent (4 out of 33) of the school taught children were coping. The author concedes that many extrinsic variables may have played a role in the results obtained, (Read, 1987).

With so many variables to consider, assessing the success of remedial teaching is not simple. Tansley and Panckhurst (1981), cites Chazan who reviewed research in Britain up to the mid-60's on the effects of remedial teaching on reading. It was concluded that most research studies showed substantial short-term gains as a result of remedial teaching but that controlled longer term studies showed little or no difference between those children who had received remedial treatment and those who had not (op.cit.:196-197).

Topping (1977) evaluated the long term effects of remedial teaching in a psychological service teaching unit. 'Normal' children showed greater gains than children with specific learning difficulties but the latter increased rates of progress on transfer back to schools. The author hypothesised that they did so because of increased neurological organization and maturity.

Cosford's (1988) research findings confirmed findings of earlier studies which indicate that early identification of L.D. and appropriate intervention allows for more

efficacious remediation.

Tansley and Panckhurst (1981:200) cite some studies done in the 1970's. A number of studies showed that the degree of improvement resulting from remedial teaching depended partly on age. The older the child the more ingrained the retardation was likely to be; in contrast, an experienced remedial teacher and a psychologist observed that younger children made better progress than older ones.

2.3.1. SUMMARY

The evidence of efficacy of remedial teaching is not encouraging. The search for scientifically valid results is further complicated by problems of research methodology identified in 2.5..

As discussed in this section, there are so many variables to consider when assessing the efficacy of remedial teaching that it is difficult to conduct scientifically acceptable empirical research in this field.

2.4 ASSESSMENT, DIAGNOSIS AND EVALUATION IN REMEDIATION

2.4.1. INTRODUCTION

As a result of the diverse and relative nature of L.D. and remedial education "it is little wonder, then, that

assessment activities have been so persuasive and important in the field of learning disabilities" (Ysseldyke, 1983).

This state of affairs has, according to Schlieper (1982) resulted in a lack of clarity as to the basic frames of reference appropriate to the tasks of learning disability assessment. This lack of clarity inevitably leads to confusion and disagreement over the details of method, technique and interpretation.

"Assessment, diagnosis and evaluation may be seen as necessary stages in helping the child with learning difficulties. Assessment comes first, diagnosis points the way to a programme of teaching and learning, and evaluation is a check on learning" (Tansley and Panckhurst, 1981: 204).

2.4.2. ASSESSMENT AND DIAGNOSIS

2.4.2.1. WHAT IS ASSESSMENT AND DIAGNOSIS?

Salvia and Ysseldyke (1988) defines assessment as "the collection of data to specify and verify problems and to aid in decision-making", (p. 5). Schlieper (1982) maintains that a learning disability assessment comprises two quite distinct tasks, namely, making a diagnosis and gathering an information base for remedial planning. Assessment is generally defined as an attempt to determine how

successfully an individual will function in a given environment . This concerns the quality of the interaction between the individual and the environment. The interaction is tested.

2.4.2.2. WHAT IS THE PURPOSE OF ASSESSMENT AND DIAGNOSIS?

As the various definitions of assessment indicates, it is more than just the collection of information. Information collected, such as test data, for instance, is done with a specific purpose in mind.

In general the assessment is usually concerned with clarifying or verifying the existence of educational problems in the areas of academic performance, behaviour and social adaptation and physical development. Tansley and Panckhurst (1985), cite various writers stressing that assessment should lead to workable remedial recommendations in areas mentioned above. Psychometric assessment of pupils referred to the Athlone School Clinic (DEC-HR), aims at making decisions about the pupils intellectual functioning diagnosing the presenting problem(s) planning and implementing individual educational programme (IEP).

This appear to be underscored by Lerner (1981) who wants assessment to lead to a five steps 'clinical teaching cycle' which is self-checking and self-renewing:

(i) diagnosis, (ii) planning, (iii) implementation of teaching plan, (iv) evaluation of student performance and (v) modification of the diagnosis. Other researchers, Salvia and Ysseldyke (1988), found that the types of decisions which can be made in educational settings include: (i) referral, (ii) screening, (iii) classification, (iv) instructional planning and (v) evaluation of the pupil's progress.

Wallace and Larsen (1978), previously, found that, generally, children with specific learning problems are administered various educational assessment techniques for 2 major purposes: (1). to identify and sometimes label for administrative purposes those children experiencing learning problems who will probably require special educational help, and (2). to gather additional information that might be helpful in establishing instructional objectives and remedial strategies for those children identified as handicapped learners, (p. 5).

In remedial education a thorough assessment of a pupil's learning difficulty and subsequent plan of instruction (IEP) is of utmost importance for the effective remediation of the prevailing problem. Evaluative techniques generally allow a teacher to make decisions on the basis of information gathered during the assessment process.

2.4.2.3. ASSESSMENT & DIAGNOSIS FOR REMEDIATION

The typical pattern of identification and referral in most school systems (also DEC-HR) is usually initiated by regular classroom teachers who request help for individual students.

Following the initial referral, (with background information and scholastic data), the children are usually administered a battery of psychological and scholastic tests. This is to assess the pupils' level of intellectual functioning, learning abilities, perceptual characteristics, language skills and preferences, motivation, adaptive behaviour and possible socio-cultural variables, (Wallace and Larsen, 1978). Ideally, whenever possible, various emotional and environmental factors are also assessed, and parental and home consultations are arranged (parent interviews are regarded as imperative in assessment and diagnosis by DEC-HR clinicians).

Following the assessment and diagnosis, the information is evaluated to determine whether a pupil is an appropriate case for remediation or not. Appropriate follow-up steps are taken to address problems highlighted by the process of assessment and diagnosis. With reference to diagnosis, Sabatino and Miller (1980) suggest that the outmoded definition of L.D. has resulted in a "failure to establish

an adequate diagnostic base for entity", (p. 83). In their opinion the diagnostic purpose in isolating the entity known as L.D. may be found in the intra-individual comparisons of how the child interacts, perceives and works within the "social order and academic environment of the school", (op.cit. p.83).

Many different assessment measures and techniques (e.g. psychometric, perceptual) are used in the appraisal process, certain underlying assumptions are made (e.g. the person giving the test is skilled), different types of tests are used (e.g. formal i.e. Standardized/informal, norm-referenced/criterion referenced), different settings (clinic guidance centre, school etc.). Discussion, however, of the above will not be dealt with here as it is not within the scope of this dissertation.

2.4.3. EVALUATION

Bloom (1956) defines evaluation as "the making of judgements about the value, for some purpose, of ideas, works, solutions, methods, material etc. It involves the use of criteria as well as standards for appraising the extent to which particulars are accurate, effective, economical, or satisfying. The judgements may be quantitative or qualitative, and the criteria may be either those determined by the student or those which are given to him", (p. 185).

It has been the acceptable principle at the Athlone School Clinic (DEC-HR) to make quantitative and qualitative judgements of assessment information as part of the evaluative process of remediation.

In essence, evaluation is regarded as a study of the interaction between the pupil and the learning situation to the extent to which this interaction produces changes in the student. These changes (educational or behavioural) are considered important to the clinician as it allows him to draw valid conclusions and make appropriate recommendations for remediation.

In view of the importance of accurate conclusions, especially for pupils requiring remedial support, ideally, class teachers and remedial teachers should form part of the process of evaluating assessment information. Evaluation of pupils after sessions of remedial teaching for purposes of further programme planning should, in the view of principals of School Clinics, interviewed by the writer, be done in consultation with the clinician who did the original assessment and diagnosis. This they feel makes for better quantitative and qualitative judgement of changes brought about within the pupil in the interaction between the pupil and the learning situation.

Evaluation must therefore be regarded, in the view of Owen and Taljaard (1988), as part of the learning situation.

Learning and evaluation are thus inextricably linked in a continuing cycle of change .

2.4.4. ISSUES OF ASSESSMENT, DIAGNOSIS AND EVALUATION

In assessing pupils certain underlying assumptions are inherent (Salvia and Ysseldyke, 1988). The authors cite assumptions identified in research by T.E. Newland. These are:

- (i) error will be present;
- (ii) behaviour sampling is adequate;
- (iii) the person giving the test is skilled;
- (iv) acculturation is comparable;
- (v) present behaviour is observed - future behaviour is inferred.

Assessments may be rendered invalid to the extent assumptions are not met or recognized (op. cit.). The problem of invalid and unreliable assessment information can have an effect on diagnostic information, evaluation and planned remedial teaching programmes.

Berler and Romanczyk (1980) found, in a survey on assessment procedures used in research literature, support for an expected "lack of specificity and consistency in the use of assessment instruments and selection criteria." Thus, the

findings of the survey (op.cit.) provide support for the speculations that:

- (i) consistency in assessment procedures across studies is minimal;
- (ii) information describing the population, the assessment instruments and their criteria, is often vague or missing;
- (iii) Standardized assessment of many relevant characteristics, such as additional deficits, frequently is not included.

The authors (op.cit.) feel that research needs to focus on the development of standardized and currently non-standardized tests. Normative data, in their (op. cit.) view is a necessary pre-requisite to gather information about reliability and validity of these measures, and standardized procedures of assessment, diagnosis and evaluation.

In view of the above mentioned factors which can result in unreliable psychometric outcomes on assessment, diagnosis and evaluation, Dickenson (1980), proposes an alternative form of assessment - Direct Assessment. This is based on the assumption that behaviour is situation specific. For the most part according to Dickenson, assessment procedures assess how children differ from one another on various characteristics without due regard for the environment in which the child is expected to learn.

Direct assessment appears to correspond to a large degree with curriculum-based assessment (C.B.A.) and evaluation advocated by Cornwall (1981), Marston et al. (1984), Tucker (1985) and Marston (1988). Curriculum-based assessment uses the material to be learned as the basis for assessing the degree to which it has been learned, thus moving away from typical or traditional forms of assessment.

Dickenson (1980) argues that typical tests measure general traits or states such as intellectual ability or inability, perceptual motor dysfunction, auditory or visual perceptual impairment on a correlational relationship basis. In Dickenson's view research findings do not support the assumption that by changing traits and states the child will learn to read, write and perform many other skills. Direct assessment, in contrast, assumes that the child's behaviour is the problem and that the only data useful for remediation purposes are those that relate to behaviours in an environmental context.

In view of environmental factors influencing learning, especially in children receiving schooling in DEC - HR schools, direct assessment appears to be a useful tool. However, in spite of the obvious advantages of using data that were generated under actual conditions rather than using a test that only samples behaviour and giving specific information with which to develop remedial programmes,

school psychologists, principals and remedial teachers interviewed by the writer is of the opinion that a critical, in-depth assessment and evaluation of the technique must be undertaken before implementation in DEC-HR schools.

Perceptual deficits theories in the conceptualization of L.D., hold that school failure in some students can be attributed to perceptual processing deficits. Taylor (1980), queries whether visual perceptual tests (which form part of most assessment batteries) measure the perceptual skills related to reading achievement. Taylor states that "researches have failed to substantiate the predictive validity of visual perceptual measures". Larsen and Hammill (1975) found that there is not enough of a relationship between the measured visual perception skills and academic achievement for visual perception to be a useful predictor. Research findings indicating a poor showing of measures of visual perception to later school achievement and the unimpressive effects of perceptual training on reading achievement "may be related to a mismatch between what is being measured (assessed) and trained to what is required in the learning-to-read process", (Taylor, 1980).

Visual perception assessment is criticized by Taylor (ibid.) as being stimuli-specific instead of task-related. As learning to read, for example, involves differentiation of the distinctive features of letters or words (distinctive

feature theory), assessments should be geared towards obtaining data directly related to such a task. Results from task-related assessments, as argued by Taylor (op. cit.), are immediately transferable to instructional situations. This may prove beneficial to pupils in need of remedial help.

2.4.5. SUMMARY

Assessment is a complex process and assessment data are used to make important and far reaching decisions about individuals (Salvia and Ysseldyke, 1988). Much can go wrong in the process of assessment, diagnosis and evaluation as many factors must be considered.

The different approaches, techniques, tools and environmental settings used during the assessment-diagnosis-evaluation process requires different assumptions to be met in order to make the outcomes valid and reliable. It therefore means that in order for assessment to be meaningful, valid and reliable there should be a continuous search for effective means of assessing L.D. children. This can "often be frustrating", (Rewilak and Jansen, 1982). Because of the uniqueness of the L.D., few professionals feel totally confident in interpreting test data to reach the diagnosis of "L.D.". (In this regard compare discussion of results of this investigation - 6.4.).

It is the view of Salvia and Ysseldyke (1988), that "in selecting and administering tests, users must evaluate the kinds of behaviour to be tested, the kinds of interpretative data they want, and the extent to which a commercially prepared test ought to be used" , (p.36).

Ainscow (1988) concurs with this view in that " there should be clarity of purpose of assessment". The author states : "assessment in the special needs field should be a continuous process of gathering and reviewing information in order to help pupils succeed in the classroom".

2.5. ISSUES OF RESEARCH METHODOLOGY

2.5.1. PROBLEMS OF DEFINITION AND SAMPLING

Horn et al. (1983) point out the need for specific methodologies in research with learning disabled children. A clear and precise description of the criteria used in defining a subject as 'learning disabled' is critical in research in the field.

It may be true to state that the complexity of research in the field of L.D. is caused by the underlying complexity of definition of the field. In this regard Mattis (1978) states that, "research findings, albeit replicatable, are

determined to a great extent by the hypothetical constructs held by investigators before studies are conducted. That is, the working hypothesis concerning the nature of dyslexia determines the selection of control groups, the definition of dyslexia itself, the measures to be obtained, and the overall research design and method of data analysis. The degree to which findings are effective in furthering our understanding of the nature of dyslexia is therefore largely a function of the degree to which the explicit or implicit model of dyslexia underlying the research is valid and of heuristic value" (p.45).

Yet another researcher, Vellutino (1978) concluded that the problems associated with research methodology in the field is closely related to the problems of definitions of L.D.. The definition of L.D. has determined the sampling procedure in the field.

Berler and Romanczyk (1980) found in a survey of research literature a disconcerting "lack of specificity and consistency in the use of selection criteria". They found that the reliable identification of homogeneous populations of L.D. is problematic for both the researcher and the clinician.

The lack of a clearly defined definition of L.D. has, according to Torgesen and Dice (1980), resulted in a range of research problems which include "the inadequacies in

selection of subjects e.g. failure to control intelligence levels". They concluded that it is clear that researchers need to be more circumspect about reporting adequate descriptive statistics for the measures that are used to define the samples. Torgesen and Dice recommend that measures of central tendency and variants should be reported for all defining variables - for both the L.D. children and children in the control group(s).

The writers (op.cit.) found that the of samples of L.D. children has been almost ignored. They report that researchers and practitioners acknowledge that there are many kinds of L.D. yet very little work is being done that attempts to study clearly defined and relatively homogeneous, subgroups of L.D. children.

2.5.2. EXPERIMENTAL PROCEDURES

Torgesen and Dice (1980), appeals for more effort on the part of researchers to examine construct validity of the testing procedures and experimental paradigms which are used. The validity and the reliability of measuring instruments, e.g. standardized tests, have been found wanting in some research studies.

The question of how to quantify data needs to be addressed in order to provide more validity and reliability to

research findings. Added to this, qualitative assessment in experimental procedures is not used by many research studies surveyed by the author.

2.5.3. OTHER FACTORS AFFECTING RESEARCH METHODOLOGY

A brief summary of other factors which have been found to play significant roles in research methodology especially in remedial education studies, includes the following:

- motivation on the part of the L.D. pupil;
- maturational factors;
- sex differences;
- teacher bias;
- severity of the disorder: is it clinical or didactical;
- taking within-group differences into account;
- differentiation of remedial methods employed;
- the effects of subsequent educational treatment need to be considered;
- some sources of error or distortion which should not be overlooked:
 - (i) the influence of practice effects on post-treatment test scores;
 - (ii) the possibility of improvements being due to familiarity with the materials of evaluation;
 - (iii) the effects of regression.

A survey of research studies indicate that field studies show that few researchers took cognizance of some of the factors mentioned above.

2.6. SUMMARY

A definition of L.D. that primarily emphasised deficits in the neuropsychological domain have been found to be too narrowly conceived to provide a comprehensive description of the concept. The basic nature of L.D. as discussed here, indicates the complexity of the concept - no one area reveals more about the nature of L.D. than any other area. As learning is not a unitary skill, L.D. is not a unitary disorder.

When L.D. is defined in terms of remediation or solely on the basis of academic deficiencies, it seems nothing in reality is accomplished. The definition should therefore go to the heart of the problem. This would allow for accurate diagnosis and programming leading to high quality remedial services.

As pointed out in the discussion, lack of specific definitions, with regard to L.D. and remedial education, results in no one recipe that can be followed for

assessment, diagnosis and decision making. Learning disability assessment is thus not monolithic and cannot be encompassed by a single approach. A child's performance may be referred to norms to establish a diagnosis but should really be referred to the behavioural context in order to develop a remedial plan, (Schlieper, 1982).

The cyclical and complex problem of L.D. also affects both service and research methodology in many ways as were discussed in this chapter. These include, sampling, experimental procedure and a host of other factors as indicated in 2.5.3..

CHAPTER 3

PROBLEMS RELATING TO THE PROVISION OF REMEDIAL
SERVICES IN THE DEPARTMENT OF EDUCATION -
HOUSE OF REPRESENTATIVES

3.1 STATEMENT OF THE BASIC PROBLEMS

The focus of this research is on the perceptions of educators in the mainstream of education of remedial services rendered to pupils with learning disabilities (L.D.). It includes a view of educational support services rendered to teachers and parents.

In this Department of Education, remedial services to pupils with such specific learning disabilities are provided, primarily, on a 'withdrawal' basis. "In the DEC-HR the concept of remedial education is perceived in the light of specialized educational techniques that are applied to individuals or small groups where a deficit in educational achievement is diagnosed at a school clinic e.g. the pupil fails reading but passes all other subjects or the pupil fails mathematics but passes all other subjects", (Cosford, 1988:7).

In addition, some didactical help in the form of a Teacher Assistance Team (TAT) or Didactical Aid Group (DAG) system is provided after hours at some schools. Teachers, on a voluntary basis (exempted from other extra-mural/ -curricula activities) provide extra tuition to pupils who may experience learning difficulties.

A problem is that class teachers, possibly ignorant of the specific definition of remedial education, refer their weak or slow learner pupils to these groups. Then when these pupils show insignificant results, teachers report that the services provided are inadequate. In many cases lack of specialized training or knowledge on the part of the group/team members has exacerbated rather than improved the problem. This was deduced from personal interviews.

However, it has also been found that in cases where a qualified remedial teacher acted as guide and consultant to the DAG, regular class teachers reported satisfactory scholastic progress on the part of pupils who received tuition in the group(s). According to the Head of Psychological Services, it is the intention of the Remedial Education Department to expand this system during the next few years.

Research studies (O'Hagan, 1977; Cook and Leffingwell, 1982; Hegarty et al., 1982; Clunies-Ross, 1984; Abel and Burke, 1985) have identified several domains of remedial services suggested by specialized teachers (e.g. remedial teachers), regular class teachers, school principals, pupils and parents as being necessary elements of a quality service, namely:

- (a) Remedial therapy (teaching);
- (b) Evaluation, i.e., assessment and diagnoses;
- (c) Management of the learning environment;
- (d) Liaison, guidance and counselling;
- (e) Curriculum development

The problem of providing the above services to all pupils, satisfying paradigms of the educational definition of pupils with L.D., is considerable, when the incidence of specific learning difficulties is taken into account.

Cosford (1988:270) found the incidence of undifferentiated low achievement in specific subjects was 17%. This, according to Cosford, is surprisingly close to the 19% obtained by researchers like Berger for the Inner London Region. It is also close to the perceived incidence of learning difficulties of 13,9% within the urban 'White' community and the 21,5% within a rural 'Black' community, in South Africa, found in studies by Metcalfe (1987). In this

TABLE 3.1 PUPIL ENROLMENT FOR SOUTHERN AFRICA, 1986 (Sub A to Std. 5)

School phase	National states		TBVC states		DET regions		RSA					
	No	%	No	%	No	%	Asians		Coloureds		Whites	
	No	%	No	%	No	%	No	%	No	%	No	%
Sub A	408 773	15.9	346 988	18.7	312 231	17.3	20 000	8.6	100 819		74 654	8.3
Sub B	328 958	12.8	240 045	12.9	225 357	13.1	19 749	8.5	89 142		70 200	7.9
Std 1	316 591	12.3	224 825	12.1	225 609	12.5	19 883	8.6	83 728		71 605	8.0
Std 2	279 198	10.9	202 506	10.9	195 373	10.8	20 753	8.9	80 783		73 846	8.2
Total Sub A-Std 2	1 233 440	51.9	1 014 374	54.6	959 780	53.7	80 295	34.6	354 472	61.1	290 905	32.4
Std 3	262 137	10.2	189 592	10.2	199 659	11.1	22 062	9.5	79 162		76 035	8.5
Std 4	216 066	8.4	157 744	8.5	154 280	8.5	21 614	9.3	76 311		77 492	8.6
Std 5	189 767	7.4	125 734	6.8	133 372	7.4	21 088	9.1	69 855		77 432	8.6
Total Std 3-5	667 970	26.0	473 070	25.5	487 311	27.0	64 764	27.9	225 329	38.9	220 960	25.7
							TOTAL		579 801			

(Source: Behr 1988)

TABLE 3.2 TOTAL NUMBER OF PUPILS IN SCHOOLS FOR EACH RACE, 1976 - 2000. (Source: Gaydon, 1987)

	1976†	1980†	1984**	2000 (projected)**
White	928 640	967 509	978 063	898 000
% of total	16,40	17,66	12,56	7,89
Asian	188 008	222 591	230 536	277 000
% of total	3,30	4,06	2,96	2,43
Coloured	655 347	757 520	780 677	821 500
% of total	11,60	13,82	10,03	7,22
African	3 900 454	3 532 233	5 795 711	9 388 500
% of total	68,80	64,46	74,45	82,46
		(5 059 332)*		
		(72,20)*		
TOTAL	5 672 449	5 479 853	7 784 987	11 385 000
		(7 006 952)*		

† Figures for TBVC (Transkei, Bophuthatswana, Venda, Ciskei) 'independent' states were not available.

* Total number of African pupils in 1981, including both the 'independent' and non-independent homelands.

** Homelands included.

regard, also compare the summary charts of the incidence of specific learning difficulties compiled by Tansley and Panckhurst (1985) - appendix G (i; ii; iii.).

As no enrollment figures in DEC-HR primary schools for 1990 are available at the time of writing (May 1990) and as no permission was received by the author to publish enrollment figures for previous years, projected figures as found in Tables 3.1 and 3.2 and the following projected HSRC figures for Coloureds for 1990 are used :

Primary : 583 780 Total Enrollment: 767 022
(HSRC 1981 : 23).

Using the figures in Table 3.1 for Coloureds as criteria the HSRC projected figures for 1990 could be extrapolated as follows :

Table 3.3.

Sub.A - Std. 2 enrollment total :	356 865	(61,1%)
Std.3 - Std. 3 enrollment total :	226 915	(38,9%)
<u>Total</u> :	<u>583 780</u>	

Cosford's study was undertaken on the Cape Flats. This part of South Africa provides a fair reflection of a cross section of the Coloured population of the country (ranging from relative affluence to abject poverty). Cosford's 17% thus accurately depicts the level of incidence of specific underachievement in DEC-HR schools country-wide. The only possible weakness being a lack of a 'rural' community. Due

consideration have been given to the aetiological criteria of organic factors and/ or cultural/socio-economic deprivation (i.e. environmental factors). Thus, using Cosford's figure of 17%, an extrapolation of the totals in Table 3.3. would indicate that for 1990 the expected incidence of specific underachievement in DEC-HR schools could be as follows:

Sub. A to Std. 2	: 60 667 pupils
Std. 3 to Std. 5	: 38 575 pupils
<u>Total</u>	<u>: 99 242 pupils</u>

The total expected incidence of specific underachievement for the year 2000 would be much higher than the above total if nothing positive (politically, socio-economically) is done soon.

The DEC-HR reports (Administration, 1989a) that, presently, it has a complement of 80 remedial teaching posts at Primary schools serving only the Junior Primary L.D. pupils. These teachers have an annual pupil intake of 20 each. Analysis of the referrals to the School Clinic (Athlone), substantiated by educators' responses to the research questionnaire, indicate that many of the L.D. cases are from the Senior Primary group, but they are not being catered for.

In May 1986, the DEC-HR appointed a Principal Subject Adviser, Remedial. This official's portfolio includes "the co-ordination of remedial services to schools and school clinics; in-service training of and guidance to principals, teachers and school psychologists and also guidance to parents; inspection of work done by remedial teachers; evaluation of pupils for placement in remedial education programmes after testing by school psychologists and cessation of remedial teaching; expansion of remedial services by establishing new remedial classes at schools where all departmental requirements are fulfilled" (Administration, 1986).

Expansion of services has certainly occurred (from 23 in 1985 to the current 78 posts) with a concomitant extra load (as per portfolio) to the single subject adviser. This research, it is hoped, will help to identify and address the deficiencies and strengths of the present remedial services provided in this Department.

Stringent guidelines for the establishments of new remedial classes and classroom specifications has been drawn up by the Department (Administration, 1987). In the 'Coloured' communities of South Africa, with the many socio-political problems, there exists a need to provide specialized remedial services to help L.D. pupils. The guidelines for the establishment of new remedial posts and classes are regarded by the education planners for the DEC-HR, as a

structured means of addressing these basic problems.

The pupils from the 'Coloured' communities experience multiproblem causes of learning difficulties. Multidisciplinary help to address these problems is, in the DEC-HR, only available from School Clinics of which there are four at present (Athlone, Mitchell's Plain, Kimberley and Johannesburg) attending to the educational needs of the whole school population (Primary and Senior Secondary education institutions). The establishment of new clinics and/or the increase in staff complements of established clinics appear, from interviews with officials in the Department, to have been left in abeyance because of financial constraints.

Educational expenditure differs considerably across the four racially segregated groups. "The way in which funds are allocated strengthens and ensures the privileged position of the 'White' population", (Csapo, 1987:11). Access to the remedial education services is also offered on an unequal basis. This inequality is continued into other educational spheres, exerting negative effects on the provision of remedial services (see also paragraph 3.3.2 of this dissertation).

3.2. NATURE OF THE PROBLEM

Under the policy of separate development the four educational systems for the separate race groups (as

classified by the government) in South Africa,"serve to perpetuate the institutionalized and legalized process of discrimination", (Csapo, 1987). The four educational systems are subdivided into 18 different departments of education. This creates a complex and unco-ordinated bureaucratic structure with inadequate consultative mechanisms. It, deliberately, provides different and unequal opportunities for education.

Specialized Education, in particular remedial education, reflects the same disparities and inequalities. The tendency to separate the pupil with learning difficulties from the 'average' pupil prevails. It appears, therefore, that education authorities, schools, teachers and 'average' pupils discriminate and make disparaging comments about pupils with specific learning difficulties. This, Lowenberg (1984), found to be particularly true of the child with a specific language disability. She found, that such pupils, "became educational dropouts despite having the potential to become assets to the country".

This pattern of 'development' on the part of pupils with learning difficulties seems to highlight deficiencies of the education system in South Africa. Metcalfe (1987), believes that the pattern, "accurately reflects the socio-economic and educational inequalities of this country's society which have a fundamentally political and economic basis."

Although an extraneous factor such as 'environmental disadvantage' is excluded from the generally accepted definition of learning disabilities (vide 1.4.1), the overwhelming influence of ecological factors on learning difficulties in this country cannot be overlooked. In South Africa identification of the child with learning difficulties is made more difficult by the multiple overlay of ecological factors. These are a direct result of socio-economic and educational inequalities inherent in the racially discriminatory apartheid system of government.

The nature of the problem, therefore, in the provision of adequate or appropriate remedial services in the DEC-HR, (providing education to the racially segregated 'Coloured' population group) appears to be one of inequitable distribution of financial resources. It is clear from that the education and the socio-economic system disable these children. "It may therefore be more realistic, at present, to speak of 'educationally' and 'socio-economically' disabled children", (Metcalfe, 1987).

Principals and teachers quote poor health, housing problems, poverty, unemployment, educational disadvantage and/or neglect and malnutrition as the chief socio-economic contributing factors causing 'educationally' and 'socio-economically' disabled children. According to Metcalfe (1987), this can be substantiated by careful analysis of the information available in the 'Coloured' communities. Rutter and Madge (1976) states that many investigations have shown

that low socio-economic status (SES) and large family size tend to be associated with both low verbal intelligence and poor reading attainment.

Metcalfe (1987), found in her study that malnutrition, as a subset of socio-economic factors, plays a major role in the incidence of learning difficulties in children. According to Perkins (1977) and Van Niekerk (1986) increasing evidence supports the finding of the negative effects of malnutrition on physical growth and mental development, particularly at the critical prenatal and postnatal growth stages. Nutrition is affected by a broad spectrum of influencing factors - social, cultural and economic.

3.3 EFFECTS OF THE PROBLEMS

3.3.1 ON THE STRUCTURE OF SCHOOL PSYCHOLOGICAL SERVICES

Figure 3.2., illustrates the place of remedial services within the structure of the School Psychological Services. The remedial section, (Figure 3.1.), is headed by a Principal Subject Adviser who is solely responsible for country-wide co-ordination of remedial services. Due to budgetary constraints, the Department is reluctant to appoint additional remedial advisers and this severely curtails the extent of input by the Principal Adviser as she is, presently, 'loaded' beyond acceptable limits.

FIGURE 3.1. STRUCTURE OF SCHOOL REMEDIAL SERVICES - (DEC - IIR).

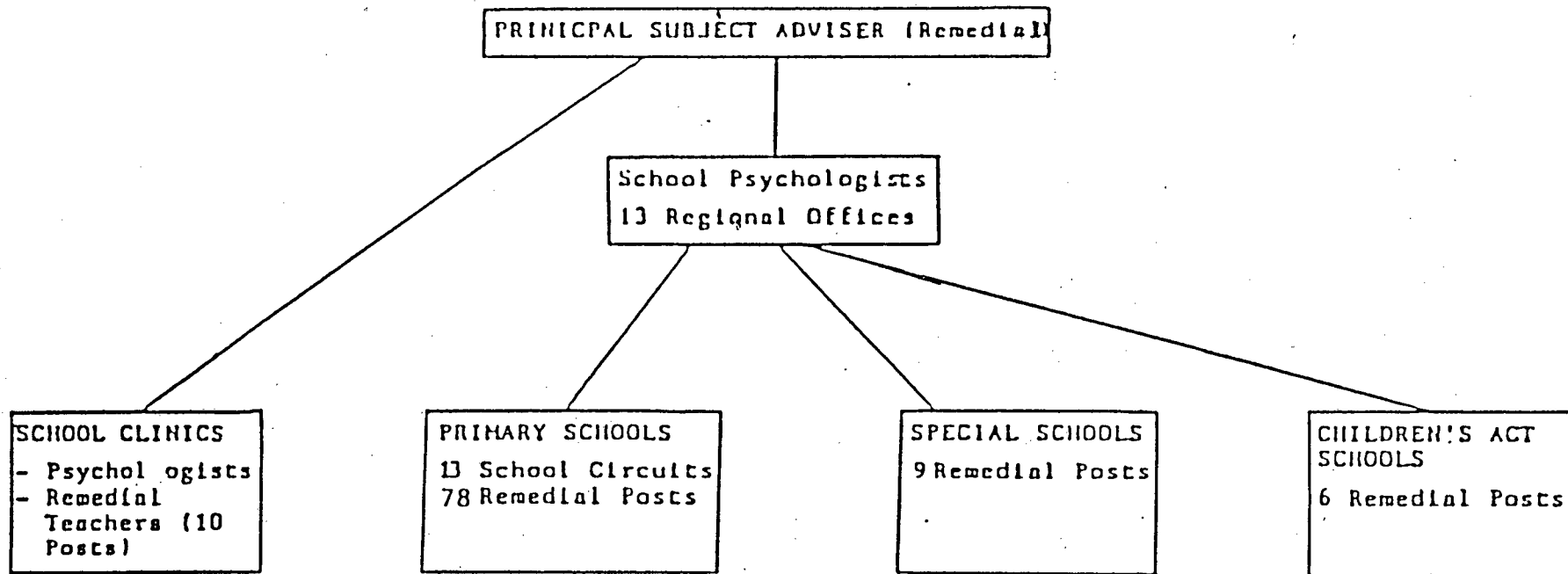
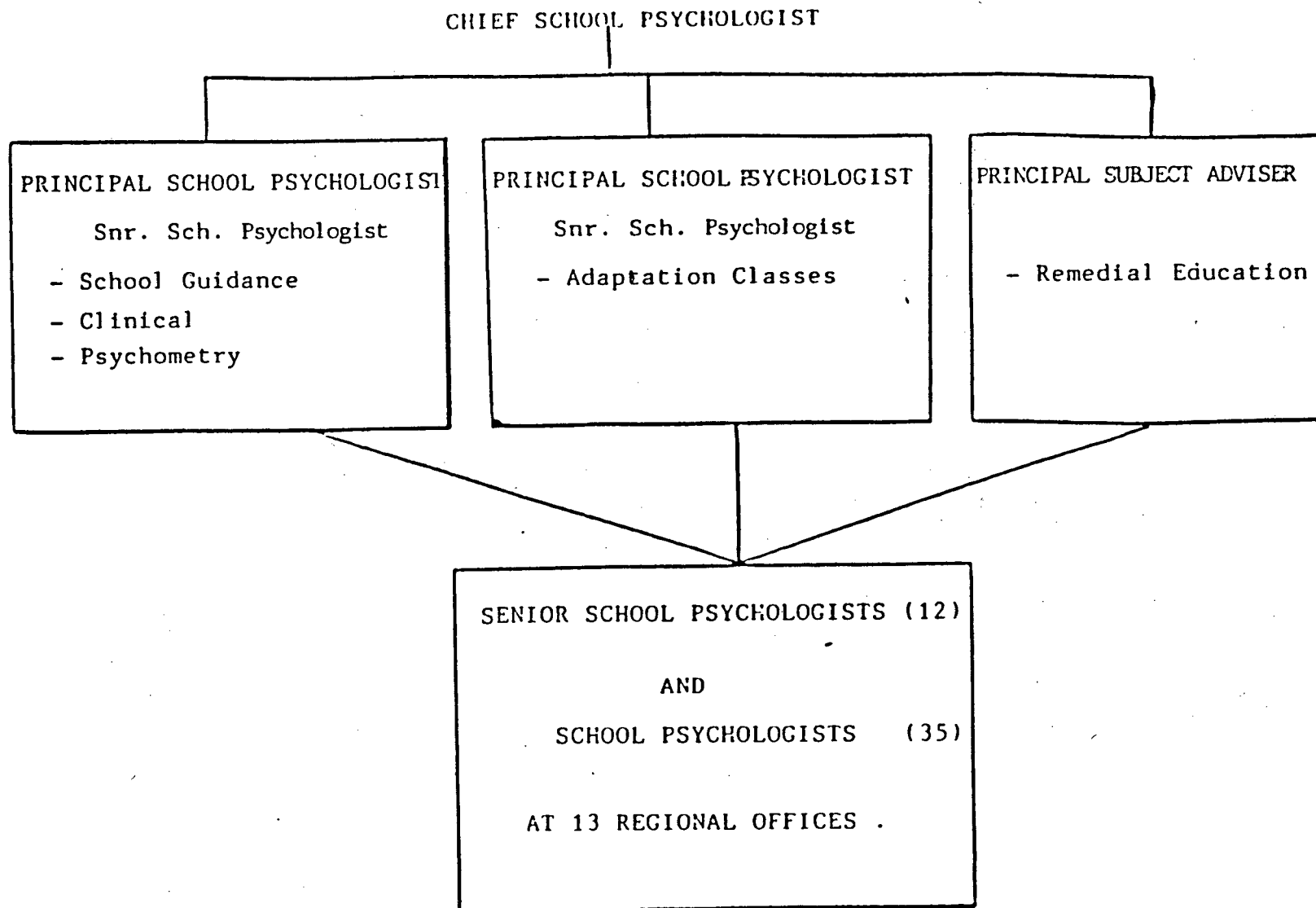


FIGURE 3.2. STRUCTURE OF SCHOOL PSYCHOLOGICAL SERVICES - (DEC - HR).



