AN ASSISTANCE PROGRAMME FOR THE LEARNING DISABLED CHILD IN THE SECONDARY SCHOOL

by

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Submitted in fulfilment of the requirements for the degree of

MASTER OF EDUCATION – WITH SPECIALISATION IN GUIDANCE AND COUNSELLING

at the

UNIVERSITY OF SOUTH AFRICA

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JUNE 2002
DECLARATION

Student number: 403-552-6

I declare that AN ASSISTANCE PROGRAMME FOR THE LEARNING DISABLED CHILD IN THE SECONDARY SCHOOL is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Lémeez Gasant (Mrs)  
Date
3/9/202
ACKNOWLEDGEMENTS

Several people contributed significantly to the completion of this work. I wish to acknowledge those efforts and express my gratitude and sincere thanks. These individuals are:

My husband, Waheeb, for his support, technical assistance with the computer, and acting as a sounding board.

My eldest son, Zaheer, for his inspiration and continued support.

My son, Yasser, for being my late night study companion.

My daughter, Needa, for help with the bibliography cards.

My supervisor, Professor A C Lessing, for her support, diligence, and for not giving up on me.

Kevin van Oordt, my first collaborator.

All my colleagues at Mitchells Plain Education Support Centre who helped me to articulate and clarify my thinking.

My mentor, Dave Pinchuck, for his kind support, constant encouragement and gentle mentoring.

All educators who participated in this research.

All the educators who assessed and evaluated the assistance programme (Rodney Johnson, Charlene Nissen, and Faldela Chotia).

My parents, for teaching me to read, be creative and to persevere.

My parents-in-law for their interest and prayers.

All members of my extended family, for unfailing support and unending encouragement.

Karlien de Beer, for prompt handling of numerous book requests.

Thanks, Lémeez
ABSTRACT

Learning disabled (hereafter abbreviated as LD) adolescents have a hard time coping with the demands of secondary school and often experience frustration and failure. Educators have received little or no training to provide meaningful support for these learners. Despite sweeping policy changes LD learners’ diverse needs are not being met in the classroom. Research indicates that LD learners are best served within the mainstream classroom. In-service training is necessary to help educators equip themselves with skills to cope with this new role. An assistance programme has been developed in this study to provide practical teaching and learning interventions, to help educators support the LD secondary school learner in regular mainstream classrooms. If LD learners are supported in the classroom they will acquire skills to become independent learners.

KEY TERMS

Learning disabilities, regular mainstream educators, LD secondary learners, teaching and learning intervention strategies, demands of the secondary school, assistance programme.
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CHAPTER ONE

INTRODUCTION, ORIENTATION AND STATEMENT OF THE PROBLEM

1.1 INTRODUCTION

A world of diversity lies behind each classroom door and if the educational needs of all children are to be met educators need to become more proficient in the instruction of learners with learning difficulties (Lewis & Doorlag 1995:40). Often teachers speculate about the reasons why learners do not realise their full potential when they become aware of adolescents in their classes who are not achieving academically. A large percentage of learners who are in mainstream secondary education do not progress satisfactorily towards the attainment of adulthood and sometimes display open disrespect for authority that results in disciplinary problems, poor manners, bad language and distracting behaviour in the classroom (Vorster & van der Spuy 1995:62).

Many teachers do not realise what their role is in regard to such children. Sometimes teachers ignore these troubled and troubling adolescents and sometimes they offer simplistic reasons for the behaviour. Many teachers express helplessness about the situation. All teachers have experienced the joy of teaching adolescents who learn quickly and easily: all teachers have shared the frustration and anxiety associated with learners who learn slowly and with great difficulty (Wallace & Kaufman 1986:2). Some teachers appear to be ignorant about the characteristics and diverse needs of learners restrained in their becoming and resign themselves to the situation (Vorster & van der Spuy 1995:65). However, teachers are able to detect learners who underachieve, have discipline problems, struggle with academic tasks and fail grades.

Educators can have the most immediate impact in classroom settings as the majority of adolescents with learning disabilities (LD) continue to receive instruction in mainstream classrooms (Bender 1993:88; Speece & Keogh 1996:1). Teachers need to take responsibility for the learning needs of all learners in their classrooms, especially LD adolescents. Assistance for the adolescent with learning disabilities in the regular classroom is practical and economically desirable as classroom interaction between
educator and learner is a huge portion of the educational process for most learners and can be considered as the heart of the educational process in most classrooms (Hernandez 1989:11, 49; Myers & Hammill 1990:107).

Teachers need to discuss effective strategies to address the situation and should explore ways of adjusting their approach to education and teaching (Vorster & van der Spuy 1995:65). When learning problems are successfully managed in the classroom, both teacher and learner can experience joy and satisfaction (Wallace & Kaufman 1986:2).

The terms LD adolescent, secondary learner, child and LD learner, will be used interchangeably, and for the purposes of this study will refer to learning disabled learners (in the broadest sense of the definition) receiving education in mainstream secondary schools. Whilst acknowledging the newer term, learners with learning barriers (LLB), that embraces the principle of inclusion and asserts that learning barriers arise mainly within the learning system, the writer chooses to use the internationally acceptable term learning disabilities (Education White Paper 6 2001:12). The terms educator and teacher will be used interchangeably and for the purposes of this study will refer to ordinary or regular subject teachers at mainstream secondary schools, unless otherwise indicated.

1.2 ANALYSIS OF THE PROBLEM

In the analysis of the problem, attention will be given to the awareness of the problem. A brief investigation will be conducted and the statement of the problem will be formulated.

1.2.1 Awareness of the problem

Awareness of the problem has been shaped over a time span of almost twenty years by four life-altering experiences. Firstly, having to parent a learning disabled child through the various stages of his school career brought the realisation that few facilities were available to learning disabled children and that teachers knew very little about learning disabilities.
Secondly, switching careers from nursing to teaching brought about the awareness of the multi-faceted nature of learning difficulties. Educators easily identified adolescents experiencing difficulties with their schoolwork but were often unaware of the phenomenon of learning disabilities. Educators were thus unable to assist these learners and experienced feelings of hopelessness, helplessness, inadequacy, guilt, anger, frustration and exhaustion (Smith 1980:88-91). Learning disabled adolescents were having a hard time at school and displayed a variety of symptoms like low academic achievement, poor reading ability, inadequate writing and spelling skills, and failure to complete assigned tasks.

Thirdly, employment as a school psychologist brought about the knowledge that there were not enough outside experts to accommodate the needs of the large percentage of adolescents with learning disabilities being taught in mainstream schools. A large percentage of secondary learners referred to the school clinic for testing and placement were in fact learning disabled; a fact that surprised educators who had labelled these children as stupid and of below-average intelligence. It also brought about the understanding that remediation of basic skills by outside experts was not always effective and that the problem had to be addressed inside the classroom as well.

Lastly, the acquisition of an Association for Children and Adults with Learning Disabilities (ACLD) booklet crystallised into the firm belief that if teachers had knowledge and know-how, they could assist learners in their classrooms. It brought about a change in approach, from individual work with learners to empowering teachers. ‘What can I do to help the child experiencing learning difficulties in my class?’ is a question commonly asked by educators at workshops facilitated by the writer. This is not a simple question as Kumm (1998:1) points out: ‘Encompassed in this question are aspects such as the identification of characteristics and the needs of the learners; ... carrying out a support programme; ... the teacher’s ability to meet learning needs within the school curriculum’.
Preliminary questions at this stage are:

- What available strategies are there that teachers can employ without much effort and training?
- What role can classroom teachers play, if we accept that they are in the best position to help the LD child?
- What kind of support do teachers require if they are to assist the LD child?
- Will teachers be willing and able to implement teaching strategies without further training?

1.2.2 Investigation of the problem

In the investigation of the problem, the discussion will focus on the effects of learning disabilities on adolescents, the emerging role of the regular educator to cater for learners with diverse learning needs, the current situation in schools, new trends and policies in education and education support services and, the availability of secondary school programmes that mainstream educators can use.

The problem centres on the development of an assistance programme for LD adolescents in regular classes at mainstream secondary schools for teachers to use. Adolescents with learning disabilities are primarily being educated in mainstream classrooms where they experience much defeat and failure, as they receive no extra assistance (Smith 1980:23). Research shows that secondary schools place demands on the LD learners (Mercer 1992:352-356) such as gaining information from written materials and lectures, demonstrating knowledge through tests, expressing information in writing, and working independently with little feedback. These demands make it increasingly difficult for the LD child to succeed. It is important for the LD child to get assistance as much of their lives revolve around school. LD adolescents can learn effectively when appropriate teaching methods are used and they are provided with skills that facilitate learning (Ariel 1992:4).