In this regard the Principal Subject Adviser states in her annual report for 1988 (Administrasie, 1988):

"Aangesien dit vir die Eerste Vakadviseur: Remedierende Onderwys heeltemaal onmoontlik is om so dikwels nodig by alle leerkragte dwarsoor die Republiek uit te kom vir indiensopleiding, inspeksie en evaluering, word daar op die skoolsielkundiges staat gemaak om toe te sien dat die remedierende onderwysdiens van 'n hoogstaande gehalte bly."

The School Psychologists in DEC-HR schools have proved themselves to be very skillful at making psychometric assessments. They make a useful contribution towards creating an awareness of the remedial services to as many educators as possible. [However, most of these School Psychologists are not remedially trained or knowledgeable about remedial teaching techniques, and are therefore very seldom in a position to provide satisfactory guidance to remedial teachers. It is regretted that the author was refused permission to research an objective assessment of the knowledge, guidance and effectiveness of remedial services rendered by the DEC-HR's School Psychologists. Useful constructive information might have been elicited which could have assisted the Department's Education planners in the planning of future services in the Psychological Services. Prof. David Donald (1980), maintains that "school psychologists have a key role to play in

giving direction, focus and guidance to the whole remedial initiative and if they are to function as more than nominal 'testers' then their training must equip them for such a role."

It has been the aim of the DEC-HR, to annually establish at least two new remedial classes/posts in each school circuit. According to the Psychological Services' annual report (Administrasie, 1988:15) this could not be attained last year due to the circumstances and problems described above (3.1).

3.3.2. ON PROVISION OF SERVICES

The provision of adequate remedial services in the DEC-HR, a direct outflow of the policy of separate education systems for separate race groups, has been adversely affected by this policy. Metcalfe (1987) states that "the apparent increasing incidence of estimates of learning difficulties through the standards suggests a cumulative effect of socio-economic and educational - disadvantage". It is unsatisfactory, according to her, that a result of continued attendance for some of the minority that succeed, "is ever-increasing difficulty in learning". This can be seen as a direct result of the socio-economic and educational system

of segregated schooling. Over the past decade, pupils from the communities, other than 'White', protested vehemently against the perceived inferior educational conditions, (Pratt, 1988). They were joined by their parents who protested at receiving wages/salaries designed to keep them and their children living in conditions of/or close to poverty. These events, apart from disrupting schooling and the associated multiplicative effects in education, prevented itinerant remedial teachers from the school clinics travelling to schools to provide remedial services and support at a time when it was much needed.

One of the domains of the remedial services, identified by research studies (vide. 3.1) is curriculum development. However, no serious practice of curriculum development can proceed without an adequate grasp of the context of innovation. This context, set within the economic and political functions of education in South Africa, is also mentioned by Millar (1981): "The school boycotts (over the past decade) provided an unusually frank insight into the political and economic functions of education in South Africa, as perceived by those rejecting such education". Therefore, any process of curriculum innovation in remedial education, in particular, would have to take cognizance of and come to terms in some way with such functions.

The inequality in schools is continued into other educational spheres such as training and qualification of teachers, generally, and remedial teachers, in particular. The Report of the National Enquiry into Education (HSRC, 1981) reported the dearth of properly qualified teachers and the high degree of school failure among the population group classified 'Coloured'. "Relatively few teachers have the minimum qualifications required for the formal specialization programmes of training in remedial education at universities", (Skuy and Perold, 1986). Provision of such training in remedial education is also costly. Taking the government's policy of disparity in distribution of financial resources among the racial groups into consideration, the acquisition of remedial skills appear to made deliberately difficult for teachers 'of colour'. Consequently, the provision of such services to pupils with learning difficulties suffer.

Since the publication of the HSRC Report (1981)," there has been successful efforts made to improve the training of 'Black' and 'Coloured' teachers and a greater awareness of the need for up-grading their qualifications", (Skuy and Perold, 1986). In this regard it is stated in the annual report of the DEC-HR's Psychological Services (Administrasie, 1988:16) :

"Tans beskik 36 van die leerkragte in die (109) remediërende onderwysposte (22 in die 78 poste by primêre skole) oor 'n spesialiseringdiploma in remediërende onderwys, terwyl 'n verdere twee leerkragte met studies ter verwerwing van die diploma besig is. Sewe leerkragte het in hulle finale studiejaar op onderwyskollege as keusevak met remediërende onderwys kennis gemaak."

Effective remedial services to pupils have also, at many schools, been detrimentally affected by certain reported irregularities. According to Education circular No. 19/89 (Administrasie, 1989a), teachers are unnecessarily withdrawn from the remedial classes to perform relief duties in other classes, at times for several consecutive weeks. They are also prevented from providing an optimal remedial service as they have to invigilate in regular classes during examinations instead of continuing with intensive remedial teaching. Remedial teachers, themselves, are reportedly under-utilizing the tuition time for remedial education. The result being that remedial pupils are prevented from making optimal progress.

The stringent criteria for the establishment of new classes appear to have, according to principals, a retarding influence on the expansion of the remedial services. Although a school may be in dire need of remedial services, but because it cannot meet all the requirements to establish a class/post at the school the provision of services is

curtailed. In addition a recent personnel circular - minute No. 17/1989 - (Administrasie: 1989b), state quite clearly that no new posts, including remedial posts, can be created until further notice. The establishment of new posts will only be considered in cases of extreme need and urgency.

In view of this most recent development, principals may find it difficult to adhere to the departmental instruction that incumbents of remedial posts are appointed for the exclusive function of providing remedial education to pupils and that their services may not be utilized in other teaching posts. Nevertheless, the DEC-HR feels that principals should bear in mind that remedial education services at a school are instituted at the request of the principal to enable pupils with learning problems to develop to their full potential. Principals should, therefore, ensure that the remedial education service in their school occupies its rightful place.

3.4 SUMMARY

Remedial services in the DEC-HR, are still very much in the embryonic stages. Research studies and interviews with educators pinpoint constraining factors on the expansion of services. This can be summarised as factors of ideology and economics with their consequent social problems in the 'Coloured' community. Maureen Archer et al., (1989), found that "ideological considerations have strangled special education services in South Africa".

Franklin Sonn, a leading educationists from and in the so-called 'Coloured' community states emphatically:

"Die uitstaande kenmerk omtrent die 'kleurling' is egter sy armoede", (Sonn, 1986:255).

Poor socio-economic conditions are prevalent in the economic and sub-economic classes of the 'Coloured' communities. The incidence of multiproblem underachievement, as found by Cosford (1988), is consequently relatively high. It appears, therefore, that a major deficiency in the South African school system is the ideology of apartheid.

A recent International Labour Organization (ILO) report (Seek Board, 1989:7) states that South Africans continue to grow poorer year by year. According to the report a leading academic put the cost of maintaining apartheid at R78 billion in lost economic growth and in the direct cost of implementing the system. This certainly does not augur well for education, in particular remedial education, in the already disadvantaged 'Coloured' communities. The I.L.O. report states further that there is no prospect of halting economic decline "without fundamental political and structural change and a complete reversal of political and economic trends", (Seek Board, 1989:7).

In this context, sanctions and disinvestment have also impacted on the growth of the South African economy. The tragic part of this, is the increase in learning

difficulties as a result of inadequate provision of remedial services to the pupils. It is predicted that by the year 2000 between 7,9 and 9,8 million people, in South Africa, could be unemployed, according to the I.L.O. report (op cit.), and the 'communities of colour' will bear the heaviest burden.

Currently, the addressing of such extraneous, (as opposed to intrinsic), factors associated with pupils' learning difficulties has been largely left to social workers attached to some schools or serving 2 or 3 schools in a demarcated geographical area. It is the opinion of some school and school clinic principals that a system of socio-pedagogues to attend to the socio-educational problems could in the long term reap greater benefits than the present system. Socio-pedagogues, after assessment of the situation can direct, directly, appropriate educational programmes to pupils' immediate (short term) and medium term needs. This system has been found, from results obtained in the 'White' Transvaal Education Department, to be most effective.

During an informal conversation with the newly appointed Head of Psychological Services (DEC-HR) on Friday, 17th November 1989, the author was informed that the DEC-HR has approved the creation of 19 socio-pedagogue posts. This, progressive and far-reaching decision, however, cannot be implemented, at the time of writing, due to financial cut-backs in the DEC-HR.

Such development, as suggested above, would require amendments to the structure of the DEC-HR's Psychological Services. In addition, and probably more significant, it would require a substantial increase in the budget of the Department. The question is now: "Can the South African economy in its present (first quarter 1990) depressed state support such a justifiable drain on its resources?" Educators interviewed by the author maintain that it can be done if less is spent on maintaining an iniquitous ideology, which sanctions separation and segregation, condones discrimination and overlooks inequalities especially in education. South Africa desperately needs skilled manpower. The manpower resources are available within the borders of the country and "simple common sense dictate the need to abandon separate and unequal education", (Sonn, 1986:133).

Problems related to the provision (assessment and intervention) of remedial education, in the DEC-HR to pupils with learning difficulties revolves around the interaction of educational, social, economic, political and consequent environmental factors. The provision of services i.e. treatment of difficulties, to a child, cannot be separated from these factors.

CHAPTER 4

SUPPORT FOR LEARNING FOR PUPILS WITH LEARNING
DIFFICULTIES IN THE MAINSTREAM
OF EDUCATION.

4.1. INTRODUCTION

The rights of children are enshrined in the Declaration of the Rights of the Child (Unesco, 1959)- appendix H: "All children have a right to opportunities and facilities so that they can develop in a normal and healthy way in freedom and dignity. Children handicapped in any way (e.g. educationally) have a right to special treatment and education". This is further emphasised in the De Lange Committee's Report (HSRC, 1981) and Visser (1989). These works (op.cit.) emphasize that every child in South Africa has the right to be cared for and to receive appropriate education irrespective of sex, race, aptitude or abilities.

This is also true of the child with special educational needs e.g. the child with learning disabilities (L.D.). For the purposes of this study, the focus is on the child with L.D., referred to in the Department of Education and Culture, House of Representatives (DEC-HR) as the child in need of remedial assistance.

The provision of education for children with L.D. in any country can be seen as a test for the educational system's flexibility. The system should be sufficiently differentiated to meet the great variety of educational needs of all the children in a specific community. In this regard, it may also be true to state that parents have a right to expect their children to be provided with differentiated education that would enable them to acquire competence in reading and writing. Parents also, therefore have the right to become anxious when their children experience difficulties in doing so.

The situation, in respect of accommodating the child with L.D.," ranges, among the 18 different education departments in the Republic of South Africa, from almost completely 'compulsory' mainstream education to a relatively refined system of provision of specialized education", (HSRC, 1981: 174). Most professionals in the field of learning disabilities support the view that regular classrooms (in the mainstream of education) should be flexible enough to accommodate and allow children with specific learning difficulties to achieve success.

4.2. WHAT DOES "MAINSTREAM" EDUCATION MEAN?

Mainstreaming means different things to different people. To some the concept means that children previously housed in separate isolated facilities are moved into regular school buildings and placed in special self-contained classes

alongside classes of 'normal' children. Edward Martin (1974), maintains that "the essence of mainstreaming is the increase of positive interactions between pupils with L.D. and 'other' learners". To others it means the total elimination of any semblance of specialized grouping on the basis of type or disability. In this way, children are assigned on the basis of age as is done with most other children, (Reger, 1974).

Reger states further that, the application of the mainstreaming concept does not mean that all 'handicapped' children e.g. L.D. children, have to be placed in classes with 'non-handicapped' pupils.

The HSRC (1981) maintains that mainstream education refers to the fundamental educational philosophy aimed at accommodating the handicapped pupil (e.g. L.D. pupil) as far as possible in the mainstream of regular education (i.e. in the same school) before considering transfer to special education.

Because children with special educational needs (including L.D. children) must ultimately take their places as adults in society they should as far as possible be accommodated in the mainstream of education. Towards this end the HSRC (op. cit.) suggested the establishment of an infrastructure within the mainstream of education with a view to effective identification, evaluation and diagnosis of, and assistance to, children in need of specialized educational assistance. A Co-operative Education Service Centre (CESC), incorporating a

Section for Evaluation and Guidance (SEG) was proposed. Such SEG's should be established, according to the HSRC report, in each defined region or service area.

Behr (1988) in discussing the HSRC (1981) report, suggests that the highly professional and comprehensive services to be provided by SEG's to mainstream schools would involve a multidisciplinary team, which should comprise of a school social worker, educational specialists in orthodidactics and compensatory education, an educational psychologist, a medical practitioner and paramedical staff. The tasks of the SEG would include comprehensive diagnosis and the designing of remedial educational programmes and guidance to educators.

SEG's would also play a part in the in-service training of personnel. The SEG would serve all children from pre-school through secondary school, their educators and parents, including family-based compensatory assistance (Behr, 1988 : 135).

In a real effort towards mainstreaming, "children should not be classified and labelled in traditional ways", (Reger, 1974). Remedial pupils, therefore, should be classified according to their specific and objectively defined needs, and services should then be designed to meet those needs. Reger (1974), lists certain principles involved in mainstreaming. The following is a summary thereof:

- i. No child should be categorized with a label reflecting a gross diagnostic category e.g. 'hearing disabled child', 'minimal brain dysfunction child'.
- ii. Children should be assessed by relevant instruments to determine those areas of strength and weakness that relate directly to specific, objective instructional actions - including changing inappropriate behaviour and providing training in occupational skills.
- iii. Many additional support services should be provided both directly to pupils with L.D. and to their support professionals, e.g. remedial teachers, speech therapists, social workers, educational psychologists etc.
- iv. Staff members qualified to teach pupils with L.D. e.g remedial teacher, should serve as consultants to teachers, administer diagnostic services and implement instructional programmes in co-operation with regular classroom teachers.
- v. The leadership of the school (including school committee) should work together on total programme implementation. Need for teacher in-service programmes should evolve out of the

perceptions and experiences of the teachers themselves (vide. research questionnaire - Appendix A).

- vi. All children should wherever possible be housed in the regular school building.
- vii. Groupings of all children in the school should be based on defined needs. In the case of L.D. children additional support devices should be provided directly to both the children and their teachers.
- viii. Diagnostic services for L.D. children is not enough. Such services should be directly tied to implementation services. Wherever possible the same personnel, e.g. remedial teacher, who provides diagnostic services should preferably also implement the instructional programme, in co-operation with other teachers.
- ix. Consultation services to teachers should have direct application to the instructional programme, providing materials to use, techniques to try and management strategies.
- x. It is suggested that children with similar, severe disabilities should be grouped together for at least part of their day. Such groupings should be based on individual performance criteria, not on gross and irrelevant non-educational diagnostic categories.

- xi. All staff members should work together on total mainstreaming programme implementation. Needs teacher (e.g. Remedial teacher) in-service training should evolve out of the perceptions and experiences of the teachers themselves.

Marcia Horne (1982) a school psychologist at the University of Oklahoma concurs with the view expressed by Martin (1974), stating: "When it comes to mainstreaming, school psychologists must be concerned with the adequacy of classroom interactions". Martin (1974), suggests that "it should be attempted to have children with learning problems in sight, in mind and in settings where they will receive the fullest measure of the educational system's resources".

4.3. THE SOUTH AFRICAN SITUATION

In South African schools the classroom teacher, usually, is expected to provide special or specific assistance (in the context of the class in mainstream education) to pupils who show a learning difficulty. These pupils therefore have special needs which need to be addressed. This can be described as "mainstreaming by default", because so few services can be made available to these pupils.

In the view of Tomlinson (1982), "the special needs of children can only be fully served if special education is understood as a social process, which is set within a social

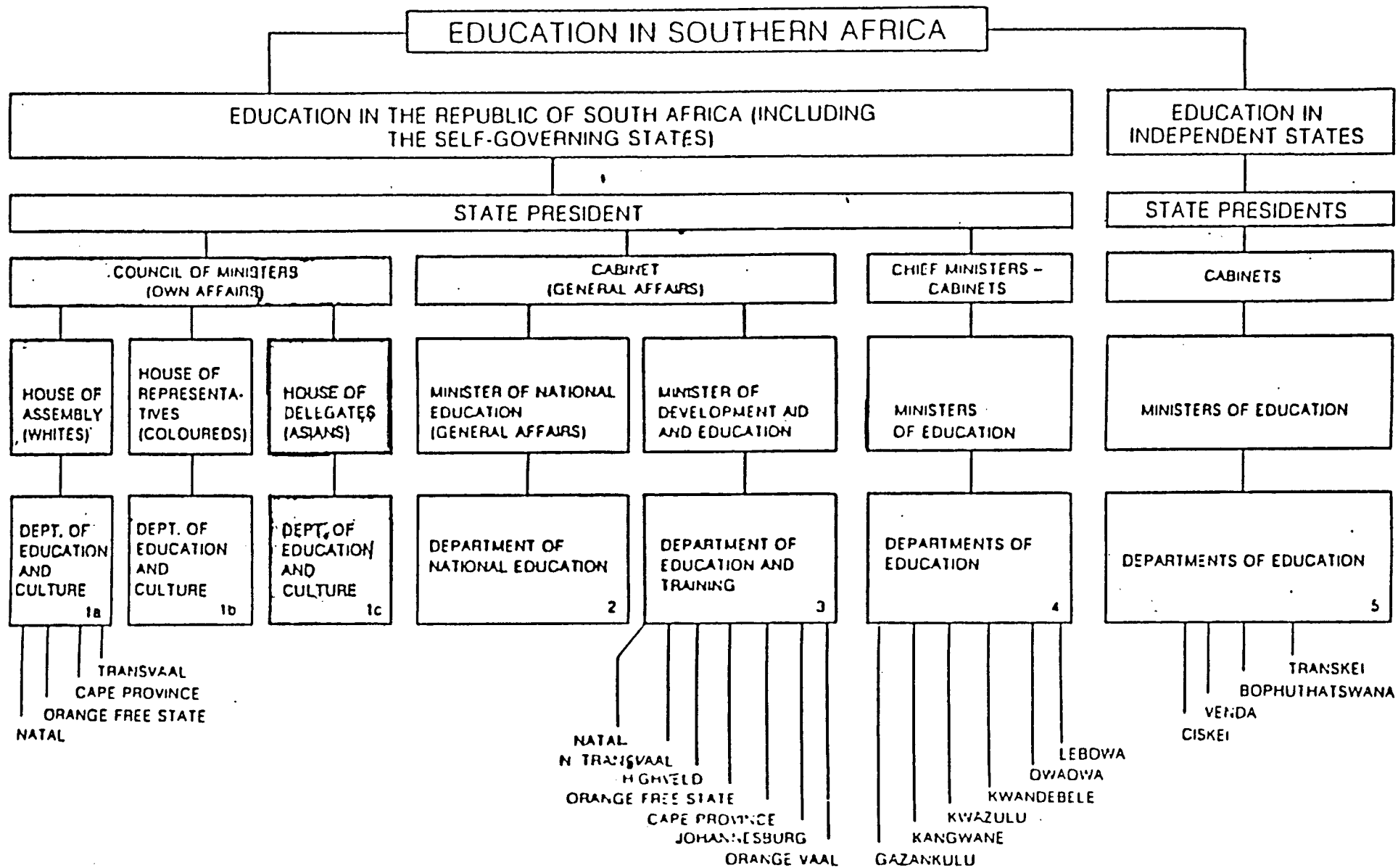


FIGURE 4.1. The decentralized educational structure of Southern Africa including the independent states (TBVC countries) and self-governing national states, 1988 (Source: Behr, 1988).

and political context". In the South African context, the development (past, present and future) of Special Education cannot be fully understood without an historical understanding of the social and political origins of this important part of the education system.

The South African education system, is overall controlled by the central government, (vide.fig.4.1.). The National Policy for General Education Affairs Act, 1984 (Act 74 of 1984), provides for the determination of a national policy for general education affairs to be administered by the Minister of National Education. The education system is sub-divided into four major, so-called Own Affairs education departments namely: House of Assembly ('White' education); House of Representatives ('Coloured' education); House of Delegates ('Indian' education) and an Education and Training Department for Blacks. Each of these Departments has responsibility for providing services for their own racial groups. There is thus, at least, a quadruplication of services which of necessity has a detrimental effect on the equitable allocation of resources. Consequently, many disparities are found among the four systems of Education. In 1967 the National Education Policy Act was promulgated.

The significance of this Act for education in South Africa, is expressed by Sebidi (1983) as follows: "The Christian National Character of the Act reflects the policy of apartheid and all aspects of institutionalized, legalized racial discrimination which divide people into White, Indian

(Asian), Coloured and Black groups, strictly in that descending order of social status and importance". This point of view is verified by examining the per capita expenditure on education (op.cit.). Per capita expenditure differs considerably among the four groups. It therefore appears, in the view of Sebidi (1983), that the government responsible, allocating resources in accordance with its political priorities has clearly made 'Coloured' and 'Black' education a low priority. Csapo (1987: 11), concurring with this, expresses the view that "the allotment of funds for education strengthens the privileged position of the White population".

Although the De Lange Report (HSRC, 1981) noted the overwhelming problems of apartheid education - racially segregated mainstream education - it stopped short recommending the abolition thereof. The Report supported the findings of Murray (1969) by suggesting that those pupils with particular needs should be kept in regular classes in mainstream schools. Educational Statistics (RSA, 1985), however, show that provision of special education services has not been developed to the same extent for all racial groups.

The Report of the Committee of Inquiry into the Education of Children with Minimal Brain Dysfunction, under the chairmanship of C.H. de C Murray (Murray, 1969) made certain recommendations and laid down guidelines for the education of children with minimal brain dysfunction (later called

specific learning disabilities). "Group A and B pupils i.e. pupils with specific learning disabilities who generally can find their way with remedial assistance were to receive education in the regular mainstream classroom", (Behr, 1988).

Arising from this 'White' pupils from Group A are expected, to be able to cope scholastically after specialized support from staff at school clinics and with regular remedial support from a trained remedial teacher. Such specialized services from school clinics were at that time only available to 'White' pupils with L.D.. It was only five years later, in 1974, with the inception of the Athlone School Clinic, that remedial services on a limited scale became available to 'Coloured' pupils with L.D..

In 'White' education, the country-wide decline in numbers of pupils at mainstream schools has made it necessary to reduce teaching posts at many schools. Posts initially discarded are those of a specialized nature, in particular, remedial posts. Remedial education is regarded as a 'luxury'. Rethinking, planning and revision of Specialized Education services in the department was scheduled for 1989. Very few, if any, new specialized education posts are being created at mainstream schools.

By contrast remedial services in DEC-HR, focus of this research, has been expanding since the appointment of a Principal Subject Adviser, Remedial.

In 1985, according to Skuy and Perold (1986), there were 23 posts including those at clinics and special schools. Most recent information (May, 1989) from DEC-HR (Administration, 1989a) states that currently there are 78 functioning remedial posts at mainstream Primary schools, country-wide. In addition, a further 8 classes have been established but are currently without teachers. There are 23 classes at special schools and school clinics. Factors presently hampering further expansion are the financial constraints and lack of trained personnel. Although the number of remedial teaching posts has risen, "the remedial education service is still in the process of development, with many children needing help and relatively few teachers and psychologists available to meet their needs", (Cosford, 1988: 6).

Remedial posts at 'Indian' and 'Coloured' schools are being filled as funds become available. According to Barker (1989), most specialist remedial teachers, however, have to divide their attention among several schools. In 'White' schools the ratio is roughly one remedial teacher to every two or three schools and some schools have one full-time remedial post. Educational experts see this situation in 'White' education as woefully inadequate, but remedial services available to the other race groups are well below an acceptable level.

In 'Black' education, for instance, the system is still attempting to catch up on the historical backlog inherited

from the designers of 'Bantu Education.' Barker (1989), quotes Department of Education and Training (D.E.T.) officials as stating that there are at present only 118 'remedial advisers' (underqualified teachers), serving 2,1 million pupils in 7500 schools country-wide. 'Black' educationists state emphatically that they have yet to see evidence of any effective remedial teaching in their schools.

"The Republic of South Africa faces the overwhelming task: to alter, to dismantle or unify four parallel systems of education according to political objectives and to produce an egalitarian system without sacrificing little of the quality of the present system for 'Whites'", (Csapo, 1987). To some extent an attempt was made to start this task in 1977 with the establishment of a national education body representing all race groups (Behr, 1988).

The cost of expanding to the entire population by duplicating the present services enjoyed by 'White' pupils, is prohibitive. With growing internal and external pressures for alternatives, change is inevitable. The ideal, recommended in the Report of the Main Committee, (HSRC, 1981) that there should be at least one remedial teacher to every large primary school or group of smaller schools appears is still a long way off in South Africa.

4.4. PROS AND CONS OF MAINSTREAMING

Although it is believed that in educational terms the actual achievement of pupils with L.D. will prosper in the mainstream setting there are many professionals who have differing views.

Mainstreaming proponents are of the opinion that mainstreaming of children with L.D. can have the healthy effect of the elimination of labels and stigma attached to being a special education pupil. In this way the pupil will find social, and more important, peer acceptance. He is regarded as an equal and will thus strive to maintain this status by achieving scholastically.

It is believed that by being mainstreamed the L.D. pupil will regain his self-confidence, self-esteem and have a better self-concept - he does not see himself as a failure or loser any longer.

4.4.1. ARGUMENTS IN FAVOUR OF MAINSTREAMING (PROS)

4.4.1.1. *Self Concept and Self-Esteem*

Laubscher (1984), expressed the view that "self-concept is the core of the personality. It determines the way the child perceives himself and his world. A positive self-concept in childhood is the best investment for maturity and emotional adjustment in adulthood."

As a basic aim of education is the preparing of the child for adulthood, (Van Vuuren, 1978), it is imperative that such education be provided in a milieu conducive to the development of a positive self-concept. The mainstream environment appears to be best suited for this , more so to the child with L.D. than the 'average' child.

A positive self concept , according to Laubscher (1984), is said to be associated with self-confidence, a positive feeling towards oneself, a mastery oriented approach towards difficulties, and an attitude of : " Life is worth living and I can truthfully say: 'I like myself' ". This point of view is confirmed by work done by Burns in 1975 (quoted in Burns, 1985). Acceptance of self is strongly correlated with acceptance of others, that is, those with realistic and positive self-concepts are able and likely to develop warm supporting relations with others.

Burns (1985), also contends that "positive self-concepts in teachers and teacher counsellors (e.g. Remedial teachers in the primary school) facilitate not only their performance as confident, respected guides but also facilitate pupil performance". The latter will flourish in all respects when the pupils, especially those with L.D., are in relationship with teachers who project trust and belief in their own capacity. Such teachers can effect warm support, enhancing the pupils' view of themselves as people of worth. "It has been shown that expectancies from such teachers lead to higher pupil self-esteem and performance", (Burns, 1985).

Self-concept, self-esteem and educational performance are closely linked. Burns (1982) and Skuy et al. (1985) found that effective development significantly correlated with academic performance. Concurring with this finding is Richmond (1984). Children often employ academic achievement as an important index of self-worth. Differences in self-concept are associated with differences in academic achievement according to studies conducted by Brookover, Erickson and Joiner, 1967 quoted in Burns (1985).

Research findings, in Burns (1985), indicate that the mainstream education environment helps the child with L.D. to develop positive self-concept and self-esteem. This can be achieved by the regular class teacher in collaboration with the remedial teacher playing a supportive role. Burns (1985), enumerates the following strategies which could be adopted in mainstream teaching settings:

(i) Maximize experiences of success:-

Each perceived failure or success experience has a potential effect on a person's self-evaluation and self-concept. For this reason the creation of opportunities for children to experience success is essential. Teachers and peers in the mainstream appear to be reasonably perceptive to minute improvements and interests with the child with L.D. in such a way that he perceives his growth as success experience.

(ii) To evaluate themselves realistically:-

One of the characteristics of individuals with negative self-concepts is that "they make unrealistic high demands upon themselves," (Burns, 1985). Realistic evaluations play a central role for maintaining a positive self-concept. Improvement and learning extend the possibility of turning the experience of true failure into one which will build up the pupil's self-concept.

The mainstream situation allows the pupil with L.D. to evaluate his scholastic performance, realistically, with the general performance of his peer group. The pupil, with teacher will realize that any improvement is good and that the way to greater success and adequate performance comes in small steps.

(iii) To be taught problem-solving techniques:-

Taking the child's individual learning into consideration, teachers can demonstrate, in close physical and emotional contact, those problem-solving skills which suit him best. His needs, learning speed and style are always unconditionally respected. This makes him feel worthwhile in himself.

(iv) To change his approach towards a task and set realistic goals:-

The pupils can be taught to be less concerned about past performance and be more concerned about achieving future success. Pupils can be assisted to develop a feeling of being in control of himself and learning situations. These characteristics form the basis of realistic goal-setting viz. they must be in relation to past performance.

Past levels of performance allow for realistic and attainable goals being set. By learning the process of goal-setting and the process of attempting to reach them the pupils with L.D. will have to adopt different approaches to different goals / tasks.

(v) To ensure generally happy experiences with other people:-

To feel good about themselves children need many happy experiences with other people, particularly their parents, teachers and peers. The mainstream environment creates situations which are conducive to the development of the child's social self-concept.

(vi) To engage in self-reward and self-praise for success:-

The child can be guided to engage in self reward for his successes. Such a child will then not be dependent on others for rewards - as, is usually the case with children with L.D.. He is able to monitor and evaluate his performance in terms of that of his peers and his own efforts and skills. Emphasis can be placed on the child's self-control over and responsibility for the gradual development of his skills.

In the context of self enhancement, Burns (1985), states: "the pupil can become his own evaluator and reinforcer". Part of the self concept is the meaning that individual pupils attach to words that are self-words. Engaging in internalized self-praise helps him reinforce his successful behaviour pattern. According to Burns (1985), "to say, 'I did well on that', not only reinforces what it was that was done, it attaches to 'I' the label of 'well-doer'". This aspect of self-praise has been found to be most important for self-concept.

Education, teaching and teacher-training (see 4.5.) must involve the socio-emotional development of each person involved. The self-concept and self-esteem are vital elements in acceptable socio-emotional behaviour. Pupils' socio-emotional behaviour has been shown by research findings, mentioned above, to improve over a wide range of their lives and is closely linked with academic attainment and social development.