Learning disabilities have an effect on the adolescent. LD learners often display social and emotional difficulties. They are frustrated, angry, display mood swings,
experience the classroom as a stressful place, display erratic academic progress and cannot cope with the daily demands of a structured school environment (Katims & Zapata 1988:21). Smith (1998:262) says that there is a high probability that the indirect effects of the learning disability will have a negative impact on motivation and self-perceptions. There are indications in literature that LD adolescents can be taught coping skills like self-advocacy (Roffman, Herzog & Wershba-Gershon 1994:413).

Research indicates that the poor performance of children at schools coupled with poor matriculation results are recognised as a serious educational, social and economic problem. Large numbers of learners drop out of school after a few years of frustration and failure, and swell the ranks of the underemployed or unemployed youth (Booyse 1995:52; NEPI Report 1992:9). Recent research (Education White Paper 6 2001:5) indicates a link between learning disabilities and school drop out rates: ‘... the curriculum and education system as a whole have generally failed to respond to the diverse needs of the learner population, resulting in massive numbers of drop-outs, push-outs and failures ...’

Teachers have a difficult and demanding job and they need a wide range of skills to do what is expected of them (Riddick 1996:204). Teachers are expected to accommodate the diverse needs of all learners in their classrooms, including the needs of LD adolescents. It is true that in the past education has not served all the learners equally well and that the success of education depends on adapting the curriculum to the individual differences among learners (Hernandez 1989:10, 107).

Teacher expectations and attitudes also impact on the LD adolescent. There is a glaring lack of awareness of the diversity of learner needs. Teachers have not received any training to address the situation and are thus unable to respond to this diversity in a meaningful way (NCSNET 1997:35). Understanding the problems of LD adolescents make it easier, leads to acceptance and remediation; whilst ignorance about learning disabilities leads to non-acceptance, denial, inappropriate teaching strategies, unrealistic teacher demands, labelling, and projection of teacher prejudice (Gaddes & Edgell 1994: 454-455).
Teachers often don't attempt any remedial work because they erroneously believe that each child is so different that no common programme would be suitable for all (Eisner 1985:71). Consider the following quotation that highlights this trend today:

The diversity of needs in the learner population and the diverse educational strategies have not been acknowledged and addressed in mainstream education, and when learning has failed to be effective and resulted in exclusion, learners were usually forced to repeat, drop out on their own or were referred to specialists outside of the context in which learning difficulties occurred (Consultative Paper on Special Education 1999:52).

When teachers encounter children experiencing learning difficulties they refer the children to a school clinic or an education support centre. Teachers expect children to be tested and appropriately placed. If placement is not a possibility, they expect outside expert help from professionals (du Toit 1991:9). This way of thinking has its origins in the medical model that education support services used prior to 1996, which placed emphasis on diagnosis of the problem (NEPI Report 1992:13).

Some teachers feel inadequate and believe that they are unable to assist learners with learning disabilities and that outside specialists have to take over if a learner is identified with a learning disability (NCSNET 1997:35; New Brunswick Education Department 1988:1). Many teachers assume that they are only responsible for teaching subject matter and that they are not responsible for the improvement or accommodation of the learning difficulties (Macon [S.a.]:2) and are thus reluctant to change course content.

Many teachers assume that secondary school learners have the necessary skills to extract information from textbooks or lectures (deBettencourt & Zigmond 1990:19), and that learners have developed study skills and independent work habits while many learners still require assistance in this regard (Lewis & Doorlag 1995:80). With assistance, older learners with undetected learning difficulties can be helped to overcome or cope with many of their difficulties (Young & Savage 1989:19).
As regards the training needs of secondary school teachers, many government departments realise that educators need training in special education and are planning training programmes for teachers and principals (Gaddes & Edgell 1994:455). More and more it is expected of educators who teach at-risk learners to integrate remedial teaching strategies with the teaching of basic skills, yet there are few models for these educators to use (Means, Chelener & Knapp 1991:xii).

If mainstream educators are expected to deal with the diverse learner needs they will need reorientation, support and training for the deliverance of a changed curriculum and training in the management of special needs in the regular classroom (Pretorius 1999:28). Full inclusion implies that most adolescents with learning disabilities, are being taught in regular classrooms by ordinary teachers who have received no training in special education (Riddick 1996:10). Teaching programmes should contain information on intervention strategies within subject content courses (deBettencourt & Zigmond 1990:19). Ongoing education and in-service training of educators is a priority (Lerner 1993:155). Instruction must change in the classroom if LD adolescents are to acquire skills to a significant degree and the approach where a LD secondary learner is pulled out for a few remedial exercises and then placed back into the classroom (see section 3.2.2) does not appear to be successful (Means, Chelener & Knapp 1991:273). What is needed is a programme that regular classroom teachers can use without extra training. Attempts at intervention should provide for all learners rather than the smaller number that compensatory programmes usually target (Means, Chelener & Knapp 1991:273). The programme should empower children (Hernandez 1989:129).

A change in educational policies heralds a new role for educators. Various research findings indicate that a large number of learners in secondary schools are learning disabled; this implies that ordinary teachers must deal with these problems in mainstream classrooms (Booyse 1995:51). Teachers are now faced with the enormous responsibility of providing assistance for the diverse learning needs of all children in their classrooms. For teachers to embrace this new role will require a fundamental shift in mindsets and attitudes. This new role will involve addressing the causes and effects of learning disabilities (Consultative Paper on Special Education 1999:20; van Wyk 1988:37-41). ‘The key role of educators would be managing the learning
programmes of the learners for which they are responsible. This would include assessing the needs of learners ... and ... providing a flexible programme’ (NCSNET 1997:63).

Some researchers regard the regular classroom placement to be the least restrictive option for learners with learning disabilities (Hernandez 1989:134; Lerner 1993:155; Young & Savage 1989:18). Many LD secondary learners are in mainstream classrooms by default: the lack of facilities places them in regular classes. Brümmern (1998:12) uses the term **mainstream dumping** (bold mine) to describe learners who have been placed in mainstream classrooms and then receive no support to overcome their learning barriers. Successful intervention programmes will require careful planning, thorough teacher preparation and a complete school support system. Through sound classroom management and appropriate curricular adaptations teachers can create learning environments in their classrooms. Positive classroom interactions are enhanced when teachers adopt realistic expectations of learners and use a variety of teaching strategies to make the curriculum accessible to all learners. Educators can and do make a difference (Hernandez 1989:73; Lerner 1993:155).

In **Table 1** a simple schematic presentation of the multi-faceted problem of learning disabilities is given, with the aim of summarising the context in which adolescents with diverse learning needs are educated (Speece & Keogh 1996:136). Under the heading **teacher** some factors that affect educators, like inadequate training and, scarce and inadequate education support services, are listed. Under the heading **learner** some facts are listed about the LD adolescent like poor academic results and an inability to cope with schoolwork. Factors pertaining to the school and the curriculum like the partial implementation of new education policies like inclusion and outcomes based education and the curriculum not being accessible to all learners are placed under the heading **curriculum**. The question now arises: what kind of intervention strategy could possibly work, given this context?
Table 1: Multi-faceted situation of the learning disabled secondary learner

<table>
<thead>
<tr>
<th>TEACHER</th>
<th>LEARNER</th>
<th>CURRICULUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate training and knowledge to identify LD learner</td>
<td>Diversity of needs not being recognised and met in the classroom</td>
<td>Not accessible to all learners</td>
</tr>
<tr>
<td>No meaningful intervention to assist learner in the classroom</td>
<td>Exhibits a range of behavioural manifestations</td>
<td>Rigid and inflexible, great emphasis on content</td>
</tr>
<tr>
<td>Scarce and inadequate education support services</td>
<td>Struggling to cope with school work and hence poor academic results</td>
<td>Teacher based and teacher paced</td>
</tr>
<tr>
<td>Inappropriate expectations of the LD secondary learner</td>
<td>Not learning coping skills and experiences failure</td>
<td>New Education Act (No 84 of 1996) indicates new vision for education</td>
</tr>
<tr>
<td>Affected by learner’s behaviour and lack of skills</td>
<td>Strained relationship with teacher in the classroom</td>
<td>New Education Policies like OBE and Inclusion not fully implemented yet</td>
</tr>
<tr>
<td>Negative teacher attitudes and reluctance to adapt subject matter</td>
<td>High dropout rate has social implications</td>
<td>Skills building still incidental despite OBE</td>
</tr>
</tbody>
</table>

Context in which learners with diverse learning needs are educated

Source: compiled using information from the discussion in chapter one.

LD adolescents need classroom survival skills (Snyder & Bambara 1997:534). The large number of children who require assistance and the limited available resources necessitate a practical, cost effective and functional approach, where assistance occurs in the classroom within the subject content area (du Toit 1991:10-13; Education White Paper 6 2001:5,18-19). Children with learning disabilities can cope in the regular classroom if they work hard and have a good classroom teacher (Young & Savage 1989:18).