4.4.1.2 *Interpersonal Relationship (Social Interaction)*

Studies relating to the interpersonal relationships of the child with L.D. seem to be rare. A possible explanation could be that the great diversity among children so classified, makes generalizations quite unreliable. The degree to which children with L.D. will be accepted or rejected by their 'average' peers may play a role in their academic achievement in the regular classroom. Hicks (1984), states that in her experience, "adequate interpersonal social competencies such as self-assertiveness is needed by children and it is needed even more so by the learning disabled".

Research findings by researchers, quoted in Coben and Zigmond (1986), demonstrate the important function peer relations serve in providing significant contributions to a child's social development. Researchers (op.cit.), have shown that children provide one another with emotional support in unfamiliar or threatening circumstances. Peer interaction has been described as critical for normal social development.

This was also found in a previous study done by Slavin et al. (1984). The results of their study, which involved Team Assisted Individualization, confirmed the increase in sociometric status of mainstreaming academically handicapped students.

According to researchers, Turnbull and Schultz, as quoted in Coben and Zigmond (1986), the basic principle underlying mainstream education ('least restrictive environment') is that (educationally) handicapped students can benefit educationally and socially from being in programmes with non-handicapped students. More specifically, the advantages anticipated from the mainstream environment include:-

- i.:- an increase in sensitivity and positive attitudes towards handicapped peers by non-handicapped students (Kaufmann et al., 1975 quoted in Coben and Zigmond, 1986).
- ii.:- academic and social benefits for handicapped students from observing and interacting with non handicapped children (Guralnick, 1976, op.cit.).
- iii.:- enhancement of social status of handicapped children among their non-handicapped peers, (Kaufman et al., 1975, op.cit.). Significantly, a study conducted by Prillaman (1981), revealed significant differences in the social status of children with L.D. and their regular class peers.

This was confirmed during an observation analysis of the social interaction of high school junior students with L.D. in their regular classrooms undertaken by Schumaker and Wildgen (1982).

In this study, Schumaker and Wildgen used a continuous recording system to observe pairs of students with L.D. and 'average' students in their regular classrooms. A number of social behaviours and socially related characteristics were observed in the target students and in the teachers and peers with whom they interacted. Results show that adolescents with L.D. do not appear to be socially isolated in the classroom as may be expected. They speak as often to peers and to as many different peers as the 'average' students.

Rooney et al.'s (1984), study on attention by students with L.D. in the regular classroom indicated increased attention to on-and-off task behaviour by these children with L.D. when asked to self-monitor their moments of attention. This procedure held positive promise for use in mainstream situations.

From the above research findings, it appears that there is a strong positive interrelatedness between interpersonal relationships and academic achievement. This was confirmed by a study done by Patten (1983). Poor concentration, poor memory and difficulty handling problem-solving tasks are

common behavioural characteristics of pupils with L.D.. These according to teachers interviewed for this study, could result in poor interpersonal relationships. With appropriate guidance and support teachers feel that they may be able to increase social interaction and achievement in the classroom. This may be best accomplished, for some pupils with L.D., in the regular (mainstream) classroom.

4.4.1.3 Scholastic Achievement and Intellectual Functioning

Opponents of the mainstreaming concept argue that the grouping of pupils with L.D. together with 'average' and 'above-average' pupils in the same regular class group could negatively affect the scholastic achievement and intellectual functioning of the non-handicapped pupils. Consequently, it is theorized that the general academic performance and ability of the class as a whole will drop to an unacceptable level.

Based on that hypothesis, Paul Weener (1981), compared 'average' and children with L.D., by focusing on the variability of performance within groups and the degree of overlap between the two groups. He found that the variability of performance was similar and was approximately 75% of that of a randomly selected national sample.

The average difference between the means of the 'average' group and the group with L.D. was less than 0.75 SD, or about one sixth the range of performance which existed within either group. On the basis of this data, it was asserted that categorical claims about etiology or education of children with L.D. are unwarranted and that combining these children with regular (average) classroom groups "has a relatively small effect on the range of ability in the classroom", (Weener, 1981). The range of performance on cognitive tasks in a combined group of pupils with L.D. and 'average' pupils would not be much greater than the range of performance within a class of only 'average' or 'above-average' pupils.

In a study by Beck, Lindsey and Frith (1981), data relating to the effects of special class placement on intellectual functioning of students with L.D. were obtained. The effect of one or two year special class placement on scholastic achievement and intellectual functioning was investigated. Twenty-eight students served as subjects. Their IQ's ranged between 82 and 114, and CA range was 8yrs 2mths to 9yrs 11mths. They all satisfied the accepted criteria for being diagnosed as having L.D., namely, average to above average intelligence; specific learning weakness; significant discrepancy between academic achievement and intellectual functioning; normal visual and auditory acuity; no emotional disturbance. The pupils were divided into two groups and randomly assigned to special classes for educational programming. Group 1 had one year of specialized education; Group 2 received two or more years of specialized education.

The selected students varied in intellectual functioning, achievement and vocabulary ability. The students were each assessed on Wechsler Intelligence Scale for Children (WISC), the Wide Range Achievement Test (WRAT) and the Peabody Picture Vocabulary Test (PPVT) before placement in the self-contained special classes. The assessment battery and procedures were repeated at the completion of the one year and two years or more in the special classes.

The teachers of the learning disabled pupils employed individual, small group, and large group sessions for instruction purposes. The instruction was geared towards the amelioration of identified deficits e.g. academic, perceptual, motoric and so forth. Other auxiliary activities were used to maintain identified strengths, which also included activities such as art, physical education therapy and music instruction.

The researchers, (Beck, Lindsey and Frith, 1981), measured the variable of change in performance (Post test minus Pre-test) on the three assessment instruments. Results indicated that : "Students, two or more years in special classes, had significantly higher mathematical scores. The number of years in self-contained classes did not significantly affect WISC scores, WRAT reading and spelling scores and PPVT scores". The researchers hypothesized that a significant difference should have occurred in academic achievement of L.D. students after receiving instruction in self-contained special classes over a period of time.

The data from this study claims to indicate that a special class system has not resulted in significant increases in functional areas. Beck and his associates, argue that: "On the contrary, these classes may possibly have contributed to a significant lowering of IQ scores".

Researchers, specifically Sewell (1982), found that: "special remedial education, outside the classroom, offers short term benefits and that it made little difference in the long term". He suggests that mainstream classroom support was more effective than 'withdrawal' support.

A study undertaken by Wang and Baker (1986), had a twofold goal. These were to reveal and analyse the design features and efficacy of mainstreaming as an educational approach to serving pupils with L.D.. Eleven empirical studies from a pool of 264 published between 1975 and 1984 were selected for analysis. Using the meta-analysis technique, a qualitative synthesis was performed of the findings from the studies. A notable finding was that mainstreamed pupils with L.D. consistently outperformed nonmainstreamed pupils with comparable difficulties.

The above research findings on mainstream education indicate a positive impact on intellectual functions and scholastic achievement of pupils with L.D.. Despite contradictory findings on mainstreaming, an essential ingredient in successful mainstreaming appears to be remedial support for the pupil with L.D..

4.4.2 ARGUMENTS AGAINST MAINSTREAMING (CONS)

Sociometric studies conducted in the United States of America on children with L.D. in regular classrooms reveal:

- i.: - that there is less acceptance of children with L.D. when compared with normal peers (Baldwin, 1958; Bryan, 1974 as quoted in Prillaman, 1981; Kistner and Gatlin, 1989).

- ii.: - Children with L.D., especially 'White' females, are significantly less attractive and consequently rejected more often than 'average' children. (Bryan, 1974, op.cit.; Kistner and Gatlin, 1989).

- iii.: - Children with L.D. are less popular and were not voted as among the smartest in the class, (Liperstein, Bapps, Bali, '1978, quoted in Prillaman, 1981; Kistner and Gatlin, 1989).

- iv.: - Children with L.D. consistently receive lower peer acceptance ratings than children with no L.D. - using the Pier-Harris Children Concept Scale and Peer Acceptance Rating Scale (Shear, 1978, quoted in Prillaman, 1981).

Such faulty interpersonal social contacts for children with L.D. affect not only their peer relationships but interaction with adults e.g. teachers and parents, as well. It is thus of

vital concern that attention be drawn to the social status of the child with L.D. in the mainstream environment. If the social status and acceptability is in doubt, the child will be unlikely to perform to the expectations that the regular class teacher may have of him / her.

Other research findings also depict the child with L.D. in the mainstream as less popular and less socially skilled than 'average' peers (Schumaker and Wildgen, 1982). Schumaker and Wildgen's studies also showed that students with L.D. attended much less to teacher statements than non-L.D. students. Not only might this result in students with L.D. learning less, but might also result in teachers perceiving students with L.D. "as being non-motivated and uninterested", (op.cit.).

Another area of note concerns the student's initiation of instructional interactions with their teachers. The result of the Schumaker and Wildgen (1982), study showed that the students rarely, if ever, asked for help or feedback from the teacher.

In many cases the stigma and labelling of children as having L.D. in a regular class only highlights their differences, rather than minimizing them. A factor often overlooked when placing children with L.D. in the regular (mainstream) classroom environment, is the compatibility between the child with L.D. and the regular classroom environment. The child

with L.D. must possess minimum scholastic competencies approximating the standards of the regular class regarding the curriculum, social skills and areas of scholastic success.

The curriculum of the regular class is drawn up, with the so-called 'average' child in mind. Consequently, the child with L.D. often cannot cope with the academic load, as no allowance is made for his different style and pace of learning.

Teachers of regular classes frequently regard themselves as untrained to effectively teach both children with L.D. and 'average' children in the same class. Such teachers may feel inadequate to handle special needs and this can have a detrimental effect on the presentation of learning material to the class as a whole. In addition, the prejudiced attitude of some regular classroom teachers towards children with L.D. ('lazy', 'unmotivated', 'stubborn', 'slow') is not conducive to creating a healthy, learning atmosphere for such pupils in the mainstream of the educational system. In addition, there are other teachers who prefer to ignore special needs rather than the extra work of adapting teaching methods .

From personal interviews conducted with regular classroom teachers responding to the author's research questionnaire it was learnt that many teachers felt threatened by the 'specialist' (e.g. Remedial teacher) intervention. They feared specialist teachers regarding them as being

incapable of proper management and/or of effective teaching ability - 'another teacher has to rectify my deficiencies' syndrome. Such teachers would deny the fact that there are many children with L.D. in the class - to the possible detriment of the child with L.D..

William Cruickshank (1977), contends that children with perceptual processing deficits resulting in specific learning difficulties have needs which the regular primary teacher cannot meet in the regular classroom setting. Unless, in his view (ibid.), "regular class *teachers* understand the nature and problems of pupils' processing deficits and know how to adapt to situations and teaching materials to the child's needs, the potential for continued failure on the part of the child will be present. He (op. cit.) thus argues that the belief that children with specific learning difficulties can, and ought to be, educated in the regular class is unfounded.

The author consulted a number of pupils with L.D. in the regular class about their learning problems and remedial lessons. These pupils were withdrawn from the regular classroom for remedial lessons on a regular basis (2 or 3 lessons per week). Many reported that their classmates mock them and they are being teased about their 'stupidness'. Some children with L.D. deny the fact that there is 'something wrong' with them and/or that they experience difficulties. This appears to correspond with research findings by Rewilak and Janzen (1984), who concluded that for children with

L.D., "denial is an important defence mechanism against their experienced difficulties in school". Some felt that they lose out on certain activities at which they might otherwise excel, e.g. art and/or sport, which they have to forgo to attend remedial lessons - they are denied the opportunity of enjoying some 'schoolwork' at which they can succeed.

The findings of a longitudinal study of the self perception of ability of students in regular and special education classes undertaken by Battle and Blowers (1982), indicate that students in special classes experienced greater gains in perception of ability scores than did students in regular classes. These findings support the view that pupils with L.D. may not perform well in the highly competitive environment of the regular (mainstream) classroom, (op.cit.).

It appears therefore from research findings discussed above and from telephonic interviews conducted with teachers of pupils with L.D. in the resource room system followed in the Transvaal Education Department and the principal and teachers at Tafelberg School (for remedial education) in the Cape Education Department, that the environment of the special class/school which is generally less competitive, tends to foster the development of self-worth.

4.4.3. SUMMARY

This discussion attempted to highlight the pros and cons of mainstream education in so far as it affects the most efficient learning environment for the L.D. pupil. The

various professional roles which remedial teachers are expected to fulfill are dictated, not only by the needs of the pupils, but also their learning environment i.e. mainstreaming or specialized school.

To summarize the conclusions:

(i). Mainstreaming is conducive to academic potential being realized. However, children may suffer socially and emotionally.

(ii). Specialized placement does not appear to foster the scholastic success. However, it does engender a sense of self-worth and a realistic acceptance of weaknesses in children so placed.

4.5. TEACHER TRAINING; STRATEGIES AND SUPPORT SERVICES FOR CHILDREN WITH LEARNING DIFFICULTIES IN THE MAINSTREAM.

4.5.1 REMEDIAL INSTRUCTION - SUPPORT FOR LEARNING

According to Bushell (1979), the Warnock Report in Britain emphasised the need for all authorities to provide adequate special education services for children diagnosed as having L.D.. It is strongly recommended in the Report (ibid.) that these children be placed in 'remedial' class groups. Schools should be obliged to offer a curriculum which is designed to assist all these children with learning difficulties.

The principle of mainstreaming the majority of pupils with L.D. is now generally accepted by most educational authorities, worldwide. It is also accepted that special schools will still be needed for those children whose disabilities preclude their remaining in the mainstream education system. It is recognised more and more, however, that the vast majority of the children with specific learning difficulties should, by right, receive education within the regular (mainstream) school.

The Bullock Report (DES, 1975) clearly recommends: - "Remedial help in learning to read should, wherever possible, be closely related to the rest of the child's learning." Pupils with L.D. receiving mainstream schooling have shown distinct gains in socio-emotional, academic and general life skills, which form part of a child's learning. The DEC-HR has adopted the system of integrating pupils with learning difficulties in the mainstream of education. Such pupils then receive full time education in an ordinary class with necessary help and support to both the pupil and teacher. Such support to the pupil may take the form of periods of withdrawal (with its drawbacks, as mentioned earlier) to a separate class or unit with a resident or itinerant remedial specialist for individualized, programmed assistance. Classroom teachers are also advised on strategies/techniques and materials to be adopted and/or adapted to assist the achievement of success by pupils with L.D. in the regular classroom.

As explained in Chapter 3, some schools in the DEC-HR are served by itinerant teachers attached to the School Clinics, of which there are four in the country at present. Schools in the Northern suburbs of the Cape Peninsula receive remedial services from the personnel and remedial education students attached to the Centre for Child Guidance at the University of the Western Cape. At present only 78 primary schools in the country, have resident remedial teachers. In an effort to help pupils with didactic learning difficulties in their schools, progressive school principals and staff have started assistance teams which provide necessary extra tuition, usually after school hours. Professionals from outside the school are consulted regularly on matters of assessment, diagnoses and of a social-work nature.

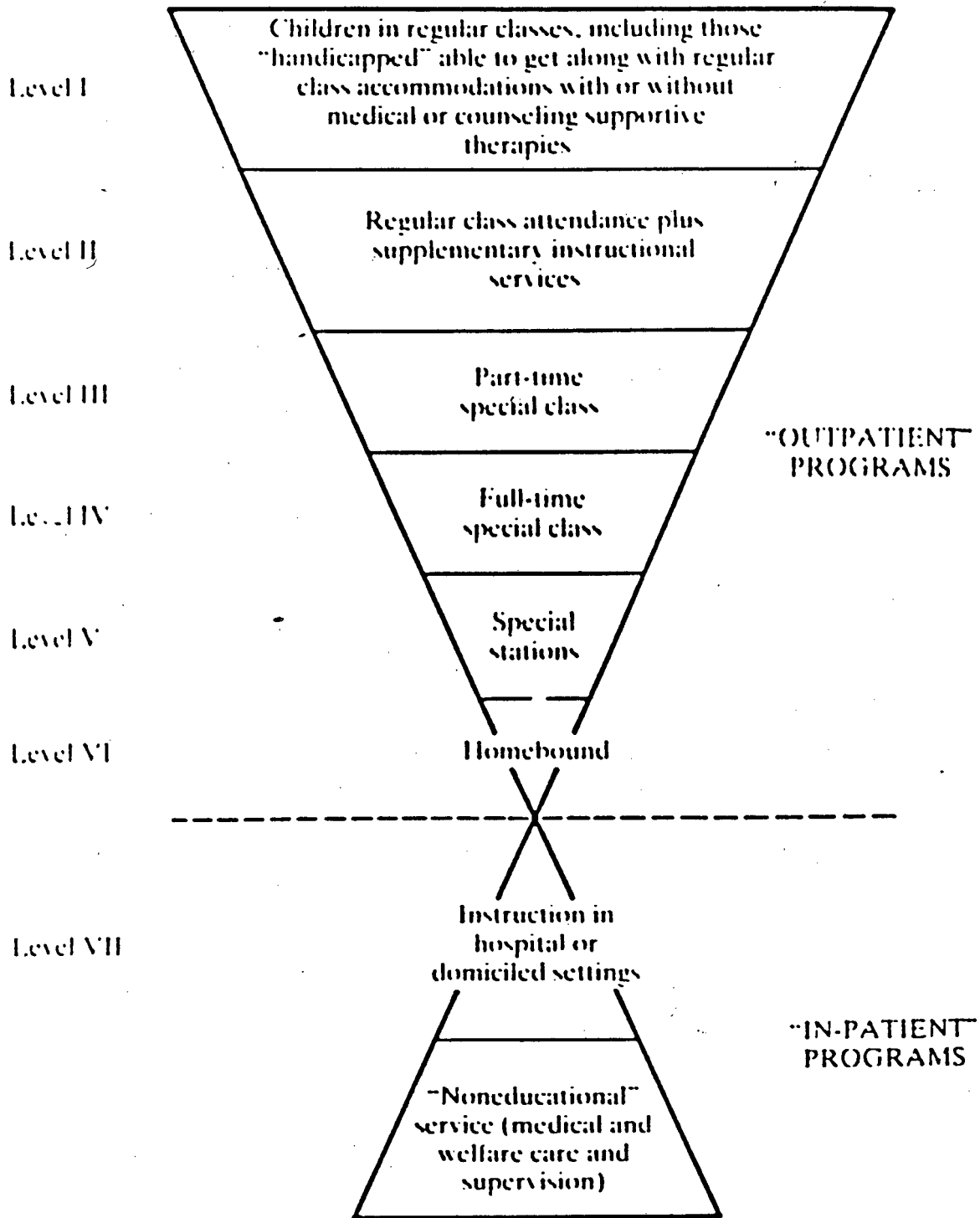
This type of support for learning appears to be underscored by the following provisions to assist pupils with L.D. in the regular class, suggested by Robinson and Thomas (1988 : 51) :

- i. To support the pupil in the (underachieving) subject by sending a teacher / helper to work with him / her in specific lessons.
- ii. To support the class teacher by arranging for a specialist teacher (e.g. remedial) to attend specified lessons on a teacher- partnership basis, working with the whole class.

- iii. To produce and adapt materials for the subject so that the pupil can use them with greater confidence.
- iv. To help and advise the subject teacher about materials, methods and practises that would be appropriate for the difficulties being experienced.
- v. To withdraw (withdrawal technique) the pupil for special help on the subject for a specified length of time.

According to Robinson and Thomas (1988), the above provisions would also enable support staff to appreciate the problems of the class teacher. This could result in help that would not only benefit the special needs of individual children, but might also be of practical use to the class as a whole. Teachers and lecturers whom the author interviewed state unequivocally that regular class teachers have a heavy workload (with 30 to 40 pupils in a class). Wherever possible the professional expertise of specialist (e.g. remedial teacher, teacher counsellor or educational psychologists) should be utilized to provide class teachers with support. Such services should include assessment of pupils, counselling of parents, curriculum development, classroom strategies and follow-up of pupils with L.D..

FIGURE 4.2. Deno's Cascade Model



(Source: Hegarty et al. 1984 : 68)

Educating pupils with special needs in ordinary school poses a challenge which can be - and is - met in many ways. According to Hegarty et al. (1981), Deno's (1970), cascade system (vide. figure 4.2.) describes some of the ways and possibilities of special resources within the ordinary (mainstream) school for pupils with L.D.. It offers a model for complete special education service to pupils. The tapered design reflects the numbers of pupils at the different levels (in America in the late sixties). It should also be noted that at each successive level the need for specialized facilities on a long-term basis is greater. Of significance is the fact that this model is based on assessment of educational need rather than traditional categories of the handicapped.

Deno's system implies a continuum from total segregation (level VII) to total integration of pupils with L.D. in the mainstream of education (level I). For the purpose of this research only levels I and II are appropriate. The treatment of individual needs of the different pre-defined categories of special education are tailored by this model. Levels I and II would cater for pupils with L.D. requiring remedial education.

Merulla and Mckinnon (1982), in their critique of Deno's Cascade system, advocate flexibility at all levels. The implication of this for the levels under discussion in this study is that pupils receiving remedial lessons on the

withdrawal system (level II) should progress to a stage where they can cope with scholastic tasks without specialized support (level I). This implies that pupils receiving remedial teaching on level II should be correctly diagnosed and placed. Diagnosing a pupil, incorrectly, as having mild learning difficulties and being placed on level II when he/she may in actual fact be severely learning disabled (level IV) could mean the pupil being 'stuck' on level II. The type of support and teaching strategies offered at level II would be totally inadequate for a level IV pupil. This obviously has implications for identification by teachers and instruments used for diagnoses and assessments.

4.5.2. STRATEGIES

For the L.D. pupil structured teaching strategies geared towards specific educational goals have been found to produce better results both academically and socially. Strategies, as applied to pupils with L.D., has a common purpose, in that they are devised to guide the pupil in approaching tasks at hand systematically. They also serve to encourage pupils to verbalize the use of successive steps. This allows for over-learning and re-auditorisation, which are proven remedial techniques. Such structured approaches would satisfy the three basic educational objectives as stated by Bloom (1956):

- a. cognitive domain
- b. affective domain
- c. psycho-motor domain.

Hewett (1967) believed that in order to achieve educational objectives a hierarchical system of educational tasks should be followed. He then proposed the following hierarchy of educational tasks for the successful inculcation of learning material - teaching strategies for the L.D. pupil could include elements of these:

- a. primary task level
- b. acceptance task level
- c. order task level
- d. exploratory task level
- e. relationship task level
- f. mastery task level
- g. achievement task level.

Hewett maintained that most children with learning problems are given tasks at all levels with the exception of the primary and achievement levels which are not applicable in the majority of cases.

4.5.2.1. Strategies for the pupil with learning difficulties

i. Peer tutoring

The first step for successful learning is, according to Alderman (1971), "to personalize the environment, thereby accommodating individual differences in (learning style". Another researcher, Heron (1978), suggests that one way to personalize the educational (learning) environment is to institute a peer tutoring system. This involves using mainstreamed 'average' and 'above-average' pupils. The

selected pupils would be those demonstrating leadership ability and who has mastered certain aspects of the learning material. These tutors, with guidance, then impart knowledge and skills to their peers (tutees) experiencing learning difficulties in specific subject areas. Such tutors therefore act as peer models.

By utilizing peer tutoring strategies, as found by Haisley et al. (1981), coupled to individualized instruction by the teacher, the mainstream child with scholastically related problems can be taught basic academic skills with great effect. According to Haisley and his associates, crucial to the success of a mainstreamed peer tutoring programme are the following major components:

- the selection of the students;
- the training programme that would equip the tutors with the skills needed to do an efficient job;
- the matching of tutors with students needing tutoring in their subject areas;
- the type of supervision and assistance afforded the tutors once they were placed in classrooms;
- the amount of communication and support given to the regular classroom teacher.

Implementation of the above components by Haisley et al. (1981), involved the following requisites and prerequisites:

Selection: The peer tutors need to have the following personal qualities: dependability; responsibility; maturity; individual academic competence; sincerity in helping others and high tolerance for frustration.

Training: The training given (ten days of two 45 minute periods) by Haisley et al. (1981), to a group of tutors for their study included: behaviour management; tasks analysis; designing teaching; direct instructions; classroom survival skills; communication.

Matching: Matching of tutor with mainstream students took into consideration personalities e.g. hard to manage students were not placed with quiet-mannered tutors.

Supervision: The teachers who developed the programme, supervised the programme.

The results obtained by Haisley et al. (1981), provided strong support for the conclusion that the at-task behaviour of tutees improved significantly as a result of this programme. Advantages of this strategy according to the researchers (op.cit.) are:

- a.- students remain mainstreamed - there is no need to leave the class to receive help;
- b.- the tutor acts as a filter for teachers and provides individualized step-by-step teaching;

- c.- study skills are practised as needed in the classroom setting;
- d.- tutees and students with L.d develop new self-confidence through completing assignments in regular classes;
- e.- teacher observe tutors and occasionally incorporate their instructional processes and procedures in teaching the whole class;
- f.- the number of students receiving tutoring is much greater than any one teacher or aid could accomplish;
- g.- interaction between tutor - tutee is a valuable social product (tutor acts as a good peer model).

The intensive programme requires close supervision and co-operation between teacher, tutor and tutee. To maintain programme quality tutors will need to constantly communicate with supervisors and be encouraged by them. This may not be so easy in the DEC-HR due to the fact that very few teachers are adequately qualified to teach regular classes (compare data from respondents for this research - chapter 6) and many are much less qualified in teaching pupils with special educational needs. The Annual Report of the DEC-HR's

Psychological Services (Administrasie, 1988) states that of the 117 remedial posts at Primary Schools, School Clinics and Special Schools, only 36 teachers (30.8%) are fully qualified. It should be pointed out, however, that through in-service training, staff development and workshops there has been a greater awareness of the need for upgrading and /or updating teachers' qualifications and knowledge of pupils with learning difficulties .

ii. Cognitive Strategy Training.

Learning a skill e.g. problem solving, is not merely a matter of acquiring the ability to perform a set of discrete responses. The essence of skill learning lies in the modification and integration of responses into systematic patterns of sequences, which are largely automatically controlled. Anderson (1980), identified three stages of skill learning, namely, the *cognitive stage*, *associative stage* and *autonomous stage*. During the cognitive stage discrete responses are learned through conscious attention to one's actions and through conscious perceptions of the results thereof. During the associative stage less attention is needed for the performance of each discrete response because of unconscious proprioceptive control. More attention may then be given to combining responses into little patterns. In the final autonomous stage the skill becomes increasingly automatic as an integrated whole, leading to independent learning.

"The ultimate aim of all remedial teaching is the independent learning of the child. Learning disabled children should be supplied with the tools of self-sufficiency so that specialized remedial services become redundant as speedily as possible. Towards this end, appropriate individualized strategies should be devised and the children trained in their use so that they can be purposefully applied to organize their learning" (Archer, 1984).

Ryan et al. (1986), assert that cognitive techniques are being widely advocated as a means of helping children with L.D. become more independent, organized and effective learners. Although most studies concentrate on strategy based interventions in reading and mathematics it is contended by educationists that the principles can be successfully applied to other aspects of academic work e.g preparing for examinations. It can help children with L.D. organize themselves and their learning as a first step towards becoming active, independent learners.

A. Cognitive Behaviour Modification (CBM)

In general, cognitive strategy programmes or cognitive behaviour modification (CBM) as it is also known, has emerged as a technique for realizing the learning potential of children with L.D. in the regular classroom. "It requires active participation in learning, overt verbalization, modelled strategies and a goal statement of a planful, reflective response style", (Ryan et al., 1986).

Ryan et al. (1986) quotes researchers, Kendall and Braswell, as advocating five steps for effective cognitive strategy training for children with L.D., namely, (1) problem definition; (2) problem approach; (3) focussing on attention; (4) choosing an answer; and (5) self-enforcement/ coping statements. This approach corresponds to a large measure with that advocated by Shlomo Kaniel (1989).

Pupils with L.D. should be taught to think, plan and apply problem-solving strategies by themselves. Shlomo Kaniel (1989), proposes the following steps in the cognitive process:

- a. gathering information to define problems e.g. in Mathematics this would entail reading the question slowly; highlighting key words etc.
- b. defining the problem - pupil to formulate questions in his / her own words;
- c. information gathering for problem as formulated - this stage may be skipped if teachers give problem with all relevant information;
- d. organizing information e.g. visualize it- e.g. in charts, pictures, graphs, according to problem type;
- e. determining plan - i.e. choosing proper formula;
- f. implementing plan - solving problem step-by-step;

- g. feedback - during task itself: putting data in the formula and checking if result is reasonable; after task; in view of teacher's comments and mark allocation.

The aim is to inculcate rational problem-solving techniques. The final outcome of this strategy will be, that after overlearning thereof, it would result in automaticity.

As is indicated in Chapter 1, children with L.D. often manifest a discrepancy between potential and performance in areas such as reading and mathematics. Student verbalizations of problems in mathematics appear to re-enforce correct problem-solving strategies and thereby increase accuracy (Ryan et al., 1986; Kaniel, 1989; Archer, 1984).

Ryan and her associates (1986), conclude: "We believe that the cognitive behaviour modification approach provides an excellent base upon which to develop techniques for children with L.D. to behave actively and strategically in academic settings."

Leon and Pepe (1983), reviewed research on CMB to establish a rationale and logic for the use of cognitive interventions to remediate the academic deficits of exceptional learners (e.g. pupils with L.D.). Their study controlled for factors like task analyzed curriculum, precise assessment of procedures, student-teacher ratio, and the use of reinforcement procedures which have been found by researchers to be critical to educational programming for developing academic skills.

The data generated by Leon and Pepe's (1983), research indicated that cognitive behaviour modification, is a viable alternative for remediating deficits in, particularly, the computation of arithmetic. A major conclusion based on these findings is that its effectiveness is due, at least in part, to generalization of training effects to similar computational tasks. It may be of interest to note, that to the author's knowledge, at least one school in this country, namely, Tafelberg School in Cape Town, a special (Remedial) education school (Department of Education and Culture - House of Assembly) has recently adopted the CBM model for strategy training for their students.

B. *Self Instruction*

The findings of Schunck and Cox (1986), from a study on effects of verbalization on children with L.D.'s mathematical skills suggests that continuous verbalization leads to more skillful performance and higher self-efficiency in children with L.D.. In summary, Ryan et al. (1986), states that self-instructional cognitive strategies have been applied successfully to improve mathematical accuracy in a small number of studies.

Poor readers, generally, and particularly children with L.D., "fail to attend systematically to text structure, tend not to monitor meaning while reading and do not discriminate effectively between useful and harmful strategies", (Ryan et al. 1986).

Numerous cognitive strategy training studies for poor readers have been undertaken. More research, however, is needed on the ability of children with L.D. to profit from such training as far as improvement in reading ability is concerned. Researchers appear to agree on the following five steps to be taught for reading comprehension:

1. What are you studying this passage for ?
2. Find the main ideas in the passage and underline them.
3. Think of a question about the main idea you underlined.
4. Learn the answers to your questions.
5. Always look back at your questions and answers to see how each successive question and answer provides you with more information.

C. *Successive-simultaneous Processing Model.*

Kaufman and Kaufman (1979), studied strategy training and remedial techniques applying the successive-simultaneous processing model for applicability to students with learning difficulties. The method, which proved to be efficacious, fun and non-threatening and applicable in the regular classroom (mainstream) involves:

1. the child being guided in approaching the task at hand and encouraged to verbalize the use of successive strategies;
2. the use of the method in the regular classroom with benefit to all children as in this study average students improved in performance;

3. using training material that is intrinsically interesting.

This method, according to Kaufman and Kaufman (1979), should be even more successful in improving academic performance when applied directly to the learning of contextual material in school.

D. *Neurological Impress Method (NIM)*

Lorenz and Vockell (1979), examined the neurological impress method for readers with L.D.. The result of their study indicate, that there were no significant differences between the control group and the experimental group in gains, in word recognition or reading comprehension. This they found true even when interactions between IQ, sex, grade (standard), teacher and school were examined. They quote Hollingworth's study which confirmed their results indicating that no significant difference between the group receiving neurological impress training and those who did not.

E. *Learning Potential Assessment Device (LPAD)*

A study undertaken by Skuy, Archer and Roth (1987), demonstrated the usefulness of the Learning Potential Assessment Device (LPAD) for intervention in the area of learning problems. "The LPAD has provided insight into the cognitive processes that underlie a child's particular area of scholastic strength and weakness", (Skuy et al., 1987).

The LPAD is a dynamic assessment - and - intervention model developed by Feuerstein and his associates (1979). It tests individual children's learning processes, identifies the specific methods by which they can be taught, and provides for development and modification of cognitive processes. The LPAD model emphasizes the ability to learn and apply a principle or set of principles, permitting an assessment of the child's capacity to learn rather than providing a measure of what he knows. This approach may be extended to include any task, irrespective of the content, provided the purpose is to evaluate the extent to which an individual is able to become involved in a learning process. "Of particular value is the structured progression of tasks", (Feuerstein, 1979: 99).

The 'structured progression of tasks', inherent in the LPAD, is one of the basic aspects of cognitive strategies. As a cognitive strategy especially suited to culturally deprived pupils with learning difficulties, the LPAD lends itself to improvement of deficient functions. The first step according to Feuerstein (1979), "is to produce in the pupil a state of awareness of the existence of a problem in the tasks presented to him/her (definition of the problem phase)". By a process of questioning, the pupil's perception is oriented and he/she is "endowed with strategies for the selection of the relevant data", (op.cit. :110).