In a multicultural society like South Africa, schools house children who have diverse learning needs and come from different backgrounds. All educational institutions
should develop support mechanisms so that all learners can experience learning success (Consultative Paper on Special Education 1999:11; Education White paper 6 2001:18-19). Schools should co-ordinate the efforts of all persons who can offer assistance to LD learners in the school (Lerner 1993: 155). Part of the mind shift that educators need to make is the recognition of the fact that school failure lie as much with what schools do, as with what learners bring to the classroom door (Means, Chelener & Knapp1991:xiii).

The new trend in education support services has seen a shift from the curative approach to a consultative approach. Such an approach focuses on teacher training and the need is to work towards schools that include everybody, celebrate differences, support learning and respond to individual learning needs (Theron 1999:9). Teachers need to respond to this challenge by learning how to deal with the diverse needs of learners.

Inclusion and outcomes based education (OBE) are the two major changes facing the education system (Kokot 1997:19). The national and provincial education departments have accepted the principle of inclusive education, which translates into education for all (Theron 1999:9). Inclusion means that learners who were previously taught in special schools now attend classes at mainstream schools with their peers and, inclusion is aimed at providing learners with skills that enable them to function as normally as they can notwithstanding their abilities (Burden 1995:44, 55). OBE is based on the premise that all children can learn and it is the school’s task to develop the talents of all learners, thus schools should find ways for learners to experience success (Kokot 1997:21). OBE is based on democratic principles embedded in the new education act and is a definite move away from teacher based teaching and an inflexible content driven curriculum (Pretorius 1999:20-21; Theron 1999:6-7). A change in policy brings about a change in classroom teaching practice.

South African research indicates that education support services or remedial resources are scarce (du Toit 1991:4; NEPI Report 1992:13). Booyse (1995:53) states that the problem is exacerbated because support services for special educational needs are almost non-existent in certain education departments and tend to be limited to primary schools. No remedial teachers have been appointed at secondary schools.
The brief body of evidence cited above (see 1.2 – 1.2.2) points to the changing education system, the emerging role of the regular classroom teacher and the intervention strategies needed to promote academic success for all learners, especially those with learning difficulties.

1.2.3 Statement of the problem

A close examination of the problem as reported in the investigation of the problem has revealed the following observations:

- The scarcity of facilities for LD learners means that a large percentage of LD adolescents are being taught in mainstream classes without any assistance.
- Secondary school teachers feel inadequate about assisting LD learners and constantly refer LD learners to outside experts.
- Secondary school teachers have received little or no training to assist LD adolescents and to cater for the diversity of learner needs in their classes.
- The education system is transforming and educators are unsure about their emerging new role.
- Few assistance programmes have been implemented at secondary school level.

Statement of the problem:

The problem concerns the development of an assistance programme that could be used by regular educators to improve the academic tasks of LD adolescents in mainstream secondary schools.

1.3 PURPOSE OF THE STUDY

The purpose for which this study has been undertaken will now be discussed. The general, specific and indirect aims of the study are outlined in the next section.
1.3.1 **General aim**

The general aim of the study is to undertake a literature study in an attempt to answer the following questions and to give a theoretical background to the empirical study:

- What assistance programmes are available for secondary school teachers?
- What characteristics do learning disabled learners display?
- What learning difficulties do learners need assistance with?
- Are there strategies that secondary teachers can employ in assisting LD learners in mainstream classrooms?

1.3.2 **Specific aim**

The specific aim of the study is the compilation of an assistance programme containing learning and teaching strategies to:

- Empower teachers with knowledge about learning disabled adolescents in their classes.
- Provide guidelines and strategies for teachers to assist LD adolescents in gaining learning skills.
- Assist LD adolescents in secondary schools in acquiring skills to help them cope with the academic demands of school.
- Assessment of the assistance programme by educators to determine if it contains practical learning and teaching strategies that ordinary mainstream educators can use.
1.3.3 Indirect aims

The indirect aims of the study are to:

- Encourage teachers to increase their existing repertoire of skills so that they can attend to the diversity of learner needs in their classrooms as indicated by the principle of inclusion.
- To encourage a greater sensitivity and understanding on the part of teachers to the needs of the LD adolescent in mainstream secondary school classes.

1.4 DEFINITION OF CONCEPTS

Definitions of the concepts learning disabilities, assistance programme, learner and, secondary school as used in this research, will now be given.

1.4.1 Learning disabilities

The following definition will be adopted for the purposes of this study:

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, and may occur across the life span. Problems in self-regulatory behaviours, social perception and social interaction may occur concomitantly with other disabilities but do not by themselves constitute a learning disability. Although a learning disability may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of these conditions or influences (Hammill 1990:82).
1.4.2 An assistance programme

An assistance programme for the purposes of this study will be a booklet containing practical and functional guidelines, as well as teaching and learning strategies, so that ordinary secondary school teachers can modify their existing teaching practices in the classroom. The assistance programme will contain a selection of teaching strategies like reading and spelling techniques, as well as learning strategies that can be taught to LD adolescents. Note taking, gaining information from written sources and lectures, and test taking modification ideas and compensatory teaching methods will also be included. The assistance programme is essentially an intervention strategy.

1.4.3 Learner

The term learner refers to all learners and replaces the terms pupils and students at schools (NCSNET 1997:vii). For the purposes of this study the term learner will refer to adolescent learners at mainstream secondary schools, unless otherwise indicated.

1.4.4 Secondary school

The term secondary school refers to an educational institution or centre of learning also commonly called high schools and spans grades eight to twelve. Grade eight and nine falls within the compulsory general education and training band (GET) that takes place at secondary school level and grade ten to twelve falls within the further education and training band (FET) (NCSNET 1997:vi). The grade eight learner is about fourteen years old while the grade twelve learner could be between eighteen and twenty years old.

1.5 LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACLD</td>
<td>Association for Children and Adults with Learning Disabilities</td>
</tr>
<tr>
<td>LD</td>
<td>Learning Disabled</td>
</tr>
<tr>
<td>LDs</td>
<td>Learning Disabilities</td>
</tr>
<tr>
<td>LLB</td>
<td>Learners with Learning Barriers</td>
</tr>
<tr>
<td>LSEN</td>
<td>Learners with Special Education Needs</td>
</tr>
</tbody>
</table>
1.6 **METHOD OF RESEARCH**

The research approach can be separated into two parts; namely a literature study and an empirical investigation.

The literature study will involve a perusal of the definition, historical background, aetiology, prevalence and typical characteristics of learning disabilities. Regular secondary classroom demands and the range of available secondary school intervention programmes will be explored.

This literature study will be undertaken to identify current ideas and trends in the field of learning disabilities in particular and special education in general. It should provide a framework to which the findings of the empirical study may be related. A reflective view of the literature can assist the writer to develop the assistance programme that contains learning and teaching strategies. Information gleaned from the literature study will be used to compile an assistance programme for LD adolescents that teachers can use.

The Delphi technique will be used and a few experts will be asked to assess and evaluate the assistance programme. The focus of the empirical research will be to ascertain if the assistance programme for LD secondary learners is teacher-friendly and usable. Educators will also be asked to prioritise what they regard as the main problems facing learners in secondary schools so that the assistance programme can address these areas of concern.
1.7 PROGRAMME OF THE STUDY

The problem on which this study is based, the aim of the study and the outline of the empirical research have been discussed in this chapter.

Chapter two describes the historical background, definition, aetiology, prevalence and characteristics of learning disabilities as detailed in the literature. The demands that the secondary school places on the LD learner and the problems that they experience in this regard will also be outlined in this chapter.

In chapter three traditional assistance models and contemporary approaches and models will be reviewed and discussed. The third chapter also deals with the role that educators can play with regard to the LD secondary learner. A description of the writer's assistance programme for LD learners will conclude this chapter.

Chapter four contains the research design of the empirical research. Chapter five will contain the details of the results of the empirical study. In the final chapter a summary, the findings of the study as well as the implications of the study will be given. Recommendations will also be made.

1.8 CONCLUSION

Many LD secondary learners are in mainstream secondary classrooms by default: the glaring lack of remedial facilities and secondary school intervention programmes place the LD learner in this almost untenable situation. Many adolescent are squeezed out of the system as regular subject teachers lack the skills, or are reluctant, to make classroom modifications and curricular accommodations for the LD secondary learner.

The interplay between the needs of the adolescent and the deficits of LDs on the individual has been hinted at. The behavioural manifestations as well as the lack of academic progress have been mentioned and will be further explored in the next chapter. By all accounts the LD secondary learner is having a hard time at school as educators grapple with their new role.
The education system is transforming itself. There is greater recognition of the diverse needs of the learner and new terms are being coined to describe learners experiencing difficulties with learning. Educators are not being trained to develop or implement teaching strategies to ensure school success for all secondary learners, especially LD learners and academic underachievers. Outcomes based education and the philosophy of inclusion has brought about a new approach of specialised education services that is in direct contrast to the model that was followed in the past. The focus is now on a consultative approach.