Enrichment of the repertoire of mental operations is another outcome of the LPAD. Operational thought processes

established by the training of specific operations, such as analogies and categorization, is reinforced by the repeated use and the application of variations of the same problem and exposure to different problems.

Another significant outflow of the LPAD model is the creation of reflective, insightful thought processes (op. cit. :115). Feuerstein and his associates assert that "insightful thought processes associated with cognitive operations can be considered the major factor that provides the cognitive processes with the stability required to produce the generalization to other events", (op. cit.). Reflective thinking, in particular, can be induced by the pupil being guided by questions such as : "'What did you do first?' 'Next?' 'Why in this order?'" (op. cit. :117).

According to Skuy and his associates (1987), their study achieved its aim of using the LPAD in the demonstration of 'cognitive modifiability', and as a basis for remedial programming for a scholastically impaired child.

F. Mastery Learning

Some educationists advocate mastery learning as a cognitive learning strategy. It is purported to provide structure and practical conditions which will enable the majority of pupils to reach high levels of attainment (Gains, 1976). "Mastery learning has strong positive effects on students' cognitive and effective (e.g. self-concept) outcomes and reduces the wide differences in student achievement, as made evident by research", (Jantjes, 1987). The procedure follows three

stages, namely, formative testing; followed by a feedback-corrective procedures stage; and finally parallel formative testing to determine whether corrective procedures have been consolidated.

Children who experience learning difficulties show aversion to all academic material. The fact that research results on cognitive strategies indicate that average students improved in performance, suggests that the techniques can be applied within the regular classroom and could benefit all children, (Guskey, 1988).

4.5.2.2 Support and Strategies for Teachers

i. Teacher Training

It is argued by Ivarie et al. (1984) that the mainstreaming of pupils with L.D. in regular classrooms places a major part of the responsibility for that pupil's instructional programme on a regular classroom teacher.

"One of the major complaints of regular classroom teachers concerning mainstreaming relates to their own feelings of inadequacy in teaching the child with L.D.. Teacher training, generally, does not include preparation for or knowledge about, children whose learning deficits are marked by rather specific characteristics not easily remediated by visual classroom teaching approaches", (Carberry et al., 1981).

Ken Dovey and Joseph Graffam (1987), concur with the above viewpoint, stating that, "most teachers in mainstream schools have no training and little knowledge with respect to teaching children with disabilities, which means that they have to be prepared to put in a lot more extra effort and adjust their teaching styles considerably", (p.101). This is difficult when they have to simultaneously teach twenty-five other children (35 to 40 in DEC-HR) and maintain order in the classroom.

The major impact of the Warnock Report (DES, 1978), according to Raban and Postlethwaite (1988), has been to point out the range and variety of need which is evident among pupils requiring some special educational provision. The report also argued that such provision is not solely the responsibility of special needs specialists in mainstream schools, but that all teachers in mainstream schools need to have relevant skills and information to identify and provide for pupils with special educational needs.

In the South African context, the Work Committee charged with investigating the education of children with special educational needs (HSRC, 1981) commented as follows : "The teachers themselves for the most part pay accidental and sporadic attention to the scholastically impaired child...". The Committee considered the training of teachers to cater for pupils with special educational needs to be of 'extreme importance', (op.cit.).

Bushell (1979), commenting on the Warnock Report, states that, "if the discovery procedure is to produce effective remedial measures, this must lead to an improved standard of teacher training both initially and during service, in order that all teachers become aware of the signs of failure before severe problems occur". It is proposed that all teachers in training should receive a module of specialized education (e.g. remedial), (op.cit.). From enquiries made to teacher training institutions in the DEC-HR, a remedial education module is now included in most of the third and fourth year teacher training courses. This is an attempt to train more effective teachers. Effective teaching, according to Burns (1987), "creates a different learning environment in which to develop socially, emotionally, as well as academically". Burns (1987), quotes research done by Hill, Powell and Fiefer in 1960 who found that the flexible, well integrated teacher was most effective with all types of pupils.

Burns (1987), states that, from a previous research, undertaken by him, the effective teacher appears to be differentiated from ineffective ones by demonstrating:

1. a willingness to be more flexible;
2. an empathic ability, sensitive to the needs of pupils;
3. an ability to personalize their teaching;
4. an appreciative reinforcing attitude;
5. an easy informal warm conversational teaching manner;
6. emotional adjustment.

The above characteristics of an effective teacher are even more applicable to teachers involved with teaching pupils in DEC-HR in view of the unique socio-political and -economic conditions. The consequent educational disadvantages experienced by these pupils, with its consequent high incidence of learning problems among Junior and Senior primary pupils (vide. Chapter 3) present a challenge to the teacher corps. The effective teacher in this department must prepare his pupils by educating them in the widest sense.

The main features of effective teaching e.g. personal relationships, child-centered approach, self-discipline, are those that promote self-actualization of the student (especially the student with L.D.) This can only be achieved through the provision of a classroom ethos that enhances productivity, personal growth, self-esteem, confidence and critical awareness. "These are characteristics which will be so needed in the future South Africa", (Burns, 1987).

Hamilton (1974), feels that owing to the fact that the child is entirely involved in the learning process, a deviation in learning is a problem entailing all disciplines concerning the welfare of the child. All students of these different disciplines should have some knowledge of the phenomenon of learning disability because in the course of their duties they will come up against it. Inter-disciplinary co-operation on training level can go a long way towards achieving this.

Barker (1989), found from his interviews with noted South African educationists, that teacher training in most sectors of South African education still lays little stress on children in need of remedial teaching. Many of the problems, according to Barker (1989), stem from the apartheid system of separate education departments for different ethnic groups. Barker quotes Mary Metcalfe, a lecturer at the University of the Witwatersrand's Department of Education and immediate past chair-person of the Southern African Association for Learning and Education Disability (SAALED) as stating that "In white education, student-teacher training is adequate In Black and 'Coloured' education, however, the shortfall and problems are frightening", (Barker, 1989:27).

It would appear, that in the interest of education in this country and, in particular, the education of the pupil with L.D. in the mainstream that student teachers of other-than- 'White' population groups be allowed to train at 'White' teacher training institutions. Official government policy seems to preclude this at this stage. However, according to Gaydon (1987), dr. Viljoen, at that time minister of Education and Development Aid in the cabinet, publicly indicated a willingness to consider the training of African teachers in colleges reserved for other races. Afrikaans training colleges and teachers' societies oppose integration of teacher training. "However, it appears that there may be considerable scope for efforts to achieve limited integration in 'White' English-medium training colleges", (Gaydon, 1987: 63).

Integration of student-teachers may bring to the fore another interesting approach to teacher education, namely that of a multi-cultural approach, and its implications for the children with L.D. in the mainstream of education. Given the paucity of research on teacher education for multi-culturalism in the South African context, Van Zijl (1987), attempts to highlight strategies which could assist teachers in coping with future change.

The concept of multi-culturalism places stress on the retention of one's own culture coupled with recognition of the contributions and enrichments that other cultures can offer. "It has been likened to a 'salad bowl', where the various ingredients not only retain their particular distinctive characteristics, but also contribute to the ultimate whole", (Van Zijl, 1987).

Rodrigues (1982), quotes the American Association for Colleges and Teacher Education (AACTE), as stating that: 'multicultural education is education that values cultural pluralism'. Multicultural education requires schools/educational institutions to be oriented towards the cultural environments of all children. As educational institutions play a major role in shaping the attitudes and beliefs of the nation's youth, it "must reflect a commitment to cultural pluralism and provide leadership for the development of individual commitment to a social system where individual worth and dignity are fundamental tenets," (op.cit.).

Having reviewed the literature on research into multi-cultural education systems, notably in the United Kingdom and the United States of America, Van Zijl (1987), concludes that taking into account the multi-ethnic nature of our South African society, and the nature of our educational system, the task for teachers and particularly teacher educators should be perfectly clear. "The iniquities of the system will not be removed overnight, but an honest commitment to a full recognition of the multi-faceted quality of our society is long overdue" (Van Zijl, 1987). In this regard, a support system for teachers in the mainstream of education is proposed.

(ii) Support Strategies for teachers -

In-service training and staff development:

Perold's (1984), study of in-service training to 'para-professionals' indicates the increased value that can be derived from in-service training. According to her findings, it seems that experienced primary school teachers, who are professionals in their own right, may become the para-professionals of remedial education when they are trained in the approaches, skills and techniques in remediation to be used in the mainstream learning situation to alleviate scholastic difficulties.

Regular in-service training and staff development programmes involving teaching strategies for pupils with L.D. have been found, from interviews with principals responding to the

questionnaires for this research, that it increases the probability that the teacher add their newly acquired skills to their teaching repertory. However, it was felt that such training should only be offered to teachers who feel that they could benefit therefrom. Forced compliance will not necessarily lead to effective changes in teachers' behaviour. The findings of Skuy and Perold's (1986) study, demonstrate the potential value and cost-effectiveness of in-service training in "alleviating the high rate of scholastic impairment in the 'Coloured' population group in South Africa".

An aspect which could be dealt with at such in-service training and/or staff development sessions is curriculum development for the regular school making allowance for the different learning styles of pupils. Prevention, with early intervention, according to the findings of Cosford (1988), is better than subsequent remediation. This has implications for curriculum development - it should be based on correct identification of the needs of the children.

The strategy of providing remedial strategies to all regular classroom teachers receives support from Marleen Pugach, in Franklin (1987 : 163-177), who questions the efficacy of distinct training programmes for teachers of the learning disabled. According to her, prospective learning disabilities teachers establish a distinct professional identity based on their training that supposedly differs from that of regular class teachers. This, in the opinion of Pugach (op.cit.), is

based on the seeming need of pupils with L.D. for specialized instruction, and "on the existence of job responsibilities that are different from those of regular classroom teachers".

Pugach (op. cit.) believes that "there is little justification for continued training of specialized education teachers for the learning disabled children". She favours broader training of regular classroom teachers (either as student-teachers or in-service training as part of staff development programmes) to enable them to address the needs of such children in the regular classroom.

Gains and McNicholas (1979), expressed similar sentiments. They believe, "children can learn their three R's as effectively through the study of general topics as they can through an analysis of specific weakness and the teaching of these in isolation". Powers (1983), asserts that, "while there is widespread agreement regarding the potential of in-service training, there has been little agreement regarding the means to employ in the realisation of that potential". It is pointed out that critics within the literature have described in-service training as "impractical, insensitive, irrelevant, lacking a conceptual framework, lacking continuity, meaningless, misguided, narrowly conceived, pretentious, remediative in nature, rigid in format, uncoordinated, unrealistic, unrelated, unsequenced, unsystematic, and without basis in learning theory", (op.cit.).

Teacher support, through in-service training and staff development should be conducted by the specialized (remedial) education teacher, who should preferably also act as consultant to teachers, pupils and parents of all children in the school, (see also Chapter 5 of this research).

Gains (1985) suggested some guiding principles which should govern in-service training courses:

1. Personal development;
2. Being broad-based in that they can be sensitive to contemporary issues and developments;
3. Being school-focussed and school-based with problem-solving activities at their core;
4. Should encourage multidisciplinary thinking;
5. There should be local authority involvement (in DEC-HR context - regional departments);
6. It must encourage innovation.

(pp. 53 - 54).

When considering in-service training programmes, it is, in the view of Sparks (1988), "worth considering the development of self-efficacy and high expectations among teachers". Sparks posits that "one way to increase self-efficacy is to provide intimate structured small groups sharing and problem-solving sessions for teachers". This strategy is being used with great success by a colleague of the author, Mr. Harold Holmes, with remedial education teachers in the Cape Peninsula Schools (House of Representatives). It has been

found that getting teachers together regularly in small 'instructional support groups' provides a safe environment for teachers to discuss their concerns and victories and learn together. It has been mentioned by teachers that they gained the confidence to try new strategies gained from their support group. These teachers began to expect themselves to do whatever is needed to help their pupils learn and they have the confidence, which is the essence of self-efficacy, to try new strategies.

(iii) Classroom Support Strategies :

According to Raban and Postlethwaite, 1988, the specialist remedial teacher has an important role to play, in providing background information on pupils, giving further advice on techniques and materials for mainstream staff and, especially making direct support available to pupils with learning difficulties. They also quote research undertaken by Bell and Kerry in 1982 with regard to teachers support and strategies and summarize the advice given to teacher in the mainstream with mixed ability classes as follows:

a.- Eliminate 'dead' time

Teachers should think about what they are going to do with pupils who finish work sooner than others. Additional work should be ready for them or they should be invited to join slower groups.

b.- Set a variety of tasks.

Different activities for the same teaching purposes should be used being designed to make use of the different skills and abilities of the pupils.

c.- Give instructions clearly

This should be done by both visual and auditory presentation.

d.- Revise any key points

Pupils to be asked to reflect on it, talk about/or write about key points in the light of their own experience.

e.- Sustain interests and motivation

Feed but do not overwhelm curiosity. Use competition, use co-operation and collaboration generously. Always give praise for pupils efforts.

f.- Encourage participation

Teachers must make sure that pupils have a contribution to make to the lesson.

g.- Give individual attention

Teachers should find as many times as possible to do this (e.g. when other pupils are occupied, intervals, after school etc.)

study, they believe, supports the view that their programme, known as the Adaptive Environment Learning Model (ALEM), can be implemented in a variety of settings and that student outcome measures coincide with high degrees of programme implementation. The ALEM should be designed to maximize each student's opportunity to master basic academic and social skills. The focus of the ALEM's design is modification of conditions in the learning environment to accommodate the needs and characteristics of individual students. At the same time, the programme systematically builds upon each student's strengths and capabilities in order to increase the ability to profit from the learning environment.

The ALEM focuses on education in the 'least restrictive environment' and is therefore perfectly suited as a mainstreaming programme (Wang and Birch, 1984). Overall results from the Wang and Birch study support the hypothesis that there is a significant relationship between the extent to which critical dimensions of the ALEM are in place and the extent to which the desired nature and patterns of classroom processes are observed. "As implementation improved, commitment changes in classroom processes and student academic attainments were observed", (op.cit.).

Jean Garnett (1988), concludes that the principles underlying the practise of classroom support demand great changes within a school. All staff including Principal and head of departments need to be fully committed and involved. Perhaps

the most important principle to grasp is that all pupils have the right of access to their school's curriculum and therefore all teachers have responsibility for identifying and responding to special needs which emerge in the classes. "Classroom support also has profound implications for the very nature of the curriculum: how it is to be organized and delivered, and the variety of teaching skills which teachers now need to have in their repertoire", (op.cit.). What Garnett (1988), have found interesting and heartwarming is that "when those who are truly committed to it and meeting each problem and obstacle with confidence and co-operation all the teachers seem to gain in professional strength and expertise."

(iv) Teacher Assistance Team (TAT)

Jordan (1974), maintains that the team approach to assessment, programme planning, implementation and review is superior to anything else we know, especially when that team includes persons with key responsibilities for what is going to happen later - persons such as parents, the referring teacher, the educational diagnostician (school psychologists, school clinic psychologist or private psychologist), the specialized education teacher (e.g. remedial) and the school principal. It is suggested that TAT's should also have substantial responsibility and authority and have ready access to another school's team of similar interests.

According to Carberry (1981), there is a great need for communication between regular classroom teacher, the specialized education teacher and the TAT (Child Study Team) members. Raban and Postletwaite (1988), concurs with this finding, stating that, "if joint responsibility for special needs pupils is to be effectively discharged by mainstream and specialist staff, there must be good communication between them".

According to the annual report of the Psychological Services of the Department of Education and Culture. House of Representatives (1988:18), the extension of teacher support teams would receive priority in the future. The Principal Subject Adviser, Remedial, states that "these support teams have been found to be most effective in the provision of didactical assistance to pupils with learning disabilities."

4.6. SUMMARY AND CONCLUSION

It has been the purpose of this chapter to illuminate some of the issues involved in the 'controversy' of mainstream education of the learning disabled pupil.

Mainstreaming, it seems, cannot be considered the final answer in the education of all children with L.D.. Diagnosis and remedial intervention need to be directed towards both children and teachers. It appears that for mainstreaming of the learning disabled to be effective interaction between

improved teacher training, careful management of financial resources, improved measurement devices, remedial techniques, classroom strategies and teacher support is required.

Since the child with L.D. eventually has to make his own way and establish himself as an adult in the community where he should be as independent as possible, the aim is to keep such children (insofar as it is educationally justifiable) in the mainstream of education. It is generally accepted by educationists that the mainstream setting is the most conducive and humanizing educational environment for pupils identified as having learning difficulties. However, poor interpersonal relationships may necessitate specialized educational support as is the case in countries like the United States of America , United Kingdom and Canada.

It seems in the final analysis, with adequate financial assistance, all professionals will decide the future of specialized education and the assistance of the world's learning disabled population. Their future is in each and everybody's hands and the first step of many in the right direction appears to be MAINSTREAMING.

CHAPTER 5

REMEDIAL SERVICES AND THE ROLE OF THE

REMEDIAL TEACHER

5.1 REMEDIAL SERVICES

"Providing appropriate education for individuals must be the principle concept on which all educational programs and services are developed". (NJCLD, 1987). In view of the diverse nature of learning disabilities, for children with L.D. to receive appropriate education a diverse range of services must be provided by professionals with differing skills and expertise.

The NJCLD (1987) posits that the types of services provided to L.D. children are determined by :

- (a) professionals concerned with L.D. planning, design and implementation of remedial services, having a clear understanding of what learning disabilities are and the manner in which these different disabilities modify how an L.D. individual learns;
- (b) the types of disabilities and the degrees of severity;
- (c) the long term nature of L.D. which necessitates a continuity of programmes and services.

In line with the NJCLD recommendations, Remedial teachers, traditionally, especially in South Africa, provide services based on a medical model and involves individual diagnostic assessment, individual programme design and individual support and motivational strategies. This is an application of traditional teacher training, (Green, 1989).

It is generally accepted that children considered eligible for remedial help are at least of average intelligence and having been diagnosed as having either specific or general learning disabilities. Group teaching, liaising with classroom teachers offering support and consultation, remedial counselling, workshops for pupils, parents and careworkers or teachers who are interested in developing their own skills are some of the different services provided by remedial teachers, (op. cit.).

The extra specialized skills of remedial teachers are utilized to provide services such as helping L.D. learners to take responsibility for their own learning, personal control and building of self-esteem, self-assertiveness, interpersonal relationships and develop socially and emotionally (compare items on questionnaire - appendix A).

Remedial education settings may be considered unique since students learn at different rates and, presumably, under different learning conditions. Pupil achievement is a critical issue in special education classrooms, and more

specifically remedial education settings. Instruction presented at the L.D. student's level, instruction that is fast paced, contrary to general belief, and comprehensive is associated with learning gains, (Englert, 1983).

Auxiliary services such as psychotherapy, audiometric and optometric services provide useful support for remedial services. In this regard speech therapy and/or language development, for instance, can go a long way towards meeting some of the aspects of remedial education mentioned above.

Remedial teachers in the DEC-HR schools indicated that they feel competent doing assessment and diagnosis of learning problems. They felt, however, less competent with respect to the application (teaching practice) of diagnoses. This necessitated regular in-service training to equip teachers with necessary skills to apply remedial techniques in the teaching situation. Research findings in the literature indicate that educational (didactical) handicaps due to socio-economic disadvantage usually yield to remedial intervention more readily than constitutional/inherent (clinical) handicaps. In the absence of empirical data with respect to the success rate of remedial teaching, the above statement cannot be supported as far as it affects DEC-HR schools.

5.1.1. AN OVERVIEW OF THE SITUATION OF REMEDIAL SERVICES IN SOUTH AFRICA

"Special education must be understood as a social process, set within a social and political context if the special needs of children are to be truly served", (Tomlinson, 1982: 182). In the South African context, the development (past, present and future) in Specialized Education (of which Remedial Education is a subset) cannot be fully understood without an historical understanding of the social and political origins of this important part of the education system.

A thorough exposition of the origins is not within the scope of this research, sufficing to state therefore, that the South African education system, although overall controlled by the central government (vide. Chapter 4), is sub-divided into four major so-called own affairs education departments namely: Education for 'Whites', Education for 'Coloureds', Education for Indians and Training Department for Black Education.

It has been learnt from reliable sources, by the author, that (present political announcements taken into account) consideration is being given to shared services, as far as specialized education is concerned, between the different departments.

5.1.1.1. EDUCATION FOR 'WHITES' (DEC - HOUSE OF ASSEMBLY)

The general declining numbers of pupils at mainstream schools country-wide has made it necessary to reduce teaching posts at schools. Posts usually discarded are those of special education, in particular, remedial teaching posts. Remedial teaching posts at School Clinics appear to remain static.

As stated earlier (paragraph 4.3) rethinking, planning and possible revision of Specialized Education services in this Department was scheduled for 1989. Very few, if any new Remedial Education posts are being created at mainstream schools. Where possible, present services are consolidated or improved.

5.1.1.2. EDUCATION FOR 'COLOUREDS' (HOUSE OF REPRESENTATIVES)

As a detailed account of services provided has been provided in Chapters 3 and 4, it will not be repeated here. The remedial teaching and psychometric services are being expanded. In order to meet the demand for such services, school psychologists provide psycho-clinical sessions after school hours at the different regional offices, (DEC-HR, Educ. Circular 36/89, Sept '89). New school clinics are planned for the major centres of the country. Financial constraints, as previously mentioned, appear to be a

hampering factor at this stage, however. Present services are, therefore, being consolidated with in-service training of personnel, on a fair scale, being undertaken.

5.1.1.3. EDUCATION FOR INDIANS (HOUSE OF DELEGATES)

Present remedial services are being consolidated. An effort is being made to expand psychometric services, presently concentrated in the Natal area, to the other provinces. Remedial services are being provided to meet the needs of average and above average pupils' having specific or general learning difficulties. Such remedial classes are attached to primary schools. In 1985 there were 85 such classes (Fiat Lux, 1986 : 11).

5.1.1.4. EDUCATION FOR 'BLACKS' (D.E.T.)

As stated in Chapter 4, the present services are woefully inadequate to serve the vast numbers of potentially L.D. learners from this population group.

Approaches in this department are towards mainstreaming of special education. As far as L.D. pupils requiring remedial teaching are concerned, they are accommodated in regular classes - mainstream education.

There are plans afoot for the extension of the services. 52 Teachers are to be trained annually (initial and in-service training inclusive) from all parts of the country, to take

up remedial posts in schools. This training will be done at the Sushuguwe Training Centre, Pretoria.

5.1.2. BRIEF OVERVIEW OF DEVELOPMENTS IN REMEDIAL EDUCATION IN OTHER DEVELOPED COUNTRIES

5.1.2.1 BRITAIN

The Education Act of 1981 fulfilling a recommendation of the Warnock Report (1978) requires a formal document - Statement of Special Education Needs - to be drawn up for all children with special educational needs (Webster, 1989). The Act which contains three key definitions, namely : special educational needs, learning difficulty and special educational provision, give Local Education Authorities (LEA's) much greater responsibilities for identification, assessment and provision of assistance to children with special educational needs.

Parents are informed by local health authorities timeously if it is suspected that a child has or is likely to have special educational needs. Very young children (under two years), with parental consent are eligible for a Statement of Special Educational Needs. Many problems are experienced in Britain with the procedure of statementing but it raised the level of awareness of the rights of children with special education needs.

Significant progress has been made in developing remedial education to contribute to the effective utilisation of curriculum content and methodology, resources and organisation, careers education, counselling, computer-aided learning and in-service education of teachers.

5.1.2.2. UNITED STATES OF AMERICA AND CANADA

Public Law 94-142 increased attention to planning education programmes with emphasis being placed on the education programme rather than the selection for special group teaching. Great importance and value are attached to Individual Education Programmes (IEP's). In Canada, "even in the absence of a legal requirement to do so (as in the U.S.A. and Britain) the development of a written document along IEP lines is evident", (Webster, 1989).

IEP's contain certain planned agreed upon objectives and goals, derived from assessments and diagnostic data, for the pupil. One of principles adhered to is that of non-discriminatory assessment. All assessments are to be multidisciplinary in nature with background information provided by parents. Parent participation is encouraged as they are regarded as partners in the decision-making process concerning the education of their child. No child is excluded from education and all parents are made aware of the need to educate every child - the principle of zero child reject and child find is followed. Should the school and parent be unable to reach agreement on an IEP for a

pupil the parent has the right to take the matter up with the Education Authorities - principle of due process. (Henderson, 1989).

5.1.2.3. SCOTLAND

"Traditionally in Scotland, the emphasis has been academic, based on opportunity", (Jones, 1979). Any lack of educational achievement on the part of pupils should therefore be attributed to inability on their part rather than to denial of opportunity.

In Scotland remedial education developed, originally, primarily as provision of assistance to pupils at secondary schools who found it difficult to cope with the ordinary curriculum. It was viewed as a positive attempt to recognise the serious limitations children's ability to cope with the academic curriculum and to provide balanced teaching in a remedial class on an ad hoc basis.

At primary school level, currently, educationists and educators regard the remedial provision as adequate. Assistance is provided in reading and number work for children withdrawn from their classes at different times for various durations. The increase in the number of remedial teachers and the effect of new ideas have given rise to diversification and experimentation. Already since 1979, as reported by Jones (1979) some schools have been evolving

systems of helping children within the context of mixed ability classes in a whole range of subjects.

5.1.2.4. ISRAEL

"The basic tenet of the educational and rehabilitation policy in Israel is that every child with special education needs assessed by recognized diagnostic procedures is entitled to benefit from a special individualized rehabilitative-educational program which will assist him/her in personal rehabilitation in society and in the realization of his/her optimal potential. This is the inalienable right of the exceptional child, and it is the duty of their family, community and society to provide it", (Michael, 1989).

Heleni Bart, in 1950, established the special education section at the Ministry of Education and Culture. Since then the Special Education system has grown to national proportion. This includes the consolidation of an educational-psychological base and increased differentiation and specialization in the various types of treatment services. No specific law yet exists relating to special education except for a section of the compulsory Education Act which empowers the Minister of Education to deal with the position of children or youth with learning difficulties.

In Israel children with special needs are mainstreamed within the regular education system according to their education needs. Preventative treatment begin at an early age in order to prevent more serious problems. Assistance to pupils are provided by one or more of the following educational frameworks :

- Individual tutoring (including small separate groups);
- In-class group instruction and additional individual treatment;
- Special individual and/or group treatment;
- Special resource classes.

(Michael, 1989).

In Israel there is an ongoing struggle aimed at improving and developing the maximal services and founding new service and educational centres.

5.1.2.5. AUSTRALIA AND NEW ZEALAND

Elements of the U.S.A. PL 94-142 are embodied in policy and practice in Australia and New Zealand. (Henderson, 1989). School principals, themselves, determine what is possible and practicable in the best interest of the individual with a learning disability.

Newer special educational programmes such as mainstreaming of pupils with educational needs (e.g. pupils in need of remedial teaching) are limited in terms of availability of

resources. The majority of pupils in need of special education receive education in special classes or schools.

A system whereby itinerant or visiting teachers, consultants and supervisory staff and other special education resources are being shared is operative. This is done on a regional planning basis and the use of the State's tax base increases the probability of success in meeting the educational needs of students with disabilities regardless of location.

5.1.2.6. NORDIC STATES (DENMARK, NORWAY and SWEDEN)

Juul (1989), states that "the Nordic nations show a common heritage of humanistic values that have found their expression in a high level of care for children and youth with special needs". Significantly, their standard of living and life expectancy are amongst the highest in the world, with wealth being distributed evenly and poverty virtually non-existent.

The Nordic Council, formed in 1952, which co-ordinates, amongst others, the function of education has been particularly instrumental in making schools responsive to the developmental needs of all children. In 1976 a Nordic States Committee was established. "One of its responsibilities was to collect and disseminate information about research being conducted in the disability fields. The Committee has also taken concrete steps to test and evaluate technological and instructional aids", (Juul, 1989).

In Sweden the best remedial classes provide very good teaching by an enthusiastic, dedicated, experienced personnel, especially trained for the job. Grundin (1979) indicated that the Swedes have already as early as the 1960's and '70's shown the limitations of remedial education through withdrawal from the classroom. The remedial system was then one of the least successful aspects of an otherwise successful educational system.

The only alternative to the 'withdrawal' system had to involve integrating the remedial services into the ordinary classroom teaching. This integration of remedial services into the regular classroom learning situation recognizes the fact that the classroom teacher may need help with various kinds of problems. This integration of remedial services also made it easier to provide prevention rather than remediation. The chances of helping children with possible learning difficulties became much greater when remediation started before such children were classified as failures. There was thus a definite move away from the traditional form of remedial education, which, in reality, is so often based on failure.

5.2. THE ROLE OF THE REMEDIAL TEACHER

There are a growing number of remedial teachers who see themselves as specialists in teaching and training and

learning "with a responsibility for helping children at all levels to improve their understanding of the subject matter of the school curriculum" ,(Ferguson, 1985).

This seems to highlight the roles of the remedial teacher as defined by O'Hagan (1977):

- (i) Guide, Counsellor and Consultant
- (ii) Therapist / Teacher
- (iii) Evaluator
- (iv) Manager of the Learning Environment
- (v) Curriculum Developer

5.2.1. GUIDE, COUNSELLOR AND CONSULTANT

Remedial teachers are expected to liaise with support services, in particular the school psychological, school health, educational welfare and careers guidance services, (Clunies-Ross, 1984). Parent consultation and counselling, where necessary, is encouraged. Remedial staff at the Athlone School Clinic (DEC-HR) regard this aspect of their role as imperative to building rapport with pupil and parent and creating a climate conducive to co-operation from parents, in particular. The community at large should ideally also be served by remedial practitioners to make them more aware of the L.D. in general and the needs of L.D. learners in the community. Dembinski & Mauser (1977) found that parents request honest evaluation of their child's

problem and that they expressed the point of view that they do want to confront their child's problem directly. This holds interesting implications for parent counselling. The remedial teacher must therefore be available to pupils, parents, teachers support services and the community as a guide, companion and consultant. This, in O'Hagan's (1977) view, could lead to improvements in educational attainments as important products of good personal relationships being established between teacher and pupil.

"Training for Remedial work has traditionally emphasised specialised teaching skills which help children find the key to learning. Perhaps more attention should be given to developing interpersonal skills, which will help in advising other teachers how to cope with learning difficulties" (Lerner, 1976). In this regard Smith (1982) states that this may be necessary, especially when it is evident that problems lie not so much with the children, as with their teachers' lack of understanding.

The remedial education teacher consultant role requires specific knowledge, skills in analysis, synthesis, and problem-solving strategies, as well as an aptitude for human relations, communication, and skill development.

5.2.2. THERAPIST / TEACHER

This should form the major task of the remedial teacher's role. This include :

(i) teaching of individuals and groups where the nature of the problem makes it impossible for it to be contained within the normal classroom situation;

(ii) treating children with associated difficulties and

(iii) where appropriate to assist colleagues on a team teaching basis.

The advantages of team teaching as a strategy for the provision of extra help for children with L.D., was assessed by Ferguson & Adams (1985), in questionnaire form. Class teachers and remedial teachers were asked to compare the benefits of team teaching with those of traditional remedial teaching. Only eight teachers in each group believed team teaching to be the more effective strategy with remedial pupils. Twice as many remedial teachers and more than twice as many Class Teachers (nineteen) felt that extra help given outside the ordinary classroom was of more benefit to the L.D. children. They found no evidence of feelings to abandon the 'withdrawal strategy.' Teaching and therapy by the withdrawal system is widely used in most developed countries.

Therapy by remedial teachers is taken to mean the process of enabling children to develop and mature and to come to terms with their own particular problems. O'Hagan (1977), suggests role play and art therapy as being very valuable in this regard. With reference to the unique situation of pupils in

the DEC-HR who may be both educationally and socially disadvantaged, behaviour strategy may be useful for the remedial teacher to employ.

Both therapy and teaching, therefore, require constant attention as they have so many obvious merits in the field of remedial education (op. cit.).

5.2.3. EVALUATOR

This role of the remedial teacher includes:

- (i) Supervision and correct administration of standardised tests as part of a comprehensive screening procedure,
- (ii) follow-up and diagnosis of specific learning difficulties in children who are identified as being "at risk".

In the DEC-HR schools, point (i), above, is regarded as the terrain of school psychologists, only, and not that of a remedial teacher - an analysis of responses to the questionnaire (Chapter 6) will further elucidate this.

Nevertheless, skill in assessment is seen by most teachers as an essential aspect of remedial work (O'Hagan, 1977). Keeping abreast of new developments in assessment and diagnostic techniques and tools can, however, be problematic.

Effective assessment procedures bring knowledge both of the individual L.D. child's requirements and "of the social needs of a particular locality" (op. cit). The teacher is provided with feedback of information useful for planning and management of classroom activities.

5.2.4. MANAGER OF THE LEARNING ENVIRONMENT

This will include:

- (i) the preparation and implementation of individualized programmes for children with particular learning difficulties
- (ii) appropriate grouping/setting procedures
- (iii) ideas and techniques for the range of children with special educational needs.

Churcher (1985) also suggests that the remedial teacher should:

- (iv) co-ordinate in-service training needs; offering advice and suggestions to staff; organizing visits and visitors;
- (v) setting up of a resource area where staff can find appropriate resources to match the needs of individual children.