Research findings support the viewpoint held by the writer: learning disabled secondary learners can acquire learning strategies and achieve academic success if appropriate support is provided. The literature study is undertaken to uncover simple tactics, quick hints, easy tips, and practical intervention strategies that regular classroom educators can use without much fuss and training.
CHAPTER 2

THE NATURE OF LEARNING DISABILITIES

2.1 INTRODUCTION

Educators often use the word puzzling to describe LD learners and mistakenly label these learners as lazy and unmotivated (Lewis & Doorlag 1995:66). Their disparate abilities and poor school performance despite obvious intelligence confuse teachers. The invisible nature of learning disabilities makes it easy for teachers to overlook or write off secondary learners with LDs (Black 1997:36).

'Succeeding in life requires the same formula for all – figuring out strengths and weaknesses, making the most of the strengths, and finding ways of correcting or dealing with weaknesses' (Sternberg & Grigorenko 1999:243). Padget (1998:174) sees a learning disability as consisting of general strengths, core symptoms and secondary symptoms. Educators are good at identifying the weaknesses of their learners yet they seldom look for their learners' strengths and abilities (Black 1997:36).

This chapter will focus on the historical background, nature, prevalence and aetiology of LDs. The characteristics of adolescents with learning disabilities and the affects of learning disabilities on academic progress as outlined in the literature will be discussed. The inability of the LD secondary learner to cope with the demands of school will also be described.

2.2 HISTORICAL BACKGROUND

A short discussion on the historical influences that helped shape the present concepts of learning disabilities follows. The emergence of the field of learning disabilities will be traced to help shed light on a very murky situation (Rhodes & Dudley-Marling 1988:1).
The period from 1800 to 1930, which Lerner (1985: 51) calls the foundation phase, was characterised by scientific research on the brain and its disorders by physicians. Physicians like Paul Broca, Carl Werniche and Kurt Goldstein (Lerner 1985: 28-29) were the first to attempt to find an explanation for reading failures in children and adults despite normal sensory and intellectual development. Terms like word blindness first coined by Kussmaul and, congenital word blindness first used by Hinshelwood, were commonly used (Rhodes & Dudley-Marling 1988:1). Mercer (1992:34) calls this the brain-injured phase.

The transition phase stretched from 1930 to 1960 and researchers from various fields including psychology, education, medicine and language, conducted clinical studies on children who were experiencing difficulties with learning (Mercer 1992:33). Terms like minimal brain dysfunction, brain injured child, and Strauss syndrome were used to describe children who were experiencing difficulties in learning (Lerner 1985:30-51). Mercer (1992:35) calls this the minimal brain dysfunction phase. Samuel Kirk first coined the term, learning disabilities, at an Association for Children and Adults with Learning Disabilities (ACLD) organisational meeting of professionals and parents in 1963. It soon became accepted as the generic label under which an array of syndromes affecting language, learning, and communication could be placed (Kapp 1991: 378; Lerner 1985:37; Myers & Hammill 1990:3).

The integration phase lasted from 1960 to 1980, during which time programmes for learning disabled children were implemented in most schools in America. Laws were promulgated to facilitate funding, teacher training and the implementation of programmes in all schools. This phase also saw the development of several learning disability organisations (Lerner 1985:51). Mercer (1992:37) calls this the public-law phase.

The contemporary phase began after 1980 and has seen the emergence of new trends in the field of learning disabilities. The widening age span of the LD population, mainstreaming of LD students and computer technology are a few of the new trends in this field (Lerner 1985:51). Historically researchers focused on the intrinsic nature of learning disabilities, now the focus seems to be shifting to extrinsic factors (Rhodes & Dudley-Marling 1988:2). The emphasis now is on educational terminology, but it is
still possible to find medical terms for common academic problems, for example, dyslexia (Lewis & Doorlag 1995:67). The debate about the nature of learning disabilities continues despite it being a widely recognised handicap (Rhodes & Dudley-Marling 1988:2). Although the emphasis in this research is mainly on American literature, it does provide valuable frameworks and points of departure for the compilation of a South African programme.

Several South African investigations have been conducted into the needs of children experiencing learning difficulties or LDs in the last decade. These reports include the National Education Policy Investigation (NEPI) Report on Support Services (1992), the Report of the National Commission on Special Needs in Education and Training (NCSNET) (1997), the Consultative Paper on Special Needs (1999) and the Education White Paper 6 (2001).

The nature of learning disabilities and a few widely used definitions of learning disabilities will be discussed in the next section of this chapter.