"When the teacher has been recognized by the pupil as one who is willing and able to meet his needs, has created a meaningful learning environment in which the child can develop and has assessed the child's educational attainments, the foundation to efficient management has been established" (O'Hagan, 1977).

Remedial teachers interviewed by the writer, reported that this aspect of remedial work has caused tremendous problems for them and requires great organizational and time utilisation ability. This, they stated, is especially the case with the drawing up of individualized educational programmes (IEP's).

The organisation of 'withdrawal' remedial sessions appears to be another problem area, with no easy solution, as class teachers often feel that allowing pupils to attend remedial sessions causes a disruption to their own teaching.

5.2.5. CURRICULUM DEVELOPER

The remedial teacher will have the role of:

- (i) preparation and implementation of school strategies in the basic subjects;
- (ii) advising colleagues (including principal) of the range of materials and apparatus available;
- (iii) remedial work 'across the curriculum', (Clunies-Ross, 1984).

Remedial teachers attempt to look seriously at the demand in education circles for a curriculum which is more relevant and meaningful, (O'Hagan, 1977). Such a curriculum according to O'Hagan, should :

- (a) be concerned with the everyday needs of pupils;

5.3. SUMMARY

In this Chapter an attempt was made to outline the different remedial services provided and the different roles remedial teachers must serve in order to adequately provide those services. To many it may look like a daunting and challenging task but it is only through integrating the various aspects of the remedial teachers' role that the individual L.D. child will eventually be reached.

It thus appears from the literature surveyed that because different educational authorities have different perceptions of remedial education, differing emphases are placed on the distinctive roles of remedial teachers.

O'Hagan (1977), concludes that "the real emphasis towards the concept of 'remedial education' must always focus on the latter term 'education' - going forward with a child until such time as the former term is no longer applicable."

CHAPTER 6

THE RESEARCH RESULTS

6.1. COLLECTION OF DATA

In this investigation the writer set out to examine how groups of educators perceived school remedial services and how perceptions differed across components of roles/domains of remedial teachers in the mainstream school situation. The components of rôles as discussed in the literature (Chapters 1, 3 and 5) were identified as :

- A. Counselling; Guidance; Liaison
- B. Remedial Teaching and Therapy
- C. Management of the Learning Environment
- D. Assessment, Diagnosis and Evaluation
- E. Curriculum Development and Reorganization of Services.

To this end the School Remedial Services Questionnaire was developed (appendix A). Two hundred and sixty (260) questionnaires were distributed as described in Chapter 1 of this dissertation : fifty two (52) to principals; fifty two (52) to remedial teachers and one hundred and fifty six (156) regular classroom teachers. Response to the survey Table 6.1 has been below the number expected by the author.

However, statisticians (Asher, 1976; Dillman, 1978) regard the percentage response in this study as satisfactory. All data collected were appropriately recorded and tabulated for treatment and analysis. Cut-off date was 31 December 1989. The scaled responses most readily lend themselves to descriptive and parametric statistical analyses since they often can be considered to be interval data.

TABLE 6.1 : SELECTION OF SAMPLE AND SAMPLE RETURNS

	Principals	Remedial Teachers		Regular Class Teachers
		Qualified	Underquali.	
Tot. In Populat.	78	22	56	1106
Number Sampled	52	22	30	156
% of Total	66,6	100	53,5	14,1
Number of Returns	26	11	10	99
% of Sample	50	50	33,3	63,4

Underquali. - Underqualified.
 Populat. - Population
 Tot. - Total

Table 6.1 reflects that of the 52 principals sampled, 50% responded; 50% of the 22 qualified and 33,3% of the 'underqualified' remedial teachers returned their questionnaires - a 40,3% return rate of the total remedial teachers sampled; the highest return of 63.4% was received from the regular classroom teachers sampled.

Because return rates on mailed educational survey instruments, even with follow-up mailings, are often in the 40 - 60 % range an unbiased final return sample of 130 (50%) would still yield 95% confidence intervals of within $\pm 3\%$ for the entire population, (Asher, 1976). The survey return rate was 56.15% (N = 146), a figure that is more than minimally adequate to reflect accurately the perceptions of the targeted respondents, (Dillman, 1978).

The 25 items in Section C of the questionnaire were grouped as follows :

Role A (Counselling, Guidance, Liaison) - items 5, 6, 7, 18, 22

Role B (Remedial Teaching/Therapy) - items 1, 2, 3, 19, 23.

Role C (Management of the Learning Environment) - items 4, 11, 12, 14, 21.

Role D (Assessment, Diagnosis and Evaluation) - items 9, 13, 16, 17, 20.

Role E (Curriculum Development and Reorganization of Services - items 8, 10, 15, 24, 25.

The 15 items in Section D were grouped as follows:

Role A (Counselling, Guidance, Liaison) - items 1, 4, 6.

Role B (Remedial Teaching/Therapy) - items 3, 7, 8.

Role C (Management of Learning Environment) - items 10, 12, 13

Role D (Assessment, Diagnosis, Evaluation) - items 2, 14, 15.

Role E (Curriculum Development and Reorganization of Services) - items 5, 9, 11.

6.2. TREATMENT AND ANALYSIS OF DATA

All data were screened initially for effects of demographic variables: educational level, years of experience, gender, age group and professional capacity. With the exception of

professional capacity, other demographic variables had negligible effects on ratings and were thus excluded from further analysis.

Pearson Product-Moment Correlation was used to evaluate the linear relationship between frequency of contact with remedial personnel from DEC-HR (i.e. remedial teachers/ remedial subject adviser/ Clinic and/or school psychologists) and the perceived helpfulness of those personnel in any school-related problem referred to them.

The following formula was used :

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{(\sum X^2 - \frac{(\sum X)^2}{N})(\sum Y^2 - \frac{(\sum Y)^2}{N})}}$$

where r = correlation coefficient

X = frequency of contact scores

Y = helpfulness of remedial personnel scores

N = number of scores in the sample

Pearson Product Moment Correlation was also used to determine whether there was any linear relationship between frequency of contact with remedial personnel and the educators' perception of the efficacy of remedial teaching.

To determine whether groups differed significantly on possible changes they would propose in the allocation of remedial teachers' time to the different

roles, 'present' time allocations and 'time that should be spent' data were submitted to a two related groups t-test.

The following formula was used :

$$t = \frac{\sqrt{N-1} \sum D}{\sqrt{N \sum D^2 - (\sum D)^2}}$$

(Source: Mulder, 1981).

where :

t = coefficient of significance between sample means

N = number of educators in groups

D = difference between scores (present time allocated and time that should be spent).

degrees of freedom :- (N - 1)

with the following underlying assumptions :

- i. the observations are independent;
- ii. the population from which the samples were drawn are normally distributed with respect to the variable under investigation;
- iii. the population from which the samples were drawn have equal variances with respect to the variable under investigation.

The null hypothesis in each case was postulated as :

H₀ - There is no difference between the means of the samples .

Spearman's Rank-order correlation coefficients were calculated from rank-orders of roles as depicted in Table 6.8. This was done to compare sets of ranks to determine the degree of inter-group equivalence of perceptions of the roles of Remedial Teachers. The equation used was :

$$r_s = 1 - \frac{6 \sum D^2}{N(N^2-1)}$$

where:

r_s - rank-order correlation coefficient (rho)

D - difference in ranks

N - Number of roles

Intercorrelations between the roles were determined. The correlations between the total scores of the different roles were calculated and computed (Table 6.10) in order to determine whether educators perceived roles of Remedial teachers to overlap, and, if so, which roles and to what extent.

The intercorrelations (Table 6.10) prompted the author to hypothesise about the possible dimensions of the roles of remedial teachers.

The following hypothesis was then postulated:

H₁ : Remedial teachers' roles could be categorized into Instructional Activities, comprising roles B (remedial teaching/therapy) and E (curriculum development);

Human Growth/Development and Relationships, comprising roles A (counselling, guidance and consultation) and C (managing the learning environment); Administrative Responsibilities comprising role D (assessment, diagnosis and evaluation).

To test the hypothesis the author made use of the statistical technique of Principal Factor Analysis to determine the loading of roles on each factor (dimension). The results were computed in Table 6.11. In keeping with international convention decimal signs were omitted. The commonality value (h^2) was estimated in each step as the highest numerical value in each column.

6.3. RESULTS AND DISCUSSION

6.3.1. DEMOGRAPHIC INFORMATION - SECTION A

All respondent principals are males. Tabulation of data (Table 6.2) indicates that the majority of principals (17 - i.e. 65%) who responded have at least matriculation plus 3 to 4 years teachers' training qualification (category C/D). Five principals (19%) have matriculation plus 5 years (category E) and 3 principals (11%) have 6 years (category F) post-matriculation training.

Table 6.2. Education level of Educators

Cat	a	b	c	d	e	f	Total
Rem.Trs.Fem	2	3	4	9	0	0	21
male			1	1		1	
Princ.	0	1	10	7	5	3	26
Reg.Trs.Fem	45	14	25	6	1	1	99
male			5	2			

Rem.Trs.Fem. - Remedial Teachers (female)
 Princ. - Principals
 Reg.Trs.Fem - Regular Class Teachers (female)

Table 6.3. Age Analysis of Educators

Cat	a	b	c	d	e	f	g	h	i	Tot.
Rem.Trs.	1	0	3	1	4	5	2	1	1	21
male					1		1		1	
Princ.	0	0	0	1	4	7	9	5	0	26
Reg. Trs.	5	11	9	6	17	15	7	1	1	99
male			2	2	2	1				

Age Groups:- a. 20 - 25 yrs. b. 26 - 30 yrs.
 c. 31 - 35 yrs. d. 36 - 40 yrs.
 e. 41 - 45 yrs. f. 46 - 50 yrs.
 g. 51 - 55 yrs. h. 56 - 60 yrs.
 i. 61 - 65 yrs.

Table 6.4. Frequency Of Contact with Remedial Personnel

	Σ	\bar{X}	
Remedial Teachers	642	30,5	N = 21
Principals	1260	48,4	N = 26
Reg. Class Trs.	1389	14,0	N = 99

Σ -sumated totals \bar{X} - mean.

Teaching experience of principals ranges between 20 and 40 years. Ages of principals (Table 6.3) range between 36 years and 60 years with a mean of 51 years. The mean frequency of contact (Table 6.4) with personnel providing remedial services is approximately 48 occasions over the two year period (January 1988 to December 1989) under review. For remedial and regular class teachers the figures are 30 and 14 occasions respectively. It appears from comments by respondent regular class teachers that only those who have pupils receiving remedial teaching really have contact with remedial personnel. There appears to be a lack of regular contact on both formal and informal bases between remedial personnel and regular class teachers.

Three (14%) of the 21 remedial teacher respondents are male (table 6.1), which appears to be a true reflection of the situation in the DEC-HR which is primarily staffed by female remedial teachers. Fifteen remedial teachers (71%) have 3 to 4 years post-matriculation teacher training. Five (23%) of the respondents have less training (lower than category C) of which two teachers (9,5% of the respondents) have only Std. 8 plus 2 years teacher training (category A).

Teaching experience of remedial teachers ranges between 2 and 37 years which compares well with the 2 to 36 years of the regular class teachers. Seven (7,4%) of regular class teacher respondents are male. Forty five (45,5%) fall into category A as far as level of education is concerned (Std. 8 plus 2 years teacher training); fourteen (14%) - category B;

Table 6.5. Helpfulness of Remedial Personnel

N=21 Remedial Teachers						N=26 Principals						N=99 Reg. Class Trs.					
RATINGS ITEMS	1	2	3	4	5	RATINGS ITEMS	1	2	3	4	5	RATINGS ITEMS	1	2	3	4	5
1	0	0	8	2	11	1	0	0	1	6	19	1	0	0	11	20	68
2	0	1	4	3	13	2	0	1	5	2	18	2	0	2	37	13	47
3	0	1	9	3	8	3	0	2	4	5	15	3	3	2	47	14	33
4	0	1	4	4	12	4	0	2	4	6	14	4	3	3	45	17	31
Σ	0	6	75	48	220	Σ	0	10	42	76	330	Σ	6	14	420	256	895

$\bar{X} = 16,6$

$\bar{X} = 17,6$

$\bar{X} = 16,0$

- Key to Ratings:
1. Detrimental
 2. No help
 3. Do not know/ not applicable
 4. Slightly helpful
 5. Very helpful

\bar{X} - Mean

thirty (30,5%) in category C; only ten (10%) have 4 years or more post-matriculation teacher training. The mean ages for regular class teachers and remedial teachers are 40 years and 47 years, respectively. It appears therefore that more experienced teachers are involved in remedial teaching.

Frequency of contact between regular class teachers and remedial personnel has been about 14 occasions (on average) for the two year period (Table 6.4). A comment made by one regular class teacher as to the reason for not having used remedial services (item 8 , Section A) was that : " as remedial classes do not cater for senior primary classes, regular class teachers of those standards never get to make use of remedial services".

6.3.2. GENERAL EFFECTIVENESS OF SCHOOL REMEDIAL SERVICES - SECTION B.

6.3.2.1. HELPFULNESS OF REMEDIAL PERSONNEL

An analysis of Table 6.5 indicates that the majority of respondents in each group of educators appear to have found remedial personnel, especially remedial teachers and the remedial subject adviser, very helpful (items 1 and 2, column 5). The helpfulness mean scores of 16,6 , 17,6 and 16,0 for remedial teachers, principals and regular class teachers, respectively, indicate that, generally, remedial personnel are perceived to be slightly helpful (mean scores

of 4 would indicate detrimental; 8 - no help; 12 - do not know/ not applicable; 16 - slightly helpful ; 20 - very helpful).

The statistical evaluation of the linear relationship between the component frequency of contact with remedial personnel (Section A - item 7) and the general helpfulness of remedial personnel (Section B - items 1 to 4) indicated a high correlation ($r = 0,86$). The frequency of contact with remedial personnel therefore appear to relate positively to the degree of helpfulness of such personnel as perceived by the different groups of educators. There appears, however, to be very little correlation ($r = 0,03$) between frequency of contact with remedial personnel and the perceived efficacy of remedial teaching (Section B - Items 5 to 9).

The distribution of responses (of all educators) to the following items were as follows :

- i. helpfulness of remedial teachers (Table 6.5) -
 - detrimental - zero
 - no help - zero
 - do not know/not applicable - 13,6%
 - slightly helpful - 19,1%
 - very helpful - 67,1%

ii. helpfulness of Remedial Subject Adviser -

detrimental - zero
no help - 2.7%
do not know - 31,5%
slightly helpful - 12,3%
very helpful - 60,2%

iii. helpfulness of School Clinic psychologists -

detrimental - 2,0%
no help - 3,4%
do not know - 41%
slightly helpful - 15,0%
very helpful - 38,3%

iv. helpfulness of school psychologists -

detrimental - 2,0%
no help - 4,1%
do not know - 36,3%
slightly helpful - 18,4%
very helpful - 39%

6.3.2.2. PERCEIVED EFFICACY OF REMEDIAL TEACHING

Table 6.6. (Perceived efficacy of remedial teaching) indicates that the majority of remedial educators perceived a marked improvement (rating 1) with respect to pupils' academic/scholastic achievement, self esteem, self-assertiveness, interpersonal relationships, social and

TABLE 6.6. PERCEIVED EFFICACY OF REMEDIAL TEACHING.

Remedial Teachers

<i>Robins</i> <i>Class</i>	1	2	3	4	5
5	12	4	3	2	0
6	14	4	1	2	0
7	9	7	4	1	0
8	12	5	3	1	0
9	11	5	3	2	0
Tot.	58	25	14	8	0
Σ	58	50	42	32	0
$\bar{X} = 8,6$					

Principals

1	2	3	4	5
10	9	6	1	0
9	9	4	4	0
7	9	8	2	0
9	5	8	4	0
9	7	8	2	0
44	39	34	13	0
44	78	102	52	0
$\bar{X} = 10,5$				

Reg. Class Trs.

1	2	3	4	5
39	34	19	3	4
37	33	17	8	4
29	38	24	7	1
35	30	23	8	3
35	34	21	5	4
175	169	104	31	16
175	338	312	124	80
$\bar{X} = 10,3$				

Σ - Summated Totals
 \bar{X} - Mean Totals
 Quest.- Questions

emotional development. Many regular class teachers (score - 169) and principals (score - 39) indicated a slight improvement (rating 2). It may be significant to note that a large proportion of regular class teachers and principals also perceived little improvement (rating 3) in the above-mentioned constructs of pupils who received remedial teaching for the minimum six month period.

The mean scores of 8,6 , 10,6 and 10,3 (Table 6.6) for remedial teachers, principals and regular class teachers, respectively, however, show a tendency towards a perception of slight improvement by pupils who received remedial teaching (mean score of 5 indicates: - marked improvement; 10 - slight improvement; 15:- little improvement and so forth). Educators' comments (6.3.2.3) may illuminate this apparent contradiction. It should also be pointed out that no long term efficacy studies of remedial teaching has to date been undertaken in DEC-HR schools.

6.3.2.3. RESPONSES TO OPEN-ENDED QUESTIONS

To the question : 'What services provided by the school remedial services are most helpful ?', the following summarized responses were received from respondents and categorized by the author :

Role A : Consultation, Guidance, Liaison, Counselling

Principals:

Guidance with respect to problems related to corrective teaching; expert advice; guidance and assistance from staff at Athlone School Clinic; regular visits by remedial personnel to schools.

Remedial Teachers:

Consultation with, and advice from, School Clinic psychologists.

Regular Class Teachers:

Having remedial teachers available for consultation, advice and guidance;

From the above it appears that the services provided under this role, are highly valued by principals and regular class teachers. Some principals and regular class teachers regarded the availability of remedial teachers for consultation, advice and guidance as helpful.

Role B : Remedial Teaching/ Therapy

Principals:

Specialized individual assistance with the teaching of reading, writing and arithmetic.

Remedial Teachers:

Specialized individual attention to pupils; promoting positive attitudes in pupils; guiding pupils to self-actualization; language development in disadvantaged children; mastering reading skills.

Regular Class Teachers:

Individualized teaching; development and improvement of language and reading skills; developing pupils' self-esteem; lessons after school hours.

Presently, this appears to be the major role being fulfilled by remedial teachers. Educators found a wide variety of services provided under this role to be helpful. None of the respondent principals mentioned any service of a therapeutic nature e.g. promoting social and emotional development in pupils.

Role C : Management of the Learning Environment

Principals:

In-service programmes; seminars and intergroup discussions.

Remedial Teachers:

In-service training; seminars and group discussions.

Regular Class Teachers:

Seminars; interaction with remedial teacher.

68% of respondent educators found in-service training, seminars and group discussions to be most helpful. About 30% of regular class teacher respondents regarded interaction with remedial teachers as helpful.

Role D : Assessment, Diagnosis and Evaluation

Principals:

Scholastic assessment of pupils; diagnosis of pupils' learning problems.

Remedial Teachers:

None.

Regular Class Teachers:

Assessment, diagnosis, evaluation and follow-up; detailed reports of scholastic assessment of pupils.

Personal interviews with educators indicated that due to the lack of qualified remedial teachers, assessment and evaluation are performed by Psychologists from the School Clinics or School Psychologists.

Role E : Curriculum Development

Principals:

None.

Remedial Teachers:

None.

Regular Class Teachers:

None.

It appears from the above that no services of a curriculum development nature are perceived by educators to be helpful. However, upon further investigation by the author, it was ascertained that no such services are presently provided by remedial personnel. Remedial teachers on the other hand, stated that their training did not provide them with the necessary skills to fulfill this role adequately.

To the question : 'What services, if any, would you like the school remedial services to provide which are not presently being offered', the following responses were received :

Role A : Consultation, Liaison, Guidance, Counselling.

Principal:

Guidance and advice to regular class teachers - how to identify possible remedial cases (pupils at risk) in the classroom; career guidance to Std. 4 and 5 pupils.

Remedial Teachers;

Remedial teachers working in co-operation with physical education teacher and guidance teacher; remedial teachers acting as consultants in senior secondary schools.

Regular Class Teachers;

Class visits by remedial teachers and assisting and guiding class teachers; help/ guidance to teachers with identification of pupils at risk; more coping skills to parents; workshops with parents - to build better relationships; counselling to parents by remedial teachers; counselling/ guidance to senior primary pupils.

Role B : Remedial Teaching/ Therapy.

Principals:

None.

Remedial Teachers;

Occupational therapy, speech therapy, social work services and other paramedic services being made available to school remedial services; remedial teachers assisting regular class teachers in the classroom - team teaching basis.

Regular Class Teachers;

Remedial assistance to 'slow learners' who do not qualify for adaptation classes; computer-assisted remedial teaching

to be considered, 'freeing' remedial teachers to provide other necessary remedial services; assisting class teachers with the teaching of some lessons - team teaching; social work services.

Role C : Manager of the Learning Environment.

Principals:

Regular workshops; greater link (interaction) between class teachers and remedial personnel so that these teachers can also become more involved in remediation in their own class rooms.

Remedial Teachers:

Regular in-service training sessions, guidance and new teaching techniques by the Principal Subject Adviser; well balanced teaching programmes.

Regular Class Teachers:

Closer contact with remedial teachers and remedial education subject adviser; media/ resource centre at each school.

Role D : Assessment, Diagnosis, Evaluation.

Principals:

None.

Remedial Teachers:

Assessment geared towards determining pupils' potential, instead of what they know or may not know.

Regular Class Teachers:

Testing and scholastic screening to be done by remedial teachers; remedial teachers in consultation with class teachers to decide on retention or phasing out of pupils receiving remedial teaching; diagnosis of learning problems; testing and diagnosis of pupils at risk; more uniform criteria/ systems of assessment and evaluation of pupils - remedial teachers' evaluation of pupils are norm-based whereas class teachers' evaluation is curriculum-based.

Role É Curriculum Development and Reorganization of Services

Principals:

Establishing remedial classes at all schools with qualified remedial teachers; assistance to pupils in Stds. 3 to 5; provision of school-readiness tests to pre-schoolers; teaching aids and resources in keeping with technological developments e.g. computers; teaching to cover broader spectrum of school curriculum.

Remedial Teachers:

More remedial classes and teachers permanently attached to each school; making remedial teaching available to Stds. 3 to 5 pupils as well; availability of more aids and technological resources e.g. computers; establishing remedial teaching department at each school - with remedial teacher as Head of Department; merging quality elements of remedial teaching with regular class teaching - individualized educational programmes, based on pupils' needs, to become the norm.

Regular Class Teachers:

More remedial classes at various levels - kindergarten, junior primary, senior primary - allowing more pupils with learning difficulties access to remedial services; permanent remedial teacher at each school; tuition in all subjects should be offered through the school (remedial teaching across the curriculum); remedial teaching resource centres centralized in a regional circuit for all teachers and pupils - with variety of audio-visual aids; establishing a remedial department at schools with a remedial teacher as Head of Department.

Implications of the recommendations by educators mentioned in this section will be discussed in Chapter 7.

6.3.3. RECOMMENDED INVOLVEMENT OF REMEDIAL TEACHERS -

SECTION C

Table 6.7. Section C - Summary of Means for each Role.

<u>Roles</u> ↓	Rem.Trs	Reg.Trs	Princ.
A	20,6	19,1	19,1
B	20,4	20,5	21,2
C	21,6	20,1	20,1
D	22,8	21,5	22,5
E	22,2	21,7	23,0

Rem. Trs - Remedial Teachers

Reg. Trs - Regular Class Teachers

Princ. - Principals

A - E - Roles of Remedial Teachers

TABLE 6.8. RANK-ORDER OF ROLES AS DEPICTED BY TABLE 6.7.

<u>Roles</u> ↓	Rem.Trs.	Reg.Trs.	Princ.
A	4	5	5
B	5	3	3
C	3	4	4
D	1	2	2
E	2	1	1

Key to Roles - Tables 6.7. and 6.8.

A - Liaison/Counselling/ Guidance

B - Remedial Therapy / Teaching

C - Management of Learning Environment

D - Evaluator/ Assessor/ Diagnostician

E - Curriculum Development.

Mean scores for each role for each group of educators (Table 6.7) indicate a distinct correspondence of perception of the roles of remedial teachers. There appears to be stronger support from all three groups of educators for roles D and E. Principals provide the strongest support for role E whilst remedial teachers provide strongest support for role D.

Rank-order of roles (Table 6.8) indicate similarity of importance attached to each role of Remedial teachers as perceived by regular class teachers and principals. The calculated rank-order correlation coefficient ($r_s = 0,6$) between the rank-order for the roles by Remedial teachers and the other two groups of educators indicates a moderately positive correlation. There is thus a moderate degree of inter-group equivalence of perceptions of the roles of Remedial teachers between educators.

The distribution of educators' responses (Table 6.9.) shows a close correspondence of recommended roles of remedial teachers by educators. Surprisingly, groups of educators differed greatly in respect of roles D and E. 69,5% of remedial teachers felt that role/ domain D is a role which they should always be involved with, compared to 55,1% of regular class teachers and 58,6% of principals. Table 6.9. reflects that in the case of role E, 61% of remedial teachers, 55,5% of regular class teachers and 66,1% of principals regarded it as a role for remedial teachers to be always involved in.

TABLE 6.9. - SECTION C - PERCENTAGE DISTRIBUTION OF EDUCATORS' RESPONSES.

	Remedial Teachers					Regular Class Teachers					Principals				
ROLE ↓	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
A	2.8	3,8	18,0	27,6	47,6	3,2	6,0	30,5	24,2	35,9	6,6	5,8	22,5	22,1	35,8
B	5.7	11,9	18,0	28,5	46,6	3,0	3,6	21,4	29,0	42,8	5,7	2,4	19,0	29,7	42,9
C	1.9	0,9	15,2	24,7	57,1	2,8	4,4	21,7	27,9	43,0	3,3	4,1	27,2	19,8	45,4
D	1.9	1,9	4,7	21,9	69,5	1,6	2,0	15,5	25,6	55,1	0,8	0,8	6,6	33,0	58,6
E	0.0	0,9	14,2	22,8	61,0	1,2	1,0	14,9	27,2	55,5	0,8	0,8	4,9	27,2	66,1

1. never should be involved
2. usually should not be involved
3. sometimes should be involved
4. usually should be involved
5. always should be involved

- A. Liaison/Counselling/Guidance
- B. Remedial Therapy/teaching
- C. Manager of Learning Environment
- D. Evaluator/Assessor/Diagnostician
- E. Curriculum Development

Role A : Consultation, Liaison, Guidance, Counselling

The mean scores of 19,1 (Table 6.7) for both principals and regular class teachers is slightly below that of remedial teachers (20,6) for role A with rank-order (Table 6.8) of 4 for both principals and regular class teachers and 5 for remedial teachers. It therefore appears that remedial teachers in contrast to the other educators feel that they sometimes should be involved in this role.

Major proportions of educators (remedial teachers - 47,6%; principals - 35,8%; regular class teachers - 35,9%), however, feel that remedial teachers always should be involved in role A, with very strong support for items 5, 18 and 22 (vide. raw data - appendix F). In the case of item 5 (team teaching) 15 remedial teachers (71,4%), 18 principals (69,2%) and 56 regular class teachers (56,5%) responded that remedial teachers should always be involved in this activity. This is consonant with the comments by educators with respect to what services should be provided in future (item 11 - Section B of the questionnaire). 18 Remedial teachers (85,7%) felt the need for them to be always involved with family consultation and/ or counselling (Item 18). This is in contrast to the response by principals, only 9 (34,6%) and regular class teachers, only 40 (40,4%) who responded positively to this item. This appear to indicate that remedial teachers would prefer to be more involved in such activities as counselling of parents rather than being involved with guidance to colleagues.

Role B: Remedial Teaching/ Therapy

Raw scores on each item (appendix F) for role/domain B indicate strong support for items 2, 3 and 19 by educators. Remedial teachers appear to relegate this role to a position of least involvement (Tables 6.7 and 6.8). Table 6.7, however, shows that remedial teachers feel stronger (46,6%) than regular class teachers and principals, 42,8% and 42,9%, respectively, that they should always be involved (rating 5) in the role.

Role C: Management of the Learning Environment

For role C, items 11 and 14 received strongest support. The fact that 80,7% of the respondent principals, 76,1% remedial teachers and 69,6% regular class teachers are of the opinion that remedial teachers should always be involved in the development of a media centre at schools (item 14) augurs well for the future of remedial services, especially when this is taken in conjunction with educators' comments related to media centres (Section B - item 11).

Of note may be the fact that the majority of educators (50% principals; 57,1% remedial teachers; 39,4% regular class teachers) are of the opinion that remedial teachers should sometimes be involved in school disciplinary problems (item 4) to differentiate between personal misbehaviour and ecological influences.

In discussions with remedial teachers about this aspect, it was learnt that many support the view that the child's learning difficulties stem from the influence of his environment on his pattern(s) of behaviour.

Role D : Evaluator, Assessor, Diagnostician

In the case of role D items 9 , 16 and 17 were strongly supported. Very significant is the fact that 71,4% (appendix F) of remedial teachers responded that they should always be involved in item 20 (decisions regarding retention and phasing out) . Data from educators indicate that remedial teachers would rank this role first (Table 6.8) whilst both principals and regular class teachers would rank it second.

Role E: Curriculum Development

Principals and regular class teachers rank this role as the most important for remedial teachers' involvement (Table 6.8.). Remedial teachers, by contrast, according to the data, rank this role second. Table 6.7, however, indicates that remedial teachers (61%) feel more strongly than regular class teachers (55,5%) that they should always be involved (rating 5) in this role.

Appendix F reflects that items 10 , 24 and 25 received the strongest support from educators. 21 Principals (80,7%) gave their support (always should be involved) to item 25; 18

18 (85,7%) of remedial teachers responded positively to this item, whilst 67 (67,6%) of regular class teachers were in support that remedial teachers should always be involved in curriculum development.

TABLE 6.10. INTERCORRELATIONS MATRIX OF ROLES

	A	B	C	D	E
A	-				
B	-0,60	-			
C	1.00	-0,60	-		
D	0,67	0,18	0,67	-	
E	-0,13	0,87	-0,13	0,64	-

Roles: A - Counselling, Guidance, Consultation
B - Remedial Teaching/ Therapy
C - Management of Learning Environment
D - Assessment, Diagnosis, Evaluation
E - Curriculum Development

Table 6.10 shows a perfect correlation between roles A (counselling, guidance, consultation) and C (management of the learning environment). These two roles are in all probability 'responsible' for creating a climate conducive to effective learning, hence the positive correlation. There is also a strong positive correlation between roles B (remedial teaching/ therapy) and E (curriculum development). This could possibly be ascribed to the close relationship between remedial teaching and aspects of curriculum development e.g. teaching across the curriculum; developing resource material.

There are moderately positive correlations between roles A and D (0,67); C and D (0,67); D and E(0,64). Moderate inverse correlations are indicated between roles A and B (-0,60); B and C (-0,60). Inversely low correlations were computed for roles A and E (-0.13); C and E (-0,13). The correlation between roles B and D is very low (0.18).

TABLE 6.11. LOADINGS OF ROLES ON EACH FACTOR

FACTOR	I	II	III
A	620	-085	174
B	230	072	-461
C	620	-091	403
D	905	-425	833
E	678	189	196

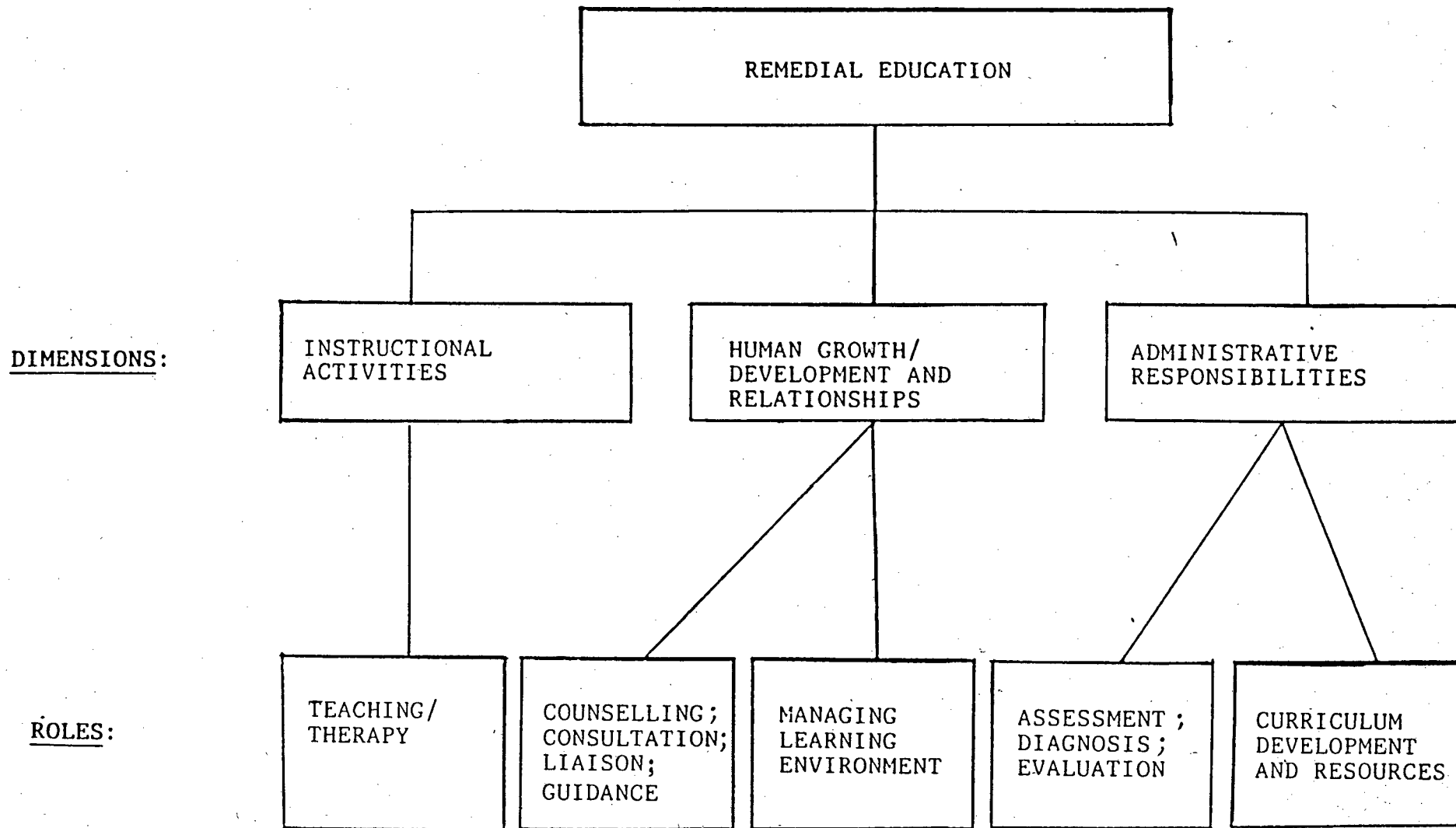
Table 6.11 indicates the heaviest loadings /clusters as:

- Factor I : Roles D and E
- Factor II : Roles A and C
- Factor III : Role B

Roles D and E (Factor I) could be categorized as Administrative Responsibilities; Roles A and C (Factor II) as Human Growth/Development and Relationships; Role B (Factor III) as - Instructional Activities.

The above can thus be illustrated schematically as in Figure 6.1. The interaction of the three dimensions of the roles of Remedial teachers form an intergrated unit. Each activity of the roles of the Remedial teacher is thus a dynamic endeavour which involves all three dimensions e.g. teaching an LD pupil the number combinations of 10. This would, for instance, involve teaching (Instructional); building rapport (Human relationships); assessing at end of lesson whether pupil has mastered concepts taught (Administrative).

FIGURE 6.1 SCHEMATIC PRESENTATION OF DIMENSIONS AND ROLES OF REMEDIAL EDUCATION AS FOUND IN THIS STUDY



6.3.4. TIME ALLOCATION - SECTION D

t-tests for significance between sample means of each group of educators indicate no significant differences between present time allocated by remedial teachers to the different roles of remedial service and desirable time allocation. This appears to indicate that educators are satisfied with the amount of time remedial teachers presently devote to each role of activity.

The distribution of mean time allocation (Table 6.13) for each recommended role for remedial teachers by each group of educators reveals that all educators feel that much of available time should be spent on role B. Regular class teachers, in contrast to the other two groups, indicated that role D should receive most of the remedial teachers' available time.

TABLE 6.12. RANK-ORDER OF TIME SPENT AND TO BE SPENT ON EACH ROLE BY REMEDIAL TEACHERS.

Roles ↓	Principals		Rem. Teachers		Reg. Class Trs	
	Spent	Should	Spent	Should	Spent	Should
A	4	3	4	4	3	4
B	1	1	1	2	2	2
C	5	5	5	5	5	5
D	2	2	2	1	1	1
E	3	4	3	3	4	3

Table 6.13. Section D - Time Allocation

Remedial Teachers

ROLE ↓	Present		Should	
	Σ	\bar{X}	Σ	\bar{X}
A	258	12,9	330	16,9
B	518	25,9	505	25,2
C	228	11,4	292	14,6
D	512	25,6	152	25,6
E	337	16,8	401	20,0

Reg. Class Teachers

ROLE ↓	Present		Should	
	Σ	\bar{X}	Σ	\bar{X}
A	750	17,4	1019	18,8
B	1024	23,8	1270	23,5
C	568	13,2	787	18,3
D	1259	29,2	1692	39,3
E	680	15,8	971	22,5

Principals

ROLE ↓	Present		Should	
	Σ	\bar{X}	Σ	\bar{X}
A	235	14,6	311	19,4
B	382	23,8	435	27,1
C	160	10,0	209	13,0
D	245	22,0	344	21,5
E	254	15,8	275	17,1

- A. Liaison/Counselling/Guidance
- B. Remedial Therapy/teaching
- C. Manager of Learning Environment
- D. Evaluator/Assessor/Diagnostician
- E. Curriculum Developer.

Σ - Summated Totals

\bar{X} - Mean

Comparison of Tables 6.12 and 6.8 indicate some correspondence and minor discrepancies. The study confirms the 'phenomenon' that remedial teachers in DEC-HR schools are traditionally strong on assessment and diagnosis, but relatively weak on the application of diagnoses to remediate learning problems (remedial teaching). Remedial teachers interviewed, stated that they lack the skills and consequently the confidence to draw up individual education programmes (IEP's) and to experiment with remedial techniques and strategies. There is a clear indication from educators that although remedial teachers should become more involved with role E (curriculum development) the present time allocation to this role should more or less remain the same.

An interesting observation which can be made is that although only 55,1% of regular class teachers (Table 6.9.) regarded role D as important, they nevertheless indicated that a substantial majority of time be allocated to this role. The greater majority of principals (66,1% - Table 6.9) regarded role E as the most important for remedial teachers' involvement, but the same group, compared to the other groups, feel that less time should be allocated to this role. All three groups apparently feel that the least amount of time should be allocated to role C.

Compared to the other educators, remedial teachers' responses indicate very low scores on items 1 and 3. Regular class teachers responded strongly to items 2 and 15 while principals viewed item 14 as significant.

6.4. SUMMARY

The results of this investigation point to a relatively satisfactory global picture of school remedial services. Nevertheless, patterns suggest principals and regular class teachers portray conservative views of school remedial services. For example, they indicated that diagnosis/evaluation and report writing activities should continue to be the primary responsibilities of remedial teachers. By contrast remedial teachers express the desire to become more involved in roles which offer more scope for development e.g. in-service/staff development programmes. They feel this will allow them to create a greater awareness amongst their colleagues of the special needs of pupils with learning difficulties as well as the contribution which might be made by a remedial department at the school. They also want to be much more involved in decision-making about retention and phasing out of pupils, which apparently is not the case at present. In the DEC-HR, assessments and evaluations for placements in- and phasing out of remedial teaching classes are done by school psychologists.

Responses to open-ended questions about recommended future practice also provide potentially valuable feedback to everyone concerned, including teacher training institutions. In excess of 40% of the samples indicated that more remedial

classes and qualified teachers are needed; 36% of educators recommended the introduction of a remedial education department at schools; approximately 62% of the samples felt that remedial teaching should be presently made available to senior primary pupils as well.

Further research would be necessary to clarify the relationship between educators' perceptions of the quality of service and the availability school remedial services. The relatively favourable result of this investigation may be ascribed to the fact that only educators in the mainstream presently exposed to remedial services, were sampled. The writer is aware that a different result may possibly be obtained should all educators, including remedial teachers at Special and Children's Act schools in the DEC-HR, be sampled.

Analyses of responses, therefore, yielded numerous and noteworthy findings. Although differences in perception of school remedial services were evident across the groups of educators sampled, there were no significant major disagreements between them.

CHAPTER 7

DISCUSSION AND CONCLUSION

7.1. IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

7.1.1. TEACHER TRAINING

7.1.1.1. REGULAR AND REMEDIAL TEACHER TRAINING

"Owing to the fact that the child is entirely involved in the learning process, a deviation in learning is a problem entailing all disciplines concerning the welfare of the child. All students of these different disciplines should have some knowledge of the phenomenon of learning disability because in the course of their duties they will come up against it" (Hamilton, 1974).

"...the practice of remedial education in any country is related to its tradition as established in its forms of teacher training", (Jones 1979). Interdisciplinary co-operation at training level could go a long way towards achieving the optimum services for children with all forms of special education needs.

The inclusion of a module on special educational needs in all teacher training courses would assist classroom teachers to identify learning problems in their classes. This would facilitate early identification of pupils with L.D. and/or other learning handicaps. Prompt assessment, diagnosis and remediation would forestall entrenched difficulties with the resultant emotional problems.

One of the major complaints of regular classroom teachers, concerning mainstreaming, related to their own feelings of inadequacy in teaching the L.D. child, (Carberry, 1981). This was also found in this study. Lack of regular contact between remedial personnel and regular class teachers (as expressed by many teachers in this study) and the consequent lack of guidance and support from remedial teachers may be a contributory factor. Teacher training, therefore, should cater for mainstream needs, as well as the provision of adequate numbers of remedial personnel. In the view of Adelman (1986), training courses for remedial teachers should be based on the following questions:

- (i). What rationale should shape the formal training programmes.
- (ii). What should be the content of the pre-and in-service phases respectively?
- (iii). How should this content be taught?
- (iv). How should the nature and worth of such programmes be evaluated?

For remedial teacher training to make a greater impact, therefore, would mean specifically articulating programme rationale, content and processes. As this study indicates, remedial teachers, should be competent to set into motion processes to improve quality of teaching by e.g. running regular workshops for staff and students, setting up special resource centres at schools etc.. They should be well versed in technological developments in education - as the computer and computer-assisted learning is, currently (and for the foreseeable future) one of the great technological contributions, teacher training should cater for this.

Clamp (1983), Waker (1984), Robinson (1985) and Anderson & O'Hagan (1989) found considerable evidence to suggest that the microcomputer presents a potentially dynamic tool in the diagnostic, prescriptive and learning process of L.D. pupils. Computers are perceived by educators as playing a potentially valuable role in the transfer of information and knowledge and may provide a viable way of servicing special educational needs.

Teacher training should be geared towards a 'need to know' type of education. By this is meant, especially in the South African situation, that teachers should be trained to guide all pupils, particularly the less able, towards developing and using communication skills, both verbal and written, as well as lateral thinking skills and problem-solving skills. These would be necessary skills required in a future South Africa where many more citizens will be required to service

the more highly developed sectors of the business environment. This would assist in stimulating socio-economic growth, which could go a long way towards decreasing environmental factors contributing to L.D. and learning difficulties. Teachers should in their training be provided with the skills to help and encourage pupils towards free thinking, using their initiative and being independent in their learning and coping.

Judging from the findings in this study, teacher training should perhaps place greater emphasis on training teachers to take leading roles in management of the learning environment - Role C (Auerbach, 1982), and in curriculum development - Role E. Remedial Teacher training should lay greater emphasis on the drawing up of IEP's and application thereof in the practical teaching situation.

7.1.1.2. Recruitment

A number of factors influencing recruitment for training as remedial teachers, have emerged from research. Adelman (1986) cites research findings highlighting the following topics: the public image of special education as a field of endeavour; the criteria used for admission into training programmes and into professional roles, and the working conditions experienced by professionals concerned with remedial teaching.

Quality of working conditions, as reported for this study by the remedial teachers, is not conducive to attracting quality personnel to the field. Of particular importance are such matters (also verified by Adelman, 1986) as salary policies, on-the-job support (including in-service or ongoing education programmes) and lack of opportunities for promotion and special status. In DEC-HR, for instance, remedial teachers can advance no higher than post level one (in the remedial field). A fact emerging from this study is the educators' expressed view that the post of Head of Department- Remedial, should be introduced.

Remedial teachers and other educators interviewed, stated that such a development (i.e. promotional opportunities) might also be the ideal way of according recognition to remedial education and status to remedial teachers in DEC-HR schools. These moves, they stated, would be key ingredients in the field's ability to attract and persuade high quality personnel to choose careers in the field of remedial education.

7.1.2 FUTURE RESEARCH

Research to provide more clearly delineated guidelines as far as the L.D. child in the mainstream of education is concerned should be undertaken. "Those who identify with the L.D. and remedial fields can only improve the bases upon

which they try to influence policies and practises by (i) a clarification of the field's most fundamental issues and problems and (ii) evolution of specific ideas and recommendations for how to proceed in dealing with the most pressing concerns", (Adelman & Taylor, 1986a).

There is a paucity of research in these fields in South Africa. This may be due to : (i). our mainstream education crisis ; (ii). the socio-political and economic crises ; (iii). the diversity of the South African population; (iv). the perceived needs of groups; (v). the diverse nature of the L.D. problem . Gallagher (1984) states that "the field of L.D. has grown and expanded at a breathtaking rate in the two decades of its existence. We all recognize that the accumulation of ambiguities and contradiction and remediation cannot continue."

Concurring with this, Adelman and Taylor (1986a) state that the problem confronting the L.D. field is not simply one of definition but involves clarifying the nature and implications of L.D. as contrasted with other learning problems. Research, therefore, needs to develop a classification scheme and valid procedures for differential diagnosis. Tansley and Panckhurst (1985), in contrast, believe that research should concentrate on analyzing characteristics instead of categorizing them. The results of this study indicate non-strong leanings towards the accurate analyses of non-learning characteristics, thus supporting

the view of Tansley and Panckhurst. Such diagnoses should distinguish between the pupil with inherent perceptual deficits with consequent impairment of functional performance and activity, and the pupil who has a learning disadvantage stemming from an interaction with, and adaptation to, the environment.

Further support for this point of view comes from Algozzine and Ysseldyke (1986) who found that professionals want precise classification of concepts such as 'L.D.' and 'remedial education' so that students can be served adequately. The fundamental issue, in their view, revolves around classification. They point out that the search for category specific interventions supports the educational need to classify students.

Further research in this regard needs to be undertaken in South Africa. No clear support or negation thereof was evident in this study. School principals were in favour of 'equipping' the regular class teacher to deal with all problems encountered by all pupils in their classes. One remedial teacher expressed the view that the quality elements of remedial teaching should, if possible, be integrated with regular education. Such moves would help focus attention on pupils' needs rather than a mere syllabus and would contribute to a more appropriate education.

Acceptance of the idea that it is not one single learning disability but rather a cluster of different learning disabilities helps direct both research and practice, (Keogh, 1986). In her opinion, the future of remedial, could be served well by research providing a systematic way of organizing and describing the range of individual attributes which characterize L.D. individuals.

The de Lange Committee Report (HSRC, 1981) grouped the majority of L.D. pupils as either 'environmentally deprived' (p.34); 'scholastically impaired' (p.35); 'handicapped' (p.35) or 'environmentally handicapped' (p.156). The de Lange Committee Report thus appears to make no distinctions between the range of individual attributes which characterize L.D. individuals. Taking into account the clear distinction drawn between Learning DISABILITIES and pupils experiencing learning DIFFICULTIES In this study, de Lange appears to categorize all pupils with special educational needs under the title of 'learning difficulty'. Adequate and appropriate educational assistance can only be provided if aetiological causal factors of L.D. are taken into account. The simplistic view, therefore, of grouping all pupils into one general group is unacceptable as the unique individual needs of such pupils would then not be catered for. Research should therefore concentrate on developing systematic diagnostic assessment instruments sensitive enough to detect and categorize individual strengths and weaknesses of 'environmentally handicapped' pupils.

Research with regard to perceptions and attitudes about the provision of remedial teaching to L.D. pupils, on the part of such L.D. pupils, 'normal' pupils and gifted children could be undertaken. It would be interesting to determine how these groups perceive such extra tuition to their peers in the mainstream educational system. Deci and Chandler (1986) expressed the viewpoint that "at least some of the future research and theory and some of the intervention and prevention programmes should be based on an 'organismic' and motivational view of the developing child."

There appears to be a need for empirical studies in local schools with regard to the efficacy of remedial teaching with respect to pupils' level of academic/scholastic achievement, self-esteem, self-assertiveness, interpersonal relationships, social and emotional development.

7.2. FUTURE OF EDUCATION FOR THE LEARNING DISABLED

7.2.1 SOME DISSENTING VIEWPOINTS ABOUT L.D.

Much recent research (e.g. Franklin et al. 1987), raises questions about the continued viability of special education as a professional field of work and study. None of the contributors to the collection of articles denies the fact that there are children in schools who seem to have difficulty learning. They maintain, however, that the source

of the problem is not usually an inherent defect in these children. In their view, the reason for children failing is 'because they are unable to meet the demands that often serve to maintain class, racial and gender inequality in the larger society', Franklin (1987: 10).

This is frequently true in the South African context. At the root of the education dilemma (which includes high failure rates) lies the officially-legislated and implemented policy of apartheid which has had "the effect of robbing persons 'other than white' of their sense of well-being" (Sonn, 1986). Pupils who have been thus politically disabled find it difficult to reach the level of education expected by the South African system.

Another factor which places a question mark on the future viability of the field of learning disabilities, according to Marleen Pucagh, (In Franklin 1987: 163-177), is the efficacy of specific training programmes for teachers of the Learning Disabled. Learning disabilities teachers establish a distinct professional identity based on their training that purports to differ from that of regular class teachers. This is based on the supposed need of L.D.-pupils for specialized instruction, and on the existence of job responsibilities that differ from those of regular classroom teachers. Pucagh (op. cit.) believes that there is little justification for the continued training of specialized education teachers for the learning disabled

children. She favours a broader training of regular classroom teachers to enable them to address the needs of such children in the regular classroom. The need for Specialized Education, in the future, will consequently decrease and eventually become unnecessary. However, the results of this study indicate that there is still a need for specialist personnel to accommodate the special needs of the pupil with learning problems.

In South Africa, the prevailing educational dispensation is the outcome of an historical heritage and subsequent evolution which reflects the broader social context in which it is located. (Pratt, 1988). Educationally therefore DEC-HR has a substantial lag to make up. There are too few remedial teachers in our schools to make any impact on the extent of the special educational needs. Findings might have been very different had more schools benefitted from remedial teaching.

Gains and McNicholas (1979) expressed similar sentiments to those of Pucach. As discussed earlier in this dissertation, they believe children can learn their 3R's as effectively through the study of general topics as they can through an analysis of specific skills and the teaching of these in isolation. Results from this study do not provide support for this viewpoint. Although many educators interviewed by the author support the view of attending to process in all subjects, many regular class teachers feel that specialized help should be specifically directed at the areas of deficit.

7.2.2. REMEDIAL SERVICES

The establishment of remedial classes with a qualified remedial teacher giving assistance to pupils from Sub. A to Std. 5 appears to be an urgent requirement, judging from the many responses by all three groups of educators.

The research findings indicate that the sampled educators perceive the function of remedial teachers, at primary schools, as including teaching and/or the provision of scholastic skills and guidance to all pupils in need of such assistance, including Senior Primary children who are traditionally excluded from remedial education services because of economic considerations.

The statistics quoted, with permission, from the annual reports of Athlone School Clinic and the Centre for Child Guidance at the University of the Western Cape (Appendix I), indicate a steady increase of referrals of pupils from Stds. 3 to 5 (26,0% - 1987 to 36,1% in 1989). These institutions cater for all DEC-HR pupils on the Cape Flats. This corroborates statements made to that effect by educators and substantiates their call for remedial intervention for these pupils.

Regular In-service training for remedial teachers is also well supported by the educators. The roles of remedial teachers, as identified in the literature and researched in this study, are clearly defined as important services to be provided. A number of educators urged that remedial education departments should be established at all large schools with a remedial teacher as Head of Department. In discussions on this aspect it was clear that educators want such a development to increase the efficacy of remedial services to the whole school. Aids and resources utilizing up-to-date technology e.g. computer assisted remedial teaching is another service regarded as important, to be provided in the near future.

The concept of team-teaching was raised by a number of remedial and regular class teachers (compare Ferguson and Adams', 1985, discussion on team teaching - Chapter 5). The provision of auxiliary services, especially social work, in the schools were regarded by many educators as necessary services. As pointed out in Chapter 3, the DEC-HR also regard this as a priority and socio-pedagogues will form an important addition to support services in future.

Algozzine and Ysseldyke (1986) and Henderson (1989), in an effort to upgrade services, recommend a merger between special and regular education be made. This would ensure the availability of the essential qualities of specialized education to all pupils in the mainstream. They argue that this would make all education more special and could eliminate the criticisms of specialized remedial services. It would no longer limit identification of some pupils as "special", but "rather recognize the uniqueness of each" (Henderson, 1989). Only one remedial teacher in this study subscribed to this idea.

The implementation of the concept of remedial-education-across-the-curriculum suggests some drastic changes. This could possibly see an end to "withdrawal" methods, except in the most severe cases. Children's needs could be met in classrooms. Respondents supported this kind of mainstream support for teachers and children.

Early Identification and Intervention (as indicated in paragraph 2.3.) allows for more efficacious remediation. This implies that a larger part of services should concentrate their resources at curriculum development at kindergarten level. Curricula should be based on the accurate identification of the needs of all children and strive at meeting those needs in the learning situation.

Remedial teachers, like most professionals, seek job satisfaction and effectiveness. In this regard the roles a principal play are particularly important. "It is imperative that learning disability teachers (e.g. Remedial teachers) understand their principal's responsibilities and provide as much support as possible", (Cheek and Lindsey, 1986). The principal is the remedial professional's primary spokesperson. It would therefore be expected that principals should assertively and sincerely assume this responsibility. They should present remedial teachers' views to the education authorities, subject adviser, parents and community organizations. It has been found by Cheek and Lindsey (1986), that effective principal and learning disability teacher relationships will promote overall job satisfaction and positive student achievement.

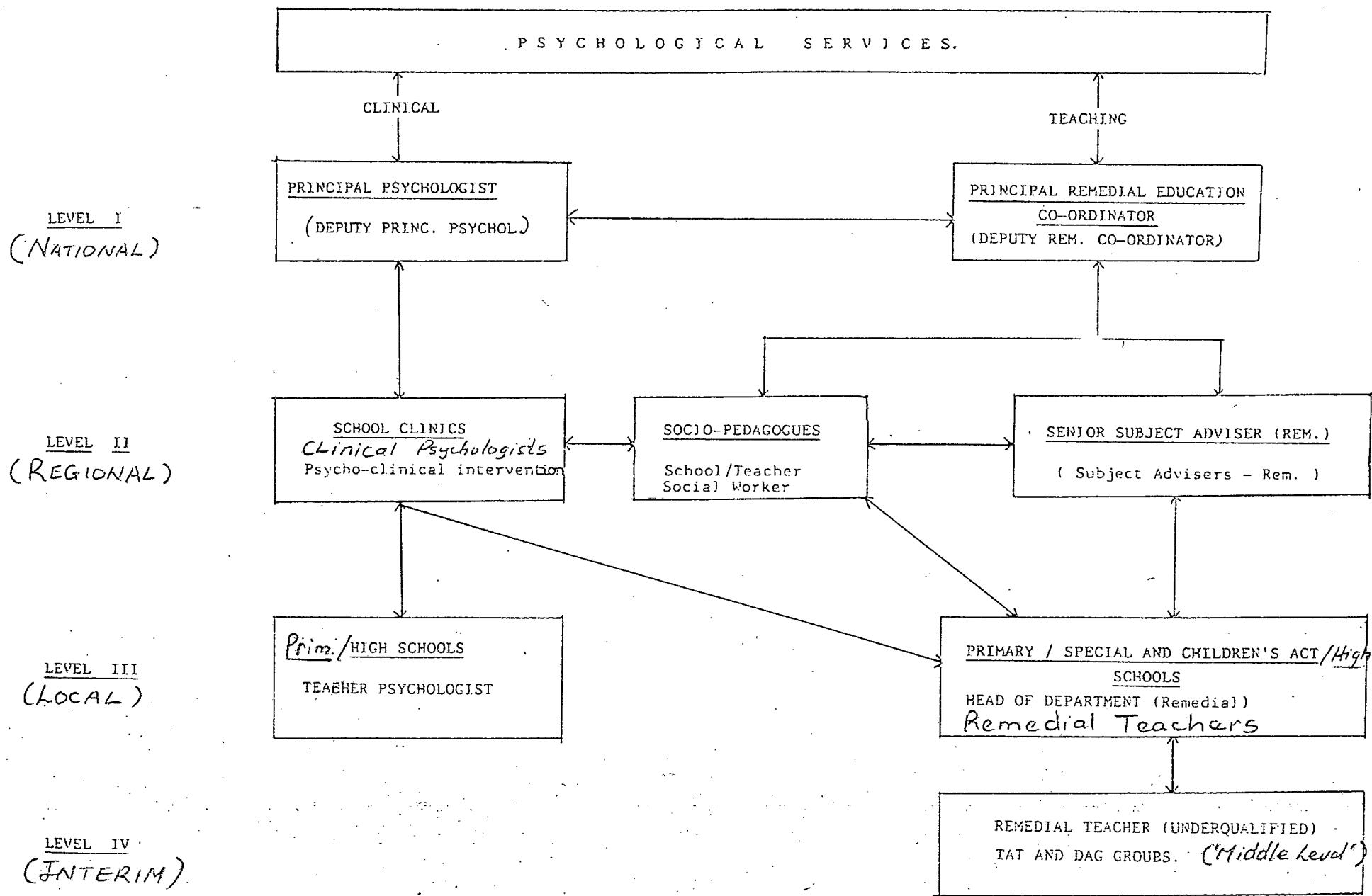
Table 3.2 reflects a projected total school enrollment figure of approximately 11 385 000 for the year 2000. It is envisaged by the majority of South Africans that by that time (year 2000) this country would have a unitary state with a single education system. In view of such possible developments and taking into account the incidence of L.D. (ranging between 13,9% and 21,5% according research in South Africa as discussed in Chapter 3), the author proposes a model based on findings in this study for Remedial Education Services for the future South Africa.

It is the author's contention that the structures of the unitary Education System should be reflected in the design of the Remedial Education Services. Decisions affecting Remedial Services, therefore, should be taken at three levels, namely : Centrally (by the Remedial Co-ordinator and senior subject advisers) ; Regionally (by subject advisers and socio-pedagogues) ; Locally (In schools by Remedial teachers and assistance teams). At present in DEC-HR, all decision-making for the Remedial Services appears to be taken at central level. Data from this study has convinced the author that the fluid and effective administration of Remedial Education in the future South Africa, could be enhanced by a structure as schematically presented in Figure 7.1.

7.2.2.1. A PROPOSED STRUCTURE FOR REMEDIAL EDUCATION SERVICES IN A SINGLE EDUCATION SYSTEM IN SOUTH AFRICA.

Special Education is the ideal area of education for immediate integration of educational resources. The proposed model includes a long term view and an interim proposal which will be phased out over a period of time. The model is based on views expressed by respondents, which concur with those of other influential persons in the field of education, during personal and telephonic interviews. Current hierarchical arrangements are to be maintained so that standards of services can be controlled for equitable distribution of resources nationwide.

FIGURE 7.1. ROBERTS MODEL FOR THE STRUCTURE OF REMEDIAL EDUCATION SERVICES IN A SINGLE EDUCATION SYSTEM IN SOUTH AFRICA.



Remedial Education and School Clinics should form a subsection of Psychological Services of the Department of Education. At the highest level, the two main components should be Clinical services and Teaching services so as to offer equal opportunities for promotion and leadership in providing high quality assistance. This was strongly motivated in questionnaire responses and interviews where remedial teachers complained of the lack of professional advancement and their subjection to psychologists' control.

LEVEL I : Central Administration (Head Office).

Remedial Teaching is to be headed by a Principal Remedial Co-ordinator. Such a person should be an appropriately qualified and an experienced remedial educator. In view of the requirements of remedial education (as discussed in this dissertation) this Head should have qualifications and experience as a psychometrician for the assessment and identification of pupils in need of specialized assistance.

School Clinics should be headed by a Principal Psychologist, qualified and registered as an educational psychologist with clinical, counselling and remedial teaching experience. Such a person should have served as School Clinic principal and have had extensive experience of clinical intervention.

Close co-operation between those two senior colleagues is a prerequisite for efficient administration of this area of Specialized Education.

It is proposed that the Remedial Education Co-ordinator be assisted by a Deputy Remedial Subject Adviser to form the policy-making body of the Remedial Education Services. It would be expected that, together, they would be responsible for co-ordinating and guiding all aspects (including general administration) of Remedial Education throughout the country. In particular, it would be expected that they design in-service training courses for upgrading knowledge and skills through workshops and seminars regular as well as newsletters with information about new remedial techniques and strategies (e.g. advances in computer assisted teaching and electronic media teaching - e.g. television). These, it is proposed, should be done in co-operation and conjunction with regional and national Special Education and professional organisations e.g. Southern African Association for Learning and Educational Disabilities, Specialised Education (Remedial) departments at universities, research institutions e.g. Human Sciences Research Council, School Clinics and the socio-pedagogues of the Department.

In the case of the Principal Psychologist (School Clinics) assistance should be provided at this level by appropriately qualified Senior Psychologists. They would be responsible

for the work done at School Clinics. There should be close liaison with school psychologists at the other levels and interaction with socio-pedagogues and Remedial Advisers. Few practical recommendations emanated from interviews in this study.

LEVEL II: Regional

Decentralisation would ensure effective service to all areas of the country. This might be on a regional basis (possibly on the basis of geographic or provincial boundaries) or on a numerical basis. The Remedial Education Services of each region could be headed by a Senior Subject Adviser assisted by Subject Advisers (the number of which will depend upon the size of the region and the number of pupils enrolled at primary schools.

The functions of these specialists would primarily encompass remedial work based on limited psychometric assessments (in close co-operation with school and/or school clinic psychologists); guidance and support for Remedial teachers (Level III); evaluation of Remedial teachers for promotion purposes; placement, remedial retention and remedial phasing-out decisions in consultation with Head of Department (Remedial) or Remedial teacher(s) and other such duties as may be assigned to them by Level I educators.

There should be a close reciprocal working relationship and interaction between Subject advisers and socio-pedagogues and School Clinic personnel.

Socio-pedagogues (also referred to as Teacher Social Workers) should also be deployed on a regional basis. Their functions would complement and assist Teachers and Clinical personnel with all socially-related scholastic problems e.g. school refusal, poor home conditions and environment, deprivation, poverty, malnutrition and pathological family dynamics. Difficult cases are to be referred to appropriate agencies.

School Clinics would handle particular cases referred to them for of psycho-clinical services, and interdisciplinary interventions not available at schools e.g. audiometry and speech therapy.

LEVEL III: Local

Research findings in this investigation indicate that Remedial departments at schools should be led by a Head of Department. Such personnel are thus proposed for all primary, special and Children's Act schools. Remedial teachers at these schools would be responsible for assisting didactical remedial cases. At high schools teacher-psychologists should be responsible for vocational and career guidance of pupils.

LEVEL IV: Interim

In view of the wide spread need and the paucity of resources, the unitary Department should as an Interim measure utilise middle level Remedial Teachers through In-service training to cope with the immediate need of the many pupils. This is to be phased out in due course. The teachers will be responsible for didactical remedial cases and organising T.A.T. and D.A.G.'s.

Roles fulfilled by Remedial teachers, in particular, should provide an effective response to the numerous problems of the different societies in South Africa. The particular expertise of Remedial teachers will become more valuable in the provision of functional literacy, problem-solving skills and communication skills as found in the Cosford (1988) study. Cosford found that there is a need for language communication and auditory skills for L.D. pupils (especially boys). The acquisition of the above - mentioned skills by pupils (including L.D.'s) could lead to personal self fulfillment and equip them with adequate skills to make significant contributions to the economic growth of the country.

Announcements and developments in political circles appear to point towards negotiated political settlements for the future democratic South Africa. This has implications for its future educational system. Educators interviewed as well as pronouncements from a variety of platforms suggest that planning should be directed towards a unitary Education System. Judging from recent public declarations it appears that such a development is also supported by the State - which signals a major shift in Government policy.

7.3. SUMMARY AND CONCLUSION

It has been the purpose of this research to illuminate some of the issues involved in the provision of appropriate services by the DEC-HR for all children with special educational needs of the Learning Disability type.

Although, to date, no acceptably "perfect" definition for L.D. has emerged researchers have tried to identify particular criteria for classification as L.D.. It is generally accepted that pupils included in the category are capable of responding positively to remedial teaching and this research has attempted to highlight the most effective strategies as viewed by the sampled groups.

The process of early intervention as mentioned in this study could allow the pupils to gain social skills which up to now have not been available to them, in order that they might match the circumstances for the roles of a 'mainstream' existence. For this reason diagnostic and remedial intervention need to be directed toward both pupils and teachers.

It appears that for mainstreaming of the L.D. to be effective, interaction between improved measurement devices, remedial techniques, improved teacher training and careful management of financial resources, is required. The spending of money on specialised education in the mainstream would allow for more and better remedial teachers who would make major contributions to solving the huge education problems in South Africa. Being removed from the control of the Psychologists would allow advancement to remedial teaching in its own right i.e. educational assessment and teaching. Close links and co-operation with psychologists i.e. assessment and therapy and also with socio-pedagogues for ecological intervention must be maintained.

It could be concluded from respondents' comments that children with specialised educational needs e.g. L.D.-children, should be kept in the mainstream of education, with the necessary support. Provision should be made in parallel educational streams for children with exceptional

educational needs e.g. mentally retarded, physically disabled etc. The movement of students between main and parallel streams should always be possible.

Since the L.D. child eventually has to find his/her own way and establish him-/herself as an adult in the community, where he/she should be independent as possible, the aim is to keep the scholar with L.D., insofar as it is educationally justifiable, in the mainstream of education with the necessary support structures. It is hoped that the research results in this study will spawn a sincere desire and direction for change in the future South Africa by all of those concerned with education and Specialized Education, in particular.

BIBLIOGRAPHY

- ABEL, R.R. & J.P. BURKE, 1985. Perceptions of School Psychology Services from a Staff Perspective. Journal of School Psychology, vol. 23, 121-131.
- ABROMS, K.J. & M. MEEKER, 1980. Learning Disabilities: A Diagnostic and educational Challenge. Journal of Learning Disabilities, vol. 13, No. 9, 492-495.
- ADELMAN, H., 1971. The Not-so-Specific Learning Disability. Exceptional Children, 37 (7), 528-533.
- ADELMAN, H.S. 1986. Staffing the Field for the Future. Journal of Learning Disabilities, vol. 19, No. 8, 477 - 479.
- ADELMAN, H.S., & L. TAYLOR, 1986a. Summary of the Survey of Fundamental Concerns confronting the L.D. field. Journal of Learning Disabilities, vol. 19, no. 7, 391-393.
- ADELMAN, H. & L. TAYLOR, 1986b. The Problems of Definition and Differentiation and the need for a Classification Schema. Journal of Learning Disabilities, vol. 19, no. 9, 514-520.
- ADMINISTRASIE: RAAD VAN VERTEENWOORDIGERS, DEPARTEMENT VAN ONDERWYS EN KULTUUR, Jaarverslag. Sielkundige Dienste. Desember 1988.
- ADMINISTRASIE: RAAD VAN VERTEENWOORDIGERS, DEPARTEMENT VAN ONDERWYS EN KULTUUR, 1989(a). Primere Skole met Remedierende Klasse op 1 Julie 1989(a). (Lêer Nommer 7/30/7/3/E).
- ADMINISTRASIE: RAAD VAN VERTEENWOORGIGERS, DEPARTEMENT VAN BEGROTING- EN ONDERSTEUNINGSDIENSTE. Omsendbrief Nr. 9/89. 4 Oktober 1989(b).
- ADMINISTRATION: HOUSE OF REPRESENTATIVES, DEPARTMENT OF EDUCATION AND CULTURE, Education Circular No. 36/86, 15 July 1986.
- ADMINISTRATION: HOUSE OF REPRESENTATIVES, DEPARTMENT OF EDUCATION AND CULTURE, Education Circular Minute, 17 September 1987.
- ADMINISTRATION: HOUSE OF REPRESENTATIVES, DEPARTMENT OF EDUCATION AND CULTURE, Education Circular Minute, 15 February 1988.
- ADMINISTRATION: HOUSE OF REPRESENTATIVES, DEPARTMENT OF EDUCATION AND CULTURE, Education Circular No. 9/89 (File No. 7/30/7/3), May 1989a.

- ADMINISTRATION: HOUSE OF REPRESENTATIVES, DEPARTMENT OF EDUCATION AND CULTURE. Education Circular No. 36/89, 21 September 1989(b).
- AFRICA, H. 1984. Learning Disabilities - Help possible if identified early, Alpha, February, p.29.
- AINSCOW, M. 1988. Beyond the eyes of the monster: an analysis of recent trends in assessment and recording. Support for Learning, vol. 3, No. 3, 149-153
- AINSCOW, M. and J.MUNCEY, 1983. Learning difficulties in the primary school: an in-service training initiative. Remedial Education, vol. 18, No. 3, 116-123.
- ALEXANDER, N. 1987. Nation and Ethnicity in South Africa. In: Sow the Wind. Cape Town : Skotaville.
- ALGOZZINE, B & J.E. YSSELDYKE 1981. Special Education Services for normal students: Better safe than sorry? Exceptional Children, vol.48, 238-243.
- ALGOZZINE, B & J.E. YSSELDYKE. 1983. Learning Disabilities as a subset of School Failure: The over sophistication of a concept. Exceptional Children, vol. 50, No. 3, 242-246.
- ALGOZZINE, B. & L. KORINER, 1985. Where is Special Education for Students with High Prevalence Handicaps going? Exceptional Children, 388-394.
- ALGOZZINE, B. & J.E. YSSELDYKE. 1986. The future of the LD Field: Screening and Diagnosis. Journal of Learning Disabilities, vol. 19, 394-398.
- ANDERSON, A. & F.J.O'HAGAN. 1989. Dyadic Interactions at the Micro-computer Interface: A Case Study in Computer Assisted Learning. Journal Of Computer Assisted Learning, vol.5, No.2, 114 - 124.
- ANDERSON, J.R. 1980. Cognitive Psychology and its Implications. San Francisco: W.H. Freeman and Company.
- ANDERSON, K. et al. 1980. Piagetian Task Performance of Learning Disabled Children. Journal of Learning Disabilities, Vol. 13, No. 9, 501-505.
- ARCHER, M. 1984. There's Method in their Mathness. Paper presented at 10th Annual Conference of the Southern African Association for the Learning and Educationally Disabled. University of the Witwatersrand, Johannesburg.
- ARCHER, M. et al. (Ed). 1989. Specialised Education: Some Responses to changing needs in the South African Context. Papers presented at the Association for Child and Adolescent Psychiatry and Allied Disciplines conference, held in Cape Town.

- ASHER, J.W. 1976. Educational Research and Evaluation Methods. Boston : Little, Brown.
- ASHLEY, M.J. 1989. Ideologies and Schooling in South Africa. Rondebosch : South African Teachers' Association.
- AUERBACH, F.E. 1982. How can we best ensure that syllabus and teaching methods in schools are reformed and up-dated. In : TUNMER, R. The de Lange Report - Assessment and Implementation in South Africa. Proceedings of the National Education Conference, 4 - 6 February, Grahamstown.
- BABBIE, E.R. 1973. Survey Research Methods. Belmont, Calif: Wadsworth Publishing Company.
- BAIN, M. 1979. Rethinking remedial education in the light of three Reports. Remedial Education, vol. 14, No. 2, 85-89.
- BANDURA, A. 1977. Social Learning Theory. New Jersey: Prentice - Hall Inc..
- BANNATYNE, A. 1973. Language, Reading and Learning Disabilities - psychology, neuropsychology, diagnosis and remediation. Illinois: Charles C. Thomas.
- BARKER, W. 1989. New Hope for the Word-Blind. Reader's Digest, vol. 135, 23-28.
- BARSCHE, R.H. 1968. Perspectives on Learning Disabilities. The Vectors of a new convergence. Journal of Learning Disabilities, 1, 4-20.
- BARTON, J.A. 1988. Problem-Solving Strategies in Learning Disabled and Normal Boys: Developmental and Instructional Effects. Journal of Educational Psychology, vol. 80, No. 2, 184-191.
- BATEMAN, B. 1967. Learning Disabilities - Yesterday, Today and Tomorrow. In : FRIERSON, E.C. and W.B. BARBE, Educating Children with Learning Disabilities. New York : Meridith Publishing Company.
- BATTLE, J. & T. BLOWERS. 1982. A Longitudinal Comparative Study of the Self-Esteem of Students in Regular and Special Education Classes. Journal of Learning Disabilities, vol. 15, No. 2, 100-102.
- BAUER, R. H. 1979. Recall after a Short Delay and Acquisition in Learning Disabled and Nondisabled children. Journal of Learning Disabilities, vol. 12, No. 9, 596-607
- BEATTY, J.R. 1977. Identifying Decision-making policies in the Diagnosis of Learning Disabilities. Journal of Learning Disabilities, vol. 10, No. 4, 201-209.

- BECK, F.J. LINDSEY & G. FRITH. 1981. Effects of Self Contained Special Class Placement on the Intellectual Functioning of Learning Disabled Students. Journal of Learning Disabilities, vol. 14, 280-282.
- BEHR, A.L. 1981. Pupil's conception of the Role of the School. South African Journal of Education, 1 (1/2), 7-9.
- BEHR, A.L. 1988. New Perspectives in South African Education. Durban / Pretoria: Butterworths.
- BELL, G.H. 1977. Aims for Remedial Education : A Reply. Remedial Education , vol.12, No.4, 197 - 201.
- BENDER, C.J.G., 1987. Skoolgereedheid - evaluering deur Skoolsielkundiges. Compass, 9-10.
- BERDIE, D.R. & J.F.ANDERSON. 1975. Questionnaires: design and use. Metuchen, N.J. : Scarecrow.
- BERGER, M. 1985. Learning Theories, Development and Childhood Disorders. In : M. Rutter & L. Hersov (eds.), Child and Adolescent Psychiatry - Modern Approaches. Second Edition. Oxford : Blackwell Scientific Publications.
- BERLER, E.S. & R.G. ROMANCZYK. 1980. Assessment of the Learning Disabled and Hyperactive Child: An Analysis and Critique. Journal of Learning Disabilities, vol. 13, No. 9, 536-538.
- BENNET, R.E. 1982. Cautions for the use of Informal Measures in the Educational Assessment of Exceptional Children. Journal of Learning Disabilities, vol. 15, No. 6, 337-339.
- BICKEL, W.E. & D.D. BICKEL, 1986. Effective Schools, Classrooms, and Instruction: Implications for Special Education. Exceptional Children, vol. 52, No. 6, 489-500.
- BLANCO, R.F. 1971. A Focus on Remediation in School Psychology. Journal of School Psychology, vol.9, No. 3, 261-277.
- BLATT, B. 1980. Why Education Research Fails: Journal of Learning Disabilities, vol. 13, No. 9, 529-530.
- BLOOM, B. 1956. Taxonomy of Educational Objectives: The Classification of educational goals. New York: Mckay.
- BRADFIELD, H.R. 1973 et al. The Special Child in the Regular Classroom. Exceptional Children, 39, 384-390.

- BREEN, M.J. 1986. Cognitive patterns of Learning Disabilities Subtypes as measured by the Woodcock-Johnson psycho-educational battery. Journal of Learning Disabilities, vol.19, 86-90.
- BRYAN, T., M. BAY & M. DONAHUE. 1988. Implications of the Learning Disabilities Definition for the Regular Education Initiative. Journal of Learning Disabilities, vol. 21, No. 1, 23 - 28.
- BUCKLEY, N.K. & WALKER, H.M. 1980. Modifying Classroom Behaviour. Research Press, Illinois.
- BURMAN, S. & P. REYNOLDS. 1986. Growing up in a Divided Society: The context of childhood in South Africa. Johannesburg: Ravan Press.
- BURNS, R.B. 1985. The Self-Concept and teaching. South African Journal of Education, vol. 5, No. 3, 152-157.
- BURNS, R.B. 1987. The Effective Teacher in the South African Context. South African Journal of Education, vol.7, No.2, 131-159.
- BURNS, R.B. & C.B. DOBSON. 1983. Experimental Psychology : Research Methods and Statistics. Lancaster: MTP Press Ltd.
- BUSHELL, R.S. 1979. The Warnock Report and Section 10 of the 1976 Education Act: Integration or Segregation. Remedial Education, vol 14, No. 1, 27-29.
- CARROLL, H.C.M. 1972. The Remedial Teaching of Reading: an evaluation. Remedial Education, vol. 7, No. 1, 10-15.
- CAMERON, R.J. 1981. Curriculum development 1: clarifying and planning curriculum objectives. Remedial Education, vol. 16, No. 4, 163-170.
- CAPRON, A.C., A. SIMON & L.O. WARD, 1973. Principles for the integration of remedial pupils in the comprehensive school. Remedial Education, vol. 18, No. 2, 75-79.
- CARBERRY, H., B. WAXMAN & D. MCKAIN, 1981. An In-Service workshop Model for Regular Class Teachers concerning Mainstreaming of the Learning Disabled Child. Journal of Learning Difficulties, vol. 14, No. 1, 26-28.
- CARL, A.E. 1987. Onderwyserbetrokkenheid by Kurrikulum-ontwikkeling - 'n mite of 'n feit? South African Journal of Education, vol. 7, No. 2, 113-123.
- CARLBERG, C. & K. KAVALE. 1980. The Efficacy of special versus regular class placement for Exceptional children: a meta-analysis. Journal of Special Education, vol.14, 295-309.

- CARLBERG, C.G. & H.J. WALBERG, 1984. Techniques of Research Synthesis. The Journal of Special Education, vol. 18, No.1, 11-26.
- CAWOOD, J. 1983. Die Onderwyser as toekomstbouer. Durban: Natalse Onderwyserunie-Kongres.
- CHALFANT, J.C. & G.E. FOSTER, 1977. Helping Teachers understand the Needs of Learning Disabled Children. Journal of Learning Disabilities, vol. 10, No. 2, 79-85.
- CHANDLER, H.N. 1981. Teaching LD students in the Public Schools: A Return to the closet? Journal of Learning Disabilities, vol. 14, No. 8, 482-485.
- CHAPMAN, J.W. 1988. Cognitive- Motivational Characteristics and Academic Achievement of Learning Disabled Children: A Longitudinal Study. Journal of Educational Psychology, vol. 80, No. 3, 357-365.
- CHAZAN, M. 1967. The Effects of Remedial Teaching in Reading: a review of Research. Remedial Education, vol. 2, No. 1, 4-12.
- CHEEK, E.H. Jnr. & LINDSEY, J.D. 1986. Principal's Roles and Teacher Conflict: A Recapitulation. Journal of Learning Disabilities, vol. 19, No. 5, 280-283.
- CHISHOLM, L.A. 1983. Implications of Research : Viewpoints of a Resource Teacher. Journal of Learning Disabilities, vol.16, No. 3, 180 - 182.
- CHURCHER, J. 1985. Special Needs in Mainstream Schools: Feet on the ground, not castles in the air. Remedial Education, vol. 20, No. 3, 135-137.
- CLAMP, S. 1983. Computer Assisted Learning and the Less-Able. Remedial Education, vol. 18, No. 1, 1 - 18.
- CLUNIES-ROSS, L.R. 1984(a). Head of Department or Learning Adviser. Remedial Educational, vol. 19, No. 2, 59-64.
- CLUNIES-ROSS, L.R. 1984(b). In-Service training for teaching slow learners. Remedial Education, vol. 19, No. 4, 154-156.
- COBEN, S.S. & N. ZIGMOND, 1986. The Social Integration of Learning Disabled Students from Self-Contained to Mainstream Elementary School Settings. Journal of Learning Disabilities, vol. 19, No. 10, 614-618.
- COHN, R. 1967. The Neurological Study of Children with Learning Disabilities. In : FRIERSON, E.C. and BARBE, Educating Children with Learning Disabilities.

- COLLINS, J.E. 1961. The Effects of Remedial Education. Birmingham. University of Birmingham Institute of Education. Educational Monographs No. 4.
- COOK, J.M.E. & LEFFINGWELL, R.J. 1982. Stressors and Remediation Techniques for Special Educators. Exceptional Children, vol. 49, No. 1, 54-59.
- COOPER, R. 1979. A matter of choice. Remedial Education, vol. 14, No. 3, 117-120.
- COMMITTEE OF INQUIRY INTO THE EDUCATION OF CHILDREN WITH MINIMAL BRAIN DYSFUNCTION. (Chairman: C. H. de C Murray), 1969. Republic of South Africa, Pretoria: Government Printer. (RP 72/1969).
- CORNWALL, K.F. 1981. Some trends in pupil's evaluation: the growing importance of the teacher's role. Remedial Education, vol. 16, No. 4, 157-161.
- COSFORD, Q. 1982. Remedial Teaching - A Practical Guide for Class Teachers and Students. Longmans, Cape Town.
- COSFORD, Q. 1988. Early Identification of Learning Disability in Children of the Cape Flats Area. Dissertation in fulfillment of PhD. University of Cape Town, Faculty of Education.
- COUNCIL FOR EXCEPTIONAL CHILDREN. What is Mainstreaming? Exceptional Children, 43, 174, 1975.
- CROSS, D.R. & G. PARIS. 1988. Developmental and instructional Analyses of Children's Metacognition and Reading Comprehension. Journal of Educational Psychology, vol. 80, No.2, 131 - 142.
- CROSSLAND, C.L., B.J. FOX & R. BAKER 1982. Differential Perceptions of Role Responsibilities Among Professionals in the Public School. Exceptional Children, vol. 48, No. 6, 536-538.
- CRUICKSHANK, W.M. 1977. Myths and Realities in Learning Disabilities. Journal of Learning Disabilities, vol. 10, No. 1, 51 - 64.
- CRUICKSHANK, W.M. 1983. Learning Disabilities: A Neurophysiological Dysfunction. Journal of Learning Disabilities, vol. 16, No. 1, 27-29.
- CRUICKSHANK, W.M. 1985. The Search for excellence: An encore. Journal of Learning Disabilities, vol. 18, 574-580.

- CSAPO, M. 1987. Perspectives in Education and Special Education in Southern Africa. Center for Human Development and Research, University of British Columbia, Vancouver.
- CHAN, K.S. & RUEDA, R. 1979. Poverty and Culture in Education: Separate but Equal. Exceptional Children, vol. 45, No. 6, 422-428.
- DANIELS, E. 1984. A Suggested Model of Remedial Provision in a comprehensive school. Remedial Education, vol. 19, No. 2, 78-81.
- DAVIES, J.W. & P. DAVIES 1988. Developing credibility as a support and advisory teacher. Support for Learning, vol. 3, No. 1, 12-15.
- DECI, E.L. & C. L. CHANDLER. 1986. The importance of motivation for the future of the LD field. Journal of Learning Disabilities, vol.19, No.10, 587-594.
- DEE, L.M. 1978. To Sink or Swim: approaches to integration of the handicapped in the U.S.A.. Remedial Teaching, vol. 12, 115-118.
- DEESE, J. & S.H. HULSE. 1967. The Psychology of Learning Third Edition, London: McGraw-Hill .
- DEMBINSKI, R.J. & A.J. MAUSER, 1977. What parents of the Learning Disabled Really Want from Professionals. Journal of Learning Disabilities, vol. 10, No. 9, 578-584.
- DEMERS, L.A. 1981. Effective Mainstreaming for the Learning Disabled Student with Behaviour Problems. Journal of Learning Disabilities, vol. 14, No. 4, 179-204.
- DENO, E. 1970. Special Education as Developmental Capital. Exceptional Children, 37(3), 229-237.
- DEPARTMENT OF CENTRAL STATISTICS. Demographic Statistics, Pretoria, Republic of South Africa, July 1989.
- DEPARTMENT OF EDUCATION AND SCIENCE (DES), 1975. A Language for Life (Bullock Report), London: HMSO.
- DEPARTMENT OF EDUCATION AND SCIENCE (DES), 1978. Special Educational Needs. (WARNOCK REPORT), London: HMSO.
- DESFORGES, M.F., C. GOODWIN, & A. KERR. Do you work in a Subtly Racist Psychological Service? Educational Psychology in Practice, vol. 1, No. 1, 10-13.
- DICKENSON, D.J. 1980. The Direct Assessment: An Alternative to Psychometric Testing. Journal of Learning Disabilities, vol. 13, No. 9, 472-476.

- DILLMAN, D.A. 1978. Mail and Telephone Surveys: The Total Design Method. New York : Wiley.
- DONALD, D. 1980. Teacher Training: Present and Future. Paper read at Annual Conference of the South African Association for Learning and Educational Disabilities. Johannesburg College of Education, Johannesburg.
- DOVEY, K. 1978. The experience of Disability: Social Construction and Imposed Limitation. Burwood: Victoria College Press.
- DUANE, D.D. & C.K. LEONG, (Eds) 1985. Understanding Learning Disabilities - International and Multidisciplinary Views, New York: Plenum Press .
- DU PREEZ, J.J. & W.L. STEENKAMP. 1980. Spesifieke Leergestremdhede - Basiese Beginsels. Durban/Pretoria: Butterworth.
- DYBWAD, G. 1980. Avoiding Misconceptions of Mainstreaming, the Least Restrictive Environment, and Normalization. Exceptional Children, vol.47, No. 2, 85-88.
- DYER, C. 1988. Which support? An examination of the term. Support for learning, vol. 3, No. 1, 6-11.
- DYKMAN, R.A. et al. 1983. Physiological Manifestations of Learning Disability. Journal of Learning Disabilities, vol. 16, No. 1, 46-53.
- EBEL, R.L. 1972. Essentials of Educational Measurement. Englewood Cliffs, New Jersey : Prentice Hall Inc.
- EDGAR, E., A.H. HAYDEN. 1985. Who are the Children Special Education Should Serve And How Many Children Are There? The Journal of Special Education, vol. 18, No. 4, 523-539.
- ENGLERT, C.S. 1983. Measuring Special Education Teacher Effectiveness. Exceptional Children, vol. 50, No. 3, 247-254.
- EPPEL, S. 1987. Against Education for 'Special Needs'. Paper presented at SAALED Annual Conference. University of Witwatersrand, Johannesburg.
- EPPS, S. J.E. YSSELDYKE & B. ALGOZZINE, 1985. An analysis of the Conceptual Framework Underlying Definitions of Learning Disabilities. Journal of School Psychology. vol. 23, 133-144.
- EYSENCK, H.J. 1984. Meta-Analysis: An Abuse of Research Integration. The Journal of Special Education. vol. 18, No. 1., 41-59.

- EYSENCK, H.J. & D. COOKSON. 1969. Personality in Primary School Children: 1. - Ability and Achievement. British Journal of Educational Psychology, vol. 39, 109-122.
- FARNHAM - DIGGORY, S. 1981. Learning Disabilities - The Developing Child. Bruner, J., M. Cole & B. Lloyd (eds.). Shepton Mallet : Fontana/ Open Books.
- FAAS, L.A. 1980. Children with Learning Problems. Boston : Houghton Mifflin Co.
- FERGUSON, N. & M. ADAMS, 1982. Assessing the advantages of team teaching in remedial education: The remedial teacher's role. Remedial Education, vol. 17, No. 1.
- FERRGUSON, N.M. & M. ADAMS, 1985. Assessing the Advantages of Team Teaching in Remedial Education: The Remedial Teacher's Role. In: New Directions in Remedial Education. C. Smith (Ed.) Philadelphia: The Falmer Press.
- FEUERSTEIN, R. 1979. The Dynamic Assessment of Retarded Performers - The Learning Potential Assessment Device, Theory Instruments and Techniques. Baltimore: University Park Press.
- FIAT LUX (Journal of the House of Delegates). 1986. Vol.21, No. 8, 10 - 13.
- FOOS, P.W. & R.P. FISHER. 1988. Using Tests as Learning Opportunities. Journal Of Educational Psychology, vol.80, No. 2, 179 - 183.
- FRANKEL, J. 1974. Special Educators speak out on their needs for resource products and services. Exceptional Children, vol. 41, 187-189.
- FRANKLIN, B.M. 1987. Learning Disability : Dissenting Essays Philadelphia: The Falmer Press.
- FREYMAN, R. 1980. Is Remedial Teaching Effective? Remedial Education, vol. 15, No. 4.
- FRIEND, M. & G. McNUTT, 1984. Resource Room Programs: Where are we Now? Exceptional Children, vol. 51, No. 2, 150-155.
- FRIEND, M. & G. McNUTT, 1987. A comparative study of Resource Teachers Job Descriptions and administrators' Responsibilities. Journal of Learning Disabilities, vol. 20, No. 4, 224-228.
- FROSTIG, M. & D.HORNE, 1964. The Frostig Program for the development of Visual Perception, Teachers guide. Chicago : Follet.

- GADDES, W.H. 1976. Prevalence estimates and the need for Definition of Learning Disabilities. In : KNIGHTS, R.M. & D.L. BAKKER (eds.), The Neuropsychology of Learning Disorders, Theoretical Approaches. Baltimore: University Park Press.
- GAINS, C.W. 1976. Mastery Learning and its implications for Remedial Teachers. Remedial Education, vol.11, No.1, 25 - 31.
- GAINS, C. W. 1980. Remedial education in the 1980's. Remedial Education, vol. 15, No. 1, 5-9.
- GAINS, C.W. 1985. The Challenge for Trainers.. In: SMITH, C.J. (Ed.). New Directions in Remedial Education. London : The Falmer Press.
- GALLAGHER, J.J. 1984. Learning Disabilities and the Near Future. Journal of Learning Disabilities, vol. 17, No. 9, 571 - 572.
- GALLOWAY, D. 1988. INSET and the Whole-school Approach. British Journal of Special Education, vol. 15 , No. 4, 173 - 175.
- GARNET, J. 1988. Support Teaching: Taking a Closer Look. British Journal of Special Education, vol. 15 , No. 1, 15 - 18.
- GAYDON, V. 1987. Race against the Ratios. South African Institute of Race Relations, Johannesburg.
- GERBER, H.M. 1981. Die Wêreldontwerp van die Leergestremde Kind. Pretoria: University of South Africa.
- GERBER, H.M. 1989. Identifisering van Leergestremdheid. South African Journal of Education, vol.9, No.3, 470 - 476.
- GICKLING, E. & J.THEOBALD, 1975. Mainstreaming : Affect or Effect. Journal of Special Education, vol. 9, 317-328.
- GICKLING, E.E., L.C.MURPHY & D.W.MALLORY . Teachers' Preference for Resource Services. Exceptional Children, vol. 45, No. 6, 442-449.
- GILLILAND, H. 1978. A Practical Guide to Remedial Reading. Columbus, Ohio: Charles E. Merrill Publishing Company.
- GOTTLIEB, B., J.GOTTLIEB , D.BERKELL & L.LEVY. 1986. Sociometric Status and Solitary Play of LD Boys and Girls. Journal of Learning Disabilities, vol. 19, 619-622.
- GRAHAM, S. & A. DWYER. 1987. Effects of the Learning Disability label, quality of writing performance and examiner's level of expertise on the evaluation of written products. Journal of Learning Disabilities, vol. 20, 317-318.

- GREEN, L. 1989. The Training of Education Professionals. In: Specialised Education: Some Responses to Changing Needs in the South African Context. M.Archer. (ed.). Papers presented in workshop form for Association for Child and Adolescent Psychiatry and Allied Disciplines conference held in Cape Town, March 1989.
- GROVE, M.C. & H.M.A.M.HAUPTFLEISCH, . 1982. Remedial Education in the Primary School. HAUM, Pretoria.
- GRUNDIN, H.U. 1979. Remedial Education - A Swedish viewpoint Remedial Education, vol. 14, No. 2, 74-77.
- GUSKEY, T.R. 1988. Research on Group-based Mastery Learning Programs: A Meta-Analysis. The Journal of Educational Research, vol. 81, No. 4, 197-216.
- GUSKIN, S.L. 1984. Problems and Promises of Meta-Analysis in Special Education. The Journal of Special Education. vol. 18, No. 1, 73-80.
- HAIGHT, S.L. 1984. Special Education Teacher Consultant: Idealism versus Realism. Exceptional Children, vol. 50, No. 6, 507-575.
- HAISLEY, F.B., C.A. TELL & J. ANDREWS, 1981. Peers as Tutors in the Mainstream: Trained 'Teachers' of Handicapped Adolescents. Journal of Learning Disabilities, vol. 14, No.4, 224-226.
- HALLAHAN, D.P. & J.M. KAUFMAN, 1976. Introduction to Learning Disabilities: A Psycho-Behavioural Approach. Prentice Hall, Inc., New Jersey.
- HAMILTON, J.H. 1974. The Optimal Utilisation of the New South African Individual Scale in the Examination of the child with Learning Disabilities. D.Ed. Thesis - University of Stellenbosch.
- HAMMILL, D.D. et al. 1987. A New Definition of Learning Disabilities. Journal of Learning Disabilities, vol. 20, No. 2, 109-112.
- HEGARTY, S.,K. POCKLINGTON & D.LUCAS . 1981. Educating Pupils with Special Needs in the Ordinary School. Windsor: NFER - Nelson.
- HEIDEGGER, B. 1988. The German School System - and integration? Support for Learning, vol. 3, No. 1, 41-43.
- HENDERSON, R.A. 1989. Delivery of Special Education in Australia, New Zealand and the United States: Similarities and Differences. International Journal of Special Education, vol. 4, No.1, 25-32.

- HERON, T.E. 1978. Maintaining the mainstreamed child in the regular classroom: The decision-making process. Journal of Learning Disabilities, vol. 11, 210-215.
- HEWETT, F.M. 1967. A Hierarchy of Educational Tasks For Children with Learning Disorders. In: FRIERSON, E.C. and W.B.BARBE. Educating Children with Learning Disabilities. New York: Meridith Publishing Company.
- HICKS, G. 1984. Assertiveness Training and Learning and Educational Disabilities. Paper presented at 10th Annual Conference South African Association for the Learning and Educationally Disabled. University of the Witwatersrand, Johannesburg.
- HILL, J.S. 1985. Die onderwyser se aandeel in die samestelling en ontwikkeling van sillabusse. SACR-Bulletin: 5-11.
- HINSON, M. 1985. Teachers' Involvement in Curriculum Change. In: SMITH, C.J. New Directions in Remedial Education. London : The Falmer Press.
- HOHN, E. 1967. De Slechte Leerling, Utrecht & Antwerpen: Uitgeverij Het Spectrum, R. Piper and Company.
- HOPSON, B. & J. ANDERSON, 1984. Papers to Lifeskills Conference. University of Cape Town.
- HORNE, M. 1982. A Review of Literature with Reference to feelings of students, teachers and parents about Learning Disabilities. Psychology in Schools, 19-22.
- HOUCK, C.K. 1984. Learning Disabilities: Understanding Concepts Characteristics and Issues. New Jersey: Prentice-Hall.
- HOUCK, C.K., C.H.GELLER & J. ENGELHARD. 1988. Learning Disabilities Teachers' Perceptions of Educational Programs for Adolescents with Learning Disabilities. Journal of Learning Disabilities, vol. 21, No.2, 90 - 97.
- HOUCK, C. & B. GIVEN. 1981. Status of SLD programs: Indications from a teacher survey. Learning Disability Quarterly, 4(3), 320-324.
- HOWARD, G.S. & J.H. BRAY. 1979. Use of Norm Groups to Adjust Student Ratings of Instruction: A Warning. Journal of Educational Psychology, vol. 71, No. 1, 58-63.
- HUDSON, P.J. et al. 1987. Competencies for Teachers of Students with Learning Disabilities. Journal of Learning Disabilities, vol.20, No.4, 232 - 235.
- HUEBNER, E.S. 1988. Bias In Teachers' Special Education Decisions as a Function of Test Score Reporting Format. Journal of Educational Research, vol.81, No. 4 , 217 - 220.

- HUMAN SCIENCES RESEARCH COUNCIL. 1981(a). Provision of Education in the Republic of South Africa. Report of the Main Committee. Pretoria: HSRC.
- HUMAN SCIENCE RESEARCH COUNCIL. 1981(b). Education for Children with Special Needs. Report of the Work Committee, No. 8, Pretoria: HSRC.
- HUMAN SCIENCE RESEARCH COUNCIL. 1981(c). Education Financing. Report of the Work Committee, No. 4, Pretoria: HSRC.
- IDOL, L. & J.F. WEST. 1987. Consultation in Special Education (Part II): Training and Practrice. Journal of Learning Disabilities, vol. 20, No.8, 474 - 492.
- IVARIE, J., D.HOGUE, , A.R.BRULLE. 1984. An Investigation of Mainstream Teacher Time Spent With Students Labelled Learning Disabled. Exceptional Children, vol. 51, No. 2, 142-149.
- JACOBSEN, B., B.LOWERY & J.DuCETTE. 1986. Attributions of Learning Disabled Children. Journal of Educational Psychology, vol. 78, No. 1, 39-64.
- JANTJES, E.M. 1987. Improving student learning through the enhancement of Initial cognitive prerequisites combined with mastery learning. Unpublished Ph.D. dissertation, North Western University, Illinois.
- JEFFS, A. 1984. Teachers with Special Needs: Staff Development in the Remedial Service. Remedial Education, vol. 19, No. 3, 107-112.
- JENKINS, J.R. 1976. Development and Evaluation of a resource Teacher Program. Exceptional Children, vol. 43, No. 1, 21-29.
- JOHNSON, D. 1985. Issues the Educational Programmes for Learning Disabled Children. In: DUANE, D.D. and C.K.LEONG, (Eds). Understanding Disabilities International and Multidisciplinary Views, 111-126, New York:Plenum Press.
- JOHNSON, D. & H. MYKLEBUST. 1967. Learning Disabilities : Educational Principles and Practices. New York: Grune and Stratton.
- JONES, C. 1988. Advisory Or Support Teachers in Primary Education? Education 3-13, vol. 16, No. 3, 6-10.
- JONES, H. 1979. The Development of Remedial Education in Scotland. (Editorial), Remedial Education, vol.14, No.2, 59 - 62.

- JONES, R.L. 1974. Correlates of Orthopedically Disabled Children's School Achievement and Interpersonal Relationships. Exceptional Children, 191-192.
- JUNKALA, J. & J.F. MOONEY. 1986. Special Education Students in Regular Classes : What Happened to the Pyramid? Journal of Learning Disabilities, vol. 19, No. 4, 218-221.
- JUUL, K.D. 1989. Some Common and Unique features of Special Education in the Nordic Countries. International Journal of Special Education, vol. 4, No. 1, 85-96.
- KALLAWAY, P. 1984. Apartheid and Education. Ravan Press, Johannesburg.
- KANIEL, S. 1989. Cognitive Strategies for Learning and Teaching. Lecture presented to Remedial Teachers, Teacher Counsellors and School Psychologists, Teachers Centre, Mowbray, Cape Town, 19 September. Unpublished.
- KAUFMAN, D. & KAUFMAN, 1979. Strategy Training and Remedial Techniques. Journal of Learning Disabilities, vol. 12, 416-419.
- KAVALE, K. 1970. Mainstreaming - the genesis of the exceptional child. The Exceptional Child, vol. 26(1).
- KAVALE, K.A. 1984. Potential Advantages of the Meta-Analysis Technique for Research in Special Education. The Journal of Special Education, vol. 18, No. 1, 61-72.
- KAVALE, K.A. & C. NYE. 1986. Parameters of Learning Disabilities in Achievement, Linguistic, Neuropsychological and Social Behavioural Domains. Journal of Special Education, vol. 19, No. 4, 443-458.
- KELLY, D.B. 1981. Withdrawal for Remedial Help in Secondary School. Remedial Education, vol. 16, No. 2, 67-70.
- KEOGH, B.K. 1983. Classification, Compliance and Confusion. Journal of Learning Disabilities, vol. 16. No. 1, 25.
- KEOGH, B.K. 1988. Improving Services for Problem Learners: Rethinking and Restructuring. Journal of Learning Disabilities, vol. 21, No. 1, 19 - 22.
- KEOGH, B.K. & L.D. BECKER, 1973. Early Detection of Learning Problems: Questions, Cautions and Guidelines. Exceptional Children, vol. 40. 5-13.
- KEOGH, B.K. & LEVITT. 1976. Special Education in the Mainstream. Exceptional Children, 8(1), 1-11.
- KEPHART, N.C. 1960. The Slow Learner in the Classroom. Columbus, Ohio: Charles E. Merrill.

- KERRY, T. 1978. Remedial Education in the Regular Classroom. Remedial Education, vol. 13, 117-121.
- KIRK, S.A. & B.BATEMAN, 1962. Diagnosis and Remediation of Learning Disabilities. Exceptional Children, vol. 29, 73-78.
- KIRK, S.A. & KIRK, W.D. 1971. Psycholinguistic Learning Disabilities : Diagnosis and Remediation. Urbana, IL: University of Illinois Press.
- KIRK, S.A. & KIRK, W.D. 1983. On Defining Learning Disabilities. Journal of Learning Disabilities, vol. 16, No. 1, 20-21.
- KISTNER, J.A. & D.F.GATLIN . 1989. Sociometric Differences Between Learning Disabled and Non - Handicapped Students: Effects of Sex and Race. Journal of Educational Psychology, vol. 81, No. 1, 118-120.
- KISTNER, J.A., OSBORNE, M. & LeVERRIER, L., 1988. Causal Attributions of Learning Disabled Children: Developmental Patterns and Relation to Academic Progress. Journal of Educational Psychology, vol. 80, No. 1, 82-89.
- KOTZE, J.M.A. 1980. Hoofstroomonderwys en Spesiale Voorsieningsvorme vir Leergestremdes. Paper read at the Annual Conference of the Southern African Association for Learning and Educational Disabilities, Johannesburg College of Education, Johannesburg.
- KOTZE, J.M.A. 1984. Die Opvoedingsproblematiek van die opvoedingshulpverlening aan ouers van kinders met leerprobleme- Paper presented at Annual Conference of Southern African Association for the Learning and Educationally Disabled. University of Witwatersrand, Johannesburg.
- KRIEKEMANS, A.J.J. 1965. Algemene Pedagogiek. Vierde Druk. Paul Brand, Hilversum.
- LANDMAN, W.A. 1974. Leesboek vir die Christen - Opvoeder. Pretoria: N.G.Kerkboekhandel.
- LANGFORD, K. 1980. The Neurological Impress Method: Useful or Not? Journal of Learning Disabilities, vol. 13, No. 1, 6.
- LARRIVEE, B. 1981. Effect of Inservice Training Intensity on Teachers' attitude toward Mainstreaming. Exceptional Children. vol. 48. No. 1 , 34-39.
- LARRIVEE, B. & L.COOK, 1979. Mainstreaming: A study of the Variables Affecting Teacher Attitudes. Journal of Special Education, vol. 13, 315-324.

- LARSEN, S., R.M.PARKER & D.D.HAMMILL. 1982. Effectiveness of Psycholinguistic training: A Response to Kavale. Exceptional Children, vol. 49, No. 1, 60-66.
- LARSON, S.C. & D.C.HAMMILL. 1976. The Relationship of selected visual perceptual abilities to school learning. The Journal of Special Education, vol. 9, 281-291.
- LASKIER, M. 1985. The Changing Role of the Remedial Teacher. In : SMITH, C.J. (Ed.). New Directions in Remedial Education. London: The Falmer Press.
- LAUBSCHER, D. 1976. Onderprestasie gedurende die Sekondêre Skoolfase, Instituut vir mannekragnavorsing, R.G.N. Pretoria.
- LAUBSCHER, D. 1984. Development of Self-Concept in the child with Learning Problems. Paper presented at Annual Conference of the South African Association for the Learning and Educationally Disabled. University of the Witwatersrand, Johannesburg.
- LEON, J.A. & H.J.PEPE. 1983. Self-instructional Training: Cognitive Behaviour Modification for Remediating Arithmetic Deficits. Exceptional Children, vol. 50, No. 1, 54-60.
- LERNER, J.W. 1985. Learning Disabilities: Theories, Diagnosis and Teaching Strategies (4th Ed.) Boston: Houghton Mifflin.
- LEWIS, R.B. 1983. Learning Disabilities and Reading: Instructional Recommendations from Current Research. Exceptional Children, vol. 50, No. 3, 230-240.
- LICHT, B.G. 1983. Cognitive motivational factors that contribute to the achievements of learning disabled children. Journal of Learning Disabilities.
- LIEBERMAN, L. 1982(a). The Nightmare of Scheduling. The Journal of Learning Disabilities, vol. 15, No. 1, 57-58.
- LIEBERMAN, L.M. 1982(b). The Regular Classroom Environment. Journal of Learning Disabilities, vol. 15, No. 5, 309-310.
- LLOYD, R.H. 1982. Sir: a participative activity for use in training remedial teachers. Remedial Education, vol. 16, No. 2, 78-79.
- LLOYD-SMITH, M. & A. SINCLAIR-TAYLOR. 1988. Inservice Training for 'designated teachers'. Support For Learning, vol. 3, No. 3, 166 - 171.

- LOGUE, G. 1979. A review of current theories and practices in the field of Learning Disability. Paper read at Annual Conference Of The Association for Learning And Educational Disabilities. University of Durban-Westville, Durban.
- LORENZ, L. & E. VOCKELL, 1979. Using the Neurological Impress Method with Learning Disabled Readers. Journal of Learning Disabilities, vol. 12, No. 6, 420-422.
- OBERHOLZER, C.K. 1979. We and our Children. Translated by J.L. du Plooy. Johannesburg: Perskor Publishers.
- O'SHEA, T. & J. SELF. 1983. Learning and Teaching with Computers. Brighton, Sussex : The Harvester Press.
- MAIER, A.S. 1980. The Effect of focussing on the cognitive processes of learning disabled children. Journal of Learning Disabilities, vol. 13, 143-147.
- MAHER, C.A. 1980. Training Special Service Teams to develop IEP'S. Exceptional Children, vol. 47, No. 3, 206-211.
- MARSHALL, S.T. 1984. Educational Psychology for the teacher in Africa. London : Edward Arnold .
- MARSTON, D. 1988. The Effectiveness of Special Education: A Time Series Analysis of Reading Performance In Regular and Special Education Settings. Journal of Special Education, vol. 21, No. 4, 13-26.
- MARSTON, D., MIRKIN, P. & S. DENO. 1984. Curriculum-Based Measurement : An Alternative to traditional Screening, Referral and Identification. The Journal of Special Education, vol. 18, No. 1, 109-117.
- MARTIN, E.W. 1974. Some Thoughts on Mainstreaming. Exceptional Children, 150-153.
- McARTHUR, D.L. (Ed.) 1987. Alternative Approaches to the Assessment of Achievement. Boston:Kluwer Academic Publishers.
- McKINNEY, J.D. 1984. The Search for Subtypes of Specific Learning Disability. Journal of Learning Disabilities, vol. 17, No. 1, 43-50.
- McKINNEY, J.D. & L. FEAGANS. 1983. Adaptive Classroom Behaviour of Learning Disabled Students. Journal of Learning Disabilities, vol. 16, No. 6, 360-366.
- McLOUGHLIN, J.A. & A. NETICK, 1983. Defining Learning Disabilities : A New and Cognitive Direction. Journal of Learning Disabilities, vol. 16, No. 1, 21-24.

- McNICHOLAS, J.A. 1976. Aims of Remedial Education: A Critique. Remedial Education, vol.11, No.3, 113-116.
- McNICHOLAS, J.A. 1979. Life Skills : A course for non-academic fourth and fifth year children in a comprehensive school. Remedial Education, vol. 14, 125-129.
- McNUTT, G. 1986. The Status of Learning Disabilities in the States: Consensus on Controversy. Journal of Learning Disabilities, vol. 19, 12-16.
- McLEOD, J. 1979. Educational Underachievement: Toward a Defensible Psychometric definition. Journal of Learning Disabilities, vol. 12, No. 5, 322-330.
- McLESKEY, J. & H.J. REITH, 1982. Controlling IQ differences between Reading Disabled and Normal Children: An Empirical Example. Journal of Learning Disabilities, vol. 15, No. 8, 481-483.
- McLESKEY, J., H.J. REITH, & L. POLSROVE, 1980. The Implications of Response generalizations for improving effectiveness of programs for Learning Disabled Children. Journal of Learning Disabilities, vol. 13, 287-290.
- MEDWAY, F.J. 1979. Causal Attributions for School-related problems: Teacher perceptions and teacher feedback. Journal of Educational Psychology, vol. 71, 809-818.
- MERCER, C.D. 1987. Students with Learning Disabilities. 3rd Edition. Columbus, Ohio: Merrill.
- MEICHENBAUM, D. 1976. Cognitive-functional Approach to cognitive factors as determinants of Learning Disabilities. In: KNIGHTS, R.M. & D.J.BAKKER (Eds.), The Neuropsychology Learning Disorders. Baltimore : University Park Press.
- MERULLA, E. & A. McKINNON. 1982. 'Stuck' on Deno's Cascade. Journal of Learning Disabilities, vol. 15, No. 2, 94 - 96.
- MESSICK, S. 1979. Potential Uses of Noncognitive Measurement in Education. Journal of Educational Psychology, vol. 71, No. 3, 281-292.
- METCALFE, M. 1987. Learning and Educational Disabilities in the South African Context. Paper presented at the South African Association for the Learning and Educationally Disabled Annual Conference. University of the Witwatersrand, Johannesburg.
- MEYERS, P.I. & D.D. HAMMILL, 1969. Methods for Learning Disorders, New York : John Wiley and Sons.

- MICHAEL, E. 1989. Special Education In Israel. International Journal of Special Education, vol. 4, No. 1, 59-64.
- MILLAR, C.J. 1983. Educational Case Studies. In : Steinberg, M.B. & S.E. Philcox (eds.), Research Methods for Higher Degrees. University of Cape Town, Faculty of Education.
- MILLER, T.L. & D.A. SABATINO, 1978. An evaluation of the teacher consultant model as an approach to mainstreaming. Exceptional Children, vol. 45, 86-91.
- MORGAN, D.P. & G. RHODE, 1983. Teachers' Attitudes toward IEPs: A two year follow-up. Exceptional Children, vol. 50, 64-67.
- MORPHET, A.R. 1983. Action Research. In : Steinberg, M.B. & S.E. Philcox (eds.), Research Methods for Higher Degrees. University of Cape Town, Faculty of Education.
- MOSER, C.A. & G. KALTON. 1972. Survey Methods In Social Investigation. Second Edition. New York: Basic Books.
- MOUNTAIN, L. 1986. Releasing the Remedial Readers Creative Power. Journal of Learning Disabilities, vol. 19, No. 1, 5-7.
- MULDER, J.C. 1981. Statistiese Tegnieke in Opvoedkunde. Pretoria : HAUM Opvoedkundige Uitgewers.
- NOAR, M & R.M. MILGRAM, 1980. Two Preservice Strategies for Preparing Regular Class Teachers for Mainstreaming. Exceptional Children, vol. 47, No. 2, 126-129.
- NATIONAL JOINT COMMITTEE OF LEARNING DISABILITIES (NJCLD). 1981. Some Representative types of Reading and Learning Disabilities. Journal of Learning Difficulties, vol. 14, No. 8, 441-442.
- NATIONAL JOINT COMMITTEE OF LEARNING DISABILITIES (NJCLD). 1987. Learning Disabilities: Issues in the Preparation of Professional Personnel. Journal of Learning Disabilities, vol. 20, No. 4, 229 - 231.
- NATIONAL JOINT COMMITTEE OF LEARNING DISABILITIES (NJCLD). 1988. Inservice Programs in Learning Disabilities. A Position Paper of the NJCLD, 27 September, 1981. Journal of Learning Disabilities, vol. 21, No. 1, 53 - 55.
- O'HAGAN, F.J. 1977. The Role of the Remedial teacher: Problems and Perspectives. Remedial Education, vol. 12, No. 2, 56-58.

- OWEN, K. & J.J.TALJAARD (Red.). 1988. Handleiding vir die Gebruik van Sielkundige en Skolastiese Toetse van IPEN en die NIPN.Pretoria: RGN.
- PALINCSAR, A.S. & D.A. BROWN. 1987. Enhancing Instructional Time through attention to Metacognition. Journal of Learning Disabilities, vol.20, No. 2, 66 - 75.
- PATTEN, M.D. 1983. Relationships between Self-Esteem, Anxiety, and Achievement in Young Learning Disabled Students. Journal of Learning Disabilities, vol. 16, No. 1, 43-45.
- PERKINS, S.A. 1977. Malnutrition and Mental Development. Exceptional Children, vol. 43, No. 4, 214-219.
- PEROLD, C. 1984. Provision of Classroom Strategies for the Classroom Teacher. Paper presented at Annual Conference of the Southern African Association for the Learning Disabled. University of the Witwatersrand, Johannesburg:
- PERQUIN, N. 1965. Pedagogiek, Bezinning op het Opvoedings-verschijnsel. Roermond - Maaseik : J.J.Romen & Zonen.
- PETRIE, P. 1988. Primary Advisory Teachers: Their Value and Their Prospects. Education 3-13, vol. 16, No. 3, 3-5.
- PHIPPS, P.M. 1982. The Merging categories: An appropriate education for administrative convenience? Journal of Learning Disabilities, vol. 15, No. 2, 153-154.
- PILLING, D. & M.K. PRINGLE. 1978. Controversial Issues in Child Development. London: Paul Elek.
- POWERS, D.A. 1983. Mainstreaming and the Inservice Education of Teachers. Exceptional Children, vol. 49, No. 5, 432-439.
- PRATT, E. 1988. Education and Change: Quality or Equality. Unpublished Master of Education Dissertation, University of Cape Town.
- PRESTON, D. et al. 1984. Minority Issues in Special Education : A Principal-Mediated Inservice Program for Teachers. Exceptional Children, vol.51 No.2, 112 - 121.
- PRICE, M. & GOODMAN, L. 1980. Individualized Education programs: A cost study. Exceptional Children, vol. 46, No. 6, 446-454.
- PRILLAMAN, D. 1981. Acceptance of Learning Disabled Students in the mainstream environment. Journal of Learning Disabilities, vol. 14, 344-346.

- PROVINCIAL ADMINISTRATION OF THE CAPE OF GOOD HOPE.
Department of education, The identification of Pupils with Learning Disabilities. Bulletin No.1, Cape Town.
- PUGACH, M.C. 1982. Regular Classroom Teacher Involvement in the Development and Utilization of IEP'S. Exceptional Children, vol. 48, No. 4, 371-374.
- PUCAGH, M.C. 1985. The Limitations of Federal Special Education Policy: The Role of Classroom Teachers in determining who is handicapped. The Journal of Special Education, vol. 19, No. 1, 123-137.
- PUCACH, M.C. 1987. The National Education Reports and Special Education: Implications for Teacher Preparation. Exceptional Children, vol.53, 308 - 314.
- QUICKLE, J. 1981. Special Educational needs and the comprehensive principle: Some implications of Ideological critique. Remedial Education, vol. 16, No. 2, 61-65.
- RABAN, B. & K. POSTLETHWAITE. 1988. Special Needs in Mainstream Schools - Classroom responses to Learning Difficulties. London: Macmillan Education.
- READ, G. 1987. Following the progress of children who have received 'remedial' tuition. Support For Learning, vol. 2, No. 1, 52 - 59.
- REDDY, C.N. 1970. An Investigation Into the Problem of Failure Amongst Pupils in Coloured Primary Schools. Unpublished Master of Education thesis, University of the Western Cape, Belville.
- REGER, R. 1974. What does 'Mainstreaming' mean? Journal of Learning Disabilities, vol. 7, No. 8, 513-515.
- REPUBLIC OF SOUTH AFRICA 1985. Central Statistical Services. Educational Statistics 1984 and 1985 Summary, Pretoria Statistical News Release, 23, 4 June 1985.
- REPUBLIC OF SOUTH AFRICA 1989. Central Statistical Services. Demographic Statistics, July 1989, Pretoria.
- REWILAK, D. & H.L.JANZEN. 1982. Learning Disabilities - Futile Attempt at Definition? School Psychology International, 3, 85-90.
- REWILAK, D. & H.L.JANZEN. 1984. Assessment of Differences Between Learning Disabled and Normally-Achieving Students. School Psychology International, vol. 5, 233-243.

- REYNOLDS, C.R. 1985. Critical Measurement Issues in Learning Disabilities. Journal Of Special Education, vol. 18, No. 4, 451-476.
- RICHMOND, M. 1984. The Self-Concept of academically able and less-able children in a comprehensive school - a comparative study. Remedial Education, vol. 2, No. 2, 57-58.
- ROBINSON, S.I. 1985. The Role of the Microcomputer as a Diagnostic, Prescriptive and Learning Instrument in Remedial Education. M.Ed Dissertation, University of Cape Town.
- RODDY, E.A. 1984. When are Resource Rooms Going to Share in the Declining Enrollment Trend? Another look at Mainstreaming. Journal of Learning Disabilities, vol. 17 No. 5, 279-281.
- RODRIGUEZ, F. 1982. Mainstreaming a Multicultural Concept into Special Education: Guidelines for Teacher Trainers. Exceptional Children, vol. 49, No. 3, 220-227.
- ROGERS, H. & D.H.SAKLOFSKY. 1985. Self-concepts, focus of control and performance expectations of Learning disabled children. Journal of Learning Disabilities, vol. 18, 273-278.
- ROONEY, K.J., M.S.DANIEL, P. HAILAHAN & J.W.LLOYD. 1984. Self-Recording of Attention by Learning Disabled Students In the Regular Classroom. Journal of Learning Disabilities, vol. 17, No. 6, 360-364.
- RUTTER, M. & L.HERSOV. 1985. Child and Adolescent Psychiatry Second Edition. London: Blackwell Scientific Publications.
- RUTTER, M. & N.MADGE. 1976. Cycles of Disadvantage : A Review of Research, London : Heinemann Educational.
- RYAN, E.B., E.J.SHORT & K.A.WEED. 1986. The Role of Cognitive Strategy Training in Improving the Academic Performance of Learning Disabled Children. Journal of Learning Disabilities, vol. 19, No. 9, 521-529.
- SABBATINO, D.A. & T.L.MILLER. 1980. The dilemma of diagnosis in learning disabilities: Problems and Potential directions. Psychology in the Schools, vol. 17, 76-86.
- SALEND, S.J. 1984. Factors contributing to the development of Successful Mainstreaming Programs. Exceptional Children vol. 50, No. 5, 409-416.
- SALEND, S.J. & J.G.LUTZ. 1984. Mainstreaming or Mainlining: A Competency Based Approach to Mainstreaming. Journal of Learning Disabilities, vol. 17, No. 1, 27-29.

- SAMUELS, S.J. & N.L.MILLER. 1985. Failure to Find Attention Differences Between Learning Disabled and Normal Children on Classroom and Laboratory Tasks. Exceptional Children, vol. 51, No. 5, 358-375.
- SAPIR, S.G. 1986. Training the Helpers. Journal of Learning Disabilities, vol. 19, No. 8, 473-475.
- SARGENT, L.R. 1981. Resource Teacher Time Utilization: An Observational Study. Exceptional Children, vol. 47, No. 6, 420-425.
- SCHIBECI, R.A. & S. GRUNDY. 1987. Local Theories. Journal of Educational Research, vol.81, No.2 , 91 - 96.
- SCHLIEPER, A.E. 1982. Notes on Frames of Reference in the Assessment of Learning Disabilities. Journal of Learning Disabilities, vol. 15, No. 2, 84-85.
- SCHUMAKER, J.B., J.S.WILDGEN & J.A.SHERMAN. 1982. Social Interaction of Learning Disabled Junior High Students in their Regular Classrooms: An Observational Analysis. Journal of Learning Disabilities, vol. 15, No. 6, 355-358.
- SCHUNK, D.H. & P.D.COX. 1986. Strategy Training and Attribution Feedback with Learning Disabled Students. Journal of Educational Psychology, vol. 8, 201-209.
- SEBIDI, S. 1983. A critique of the formula: Separate but equal in the South African System of Education. Unpublished M.A. Thesis. University of the Witwatersrand, Johannesburg.
- SEEK BOARD, November 1989. S.A. Economy going down- ILO. SEEK vol. 29, No. 10. Johannesburg: Anglican Press Co-operative.
- SEWELL, G. 1982. Reshaping Remedial Education. London: Croom Helm.
- SHAVELSON, R.J. & R.BOLUS. 1982. Self-Concept: The Interplay of Theory and Methods. Journal of Educational Psychology, vol. 74, 3-17.
- SHOTEL, J., R.IANO & J.McGETTIGAN . 1972. Teacher Attitudes with the Integration of Handicapped Children. Exceptional Children, vol. 38, 677-683.
- SIGMON, S.B. 1987. Radical Analysis of Special Education - focus on Historical Development and Learning Disabilities. London: Falmer Press.
- SINDELAR, P.T. & R.J.WILSON, 1984. The Potential Effects of Meta-Analysis on Special Education Practice. The Journal of Special Education, vol. 18, No. 1, 81-92.

- SKUY, M.S., M. ARCHER, & I.ROTH . 1987. Use of the Learning Potential Assessment Device in Assessment and Remediation of a Learning Problem. South African Journal of Education, vol. 7, No. 1, 53-58.
- SKUY, M., D.SHUKLER & M.WESTAWAY, 1985. Relationships amongst cognitive and socio-emotional measures of pre-school and primary school functioning, South African Journal of Education, vol. 5, No. 1, 35-40.
- SLAVIN, R.E., N.A.MADDEN & M.LEAVEY. 1984. Effects of Co-operative Learning and Individualized Instruction on Mainstreamed Students. Exceptional Students, vol. 50, No. 5, 434-443.
- SMITH, C.J. 1985. New Directions in Remedial Education. Philadelphia: The Falmer Press.
- SMITH, J.G. 1983. Survey Research Methodology and Questionnaire Design. In: M.B. Stienberg & S.E. Philcox, (Eds.): Research Methods for Higher Degrees, University of Cape Town, Faculty of Education.
- SMITH, M.D., J.M.COLEMAN, P.R.DOKECKI & E.E.DAVIS 1977. Intellectual Characteristics of School labelled Learning Disabled Children. Exceptional Children, vol. 43, No. 6, 352-357.
- SNART, F., J.P.DAS, & D.MENSINK. 1988. Reading Disabled Children with above-averaged IQ: A comparative Examination of Cognitive Processing. The Journal Of Special Education, vol. 22, No. 3, 344-357.
- SONN, F.A. 1986. A Decade of Struggle. Cape Teachers' Professional Association, Kasselsvlei.
- SONN, F.C.T. & D.A LOUW. 1990. Sosiokulturele Perspektiewe van Abnormale Gedrag. In : LOUW, D.A. Suid Afrikaanse Handboek van Abnormale Gedrag. Johannesburg :Southern Boekuitgewers.
- SONQUISTT, A. & W.C. DUNKELBERG. 1977. Survey and Opinion research : procedures for processing and analysis. Englewood Cliffs, N.J. : Prentice-Hall.
- SOUTH AFRICAN GOVERNMENT. 1983. WHITE PAPER ON THE PROVISION OF EDUCATION IN THE REPUBLIC OF SOUTH AFRICA. Pretoria : Government Printer.
- SPALDING, B. & A.FLOREK. 1988. One School's approach to integration: developing a community philosophy and utilizing and 'in-house' educational psychologist. Support For Learning, vol. 3, No. 1, 27-34.
- SPARKS, G.M. 1988. Teachers' Attitude Toward Change and Subsequent Improvement in Classroom Teaching. Journal of Educational Psychology, vol. 80, No. 9, 111-117.

- SPREEN, O. & R.G.HAAF . 1986. Empirically Derived Learning Disability Subtypes: A Replication Attempt and Longitudinal Patterns over 15 years. Journal of Learning Disabilities, vol. 19, No. 3, 170-181.
- STAINBACK, W. & S.STAINBACK. 1984. A Rationale for the Merger of Special and Regular Education. Exceptional Children, vol. 51, No. 2, 102-111.
- STONE, C.A. & J.V. WERTSCH. 1984. A Social Interactional Analysis of Learning Disabilities Remediation. Journal of Learning Disabilities, vol.17, No4, 194-8.
- STROMER, R. 1977. Remediating Academic Deficiencies in Learning Disabled Children. Exceptional Children, vol. 43, No. 7, 432-440.
- TANSLEY, P. & J. PANCKHURST.1981. Children with Specific Learning Difficulties - A Critical Review of Research. Windsor, Berks: NFER-NELSON.
- TARNOPOL, L. & M. TARNOPOL. 1977. Brain Function and Reading Disabilities. Baltimore : University Park Press.
- TAYLOR, N.E. 1980. Measuring Perceptual Skills that are related to the Learning Task. Journal of Learning Disabilities, vol. 13, No. 1, 17 - 19.
- THOMAS, D. 1985. The Dynamics of Teacher Opposition to Integration. Remedial Education, vol. 20, No. 2, 53-58.
- THURMAN, S.K. & M.LEWIS . 1979. Children's Response to Differences: Some Possible Implications for Mainstreaming. Exceptional Children, vol. 45, No. 6, 468-469.
- TOMLINSON, S. 1982. A Sociology of Special Education. London: Routledge and Kegan Paul.
- TOPPING, K.J. 1977. An Evaluation of the Long-term effects of remedial teaching. Remedial Education, vol.12 , No. 2, 84 - 86.
- TORGESEN, J.K. 1980. Conceptual and educational implications of the use of efficient task strategies by Learning Disabled Children. Journal of Learning Disabilities, vol. 13, 19-26.
- TORGESEN, J.K. 1986. Learning disabilities theory: Its current state and future prospects. Journal of Learning Disabilities, vol. 19, 399-407.
- TORGESEN, J., & C.DICE. 1980. Characteristics of Research on Learning Disabilities. Journal on Learning Disabilities, vol. 13, No. 10, 531-535.

- TUCKER, J.A. 1985. Curriculum-based Assessment: An Introduction. Exceptional Children, vol. 52, No. 3, 199 - 204.
- TUCKER, J., L.J. STEVENS & J.E. YSSELDYKE. 1983. Learning Disabilities : The Experts Speak Out. Journal of Learning Disabilities. vol. 16, No. 1, 6-14.
- TUCKMAN, B.W. 1978. Conducting Educational Research. Second Edition. New York : Harcourt Brace Jovanovich, Inc..
- UNESCO. 1959. Declaration of the Rights of the Child.
- VALETT, R.E. 1974. The Remediation of Learning Disabilities. Second Edition, California : Fearon-Pitman .
- VAN DER HEEVER, R. (Ed.) 1987. Alternative Education - Visions of a Democratic Alternative. Union of Teachers' Associations of South Africa.
- VAN NIEKERK, P.A. 1986. The Role of education in maintaining mental health. Psychotherapeia, vol. 45, 13-18.
- VAN VUUREN, J.C.G. (Ed.) 1978. Orientation In Pedagogics - A Study Manual for Beginners. University of South Africa, Pretoria.
- VAN ZIJL, J. 1987. Teacher Education for a multicultural society: Seven Strategies. South African Journal of Education, vol. 7, No. 3, 187-190.
- VAUGHN, S., C.S. BOS, J.E. HARRELL & B.A. LASKY. 1988. Parent Participation in the Initial Placement/IEP Conference Ten Years After Mandated Involvement. Journal of Learning Disabilities, vol. 21, No. 2, 82 - 89.
- VISSER, J. 1986. SUPPORT: a description of the work of the SEN professional. Support for Learning, vol. 4, 5-9.
- VISSER, J. 1989. Elke Kind se Reg. Educult, vol. 4.
- WADE, B. & M. MOORE, 1988. Out from under the Carpet: the needs of children and their teachers. Support for Learning, vol. 3, No. 2, 68-72.
- WAKER, P. 1984. Computer Assisted Learning in the Primary School: A South African Example. South African Journal of Science, vol. 80, No. 1, 13 - 15.
- WALLACE, G. & S.C. LARSEN, 1978. Educational Assessment of Learning Problems : Testing for Teaching. Boston : Allyn and Bacon, Inc. .
- WALLACE, G. & J.M. KAUFFMAN. 1973. Teaching Children With Learning Problems. Second Edition. Columbus : Charles E. Merrill Publishing Company.

- WANG, M.C. & E.T.BAKER. 1986. Mainstreaming Programs: Design Features and Effects. Journal of Special Education, vol. 19, No. 4, 503-521.
- WANG, M.C. & J.W.BIRCH. 1984 (a). Comparison of a Full-Time Mainstreaming Program and a Resource Room Approach. Exceptional Children, vol. 51, No. 1, 33-40.
- WANG, M.C. & J.W.BIRCH. 1984(b). Effective Special Education in Regular Classes. Exceptional Children, vol. 51, 391-398.
- WATSON, J. 1988. One-Year Courses. Teachers' View. British Journal of Special Education, vol. 15, No. 2, 79-82.
- WEBSTER, J.B. 1989. Making a Statement: Assessment of Special Educational Needs in Great Britain. International Journal of Special Education, vol. 4, No. 1, 65-74.
- WEENER, P. 1981. On Comparing Learning Disabled and Regular Classroom Children. Journal of Learning Disabilities, vol. 14, No. 4, 227-232.
- WESTLING, D.L., M.A.KOORLAND & T.L.ROSE. 1981. Characteristics of Superior and Average Special Education Teachers. Exceptional Children, vol. 47, No. 5, 357-363.
- WEISS, A. 1990. Realistic Education Needed, say Cape Town Bosses. The Argus, 17/4/90.
- WESTWOOD, P. 1981. The Remedial Teacher's Handbook. Edinburgh :Oliver and Boyd .
- WHELDALL, K., F.MERRET & S. COLMAR. 1987. 'Pause, Prompt and Praise' for parents and peers: effective tutoring of low progress readers. Support for Learning, vol. 2, No. 1, 5-12.
- WHITE PAPER ON PROVISION OF EDUCATION IN THE REPUBLIC OF SOUTH AFRICA. 1983. Pretoria: Government Printer.
- WIGG, E.H. & SEMEL, E. 1976. Language Disabilities in Children and Adolescents. Columbus, Ohio: Charles E. Merrill Publishing Company.
- WILKES, H.H., M.K.BIRELEY & J.J.SCHULTZ. 1979. Criteria for Mainstreaming the Learning Disabled Child into the Regular Classroom. Journal of Learning Disabilities, vol. 12, No. 4, 251-256.
- WILL, M.C. 1986. Educating Children with Learning Disability Problems: A Shared Responsibility. Exceptional Children, vol. 52, 411 - 415.

- YATES, J.R. 1973. Model for Preparing Regular Classroom Teachers for Mainstreaming, Exceptional Children, vol. 39, 471-472.
- YOUNG, D.N. 1982. Can Compensatory Education Overcome Existing Disadvantages? In: TUNMER, R. The de Lange Report - Assessment and Implementation in South Africa. Proceedings of the National Education Conference, 4 - 6 February, Grahamstown.
- YSSELDYKE, J.E. 1983. Current Practices in Making Psychoeducational Decisions About Learning Disabled Students. Journal of Learning Disabilities, vol. 16, No. 4, 226-232.
- YSSELDYKE, J., ALGOZZINE, B. & EPPS, S. 1983. A Logical and Empirical Analysis of Current Practice in Classifying Students as Handicapped. Exceptional Children, vol. 50, No. 2, 160-166.
- YSSELDYKE, J., ALGOZZINE, B., SHINN, M.R. & MCGUE, M. 1982. Similarities and differences between low achievers and students classified as learning disabled. Journal of Special Education, vol. 16, 73-85.
- YULE, W. & RUTTER, M. 1985. Reading and other learning difficulties. In : RUTTER, M. and L. HERSOV (Eds.), Child and Adolescent Psychiatry - Modern Approaches: Second Edition. Oxford: Blackwell Scientific Publications.