2.3 THE NATURE OF LEARNING DISABILITIES

It is not easy to define the concept LDs and as Ariel (1992:7) states: 'The definition of learning disabilities is complex and perplexing due to their nature and their heterogeneity'. Some researchers see the lack of a common definition as problematic. Other researchers insist that there is a need for several definitions as various professionals and populations require different definitions for different age levels and degrees of severity (Lerner 1993:12).

A widely used definition is the 1977 U.S. Office of Education Definition. It was developed for the purpose of guiding federal funding practices and was not intended to serve as a comprehensive statement about the nature of learning disabilities (Hammill 1990:77). It reads as follows:

Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen,
speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning disabilities, which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage.

The academic deficits listed in the Federal Definition cited above are constantly being referred to as seven academic deficits by researchers (Lerner 1993:9; Padget 1998:176; Wallace & McLoughlin 1988:6) who maintain that a learner has a specific learning disability if, despite him having been provided with adequate learning experiences, his performance is not in keeping with his age and ability levels in one or more of the following:

- Oral expression
- Listening comprehension
- Written expression
- Basic reading skills
- Reading comprehension
- Mathematical calculations
- Mathematical reasoning.

The revised (1988) National Joint Committee for Learning Disabilities (NJCLD) definition is the most widely used definition (Hammill 1990:78; Lerner 1993:8). It is also the most comprehensive and descriptive statement about learning disabilities. It provides a viable definitional umbrella, has obtained a high level of acceptance and is a representative definition that has received the endorsement of a large number of organisations (Hammill 1990:82; Rhodes & Dudley-Marling 1988:3). It reads as follows:

*Learning disabilities* is a general 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, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviours, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of these conditions or influences.

A summary of the main points of this definition is given below:

- Learning disabilities is a general term that refers to a heterogeneous group of disorders.
- Learning disabilities can exist at all ages (early childhood, school years and later adult life).
- There is a distinction between learning problems and learning disabilities.
- The exclusion phrase does not rule out the coexistence of learning disabilities and other handicapping conditions.
- Deletes the controversial phrase *basic psychological processes*.
- Emphasises the intrinsic nature of learning disabilities.
- Acknowledges the effect of extrinsic factors or environmental influences.
- Learning disabilities are largely considered to be an academic problem.

A widely accepted South African definition still eludes us. The term, learners with learning barriers (hereafter abbreviated as LLB), was proposed by the NCSNET (1997: iv-v). However they retained the usage of the term learners with disabilities (NCSNET 1997: vii). The term learners experiencing learning difficulties is the proposed term for South Africans (Consultative Paper on Special Education 1999:7; Education White Paper 6 2001:12). The WCED’s Department of Specialised
Education, has opted to use the terms LLB and learners with special education needs (hereafter abbreviated as LSEN). According to Kapp (1991: 26, 381) terms like learning handicaps, learning restraints and specific learning restraints frequently appear in South African research literature. Learning disabilities appears to be the term most widely used in research today, both internationally and in South Africa (Davis 1994:23; Education White Paper 6 2001:12).

Various researchers refer to common elements that are included in most of the available definitions (Hammill 1990:79-80; Kirk, Gallagher & Anastosiow 1993:223-224; Lerner 1993:12; Wallace & McLoughlin 1988:7-11). A brief discussion of a few of these common elements follows.

2.3.1 Uneven growth pattern

Although we all have strengths and weaknesses, learners who have extreme differences in their abilities despite an average or above-average IQ are children with learning disabilities (Young & Savage 1989:6-7). LD adolescents learn some things easily and other things only with extreme difficulty. Deficits in attention, perception, and memory mean that they will struggle to acquire certain skills (Lewis & Doorlag 1995:260).

Mental ability is comprised of numerous underlying mental abilities, these sub-abilities do not develop in an even fashion in the LD adolescent (Lerner 1993:13). The LD child has a graph of highs and lows as compared with the more even graph of non-LD children (Young & Savage 1989:7). Irregular growth or uneven development of the various components of mental ability results in intra-individual differences, or strengths and weaknesses in different cognitive processes (Lerner 1993:13). Some of the abilities of the learning disabled learner might even be in the superior or very superior range; the IQ score is thus not a true reflection of the individual’s capabilities (Young & Savage 1989:6-7). Despite average intelligence learners with learning disabilities have difficulty with learning (Lewis & Doorlag 1995:260).

Meeker (1989:218) also subscribes to this view of uneven development but defines learning disabilities as a lack of one or more learning abilities. Lewis and Doorlag
(1995:260) underscore this point when they say: 'Students with learning disabilities may read well yet spell poorly. Or they may fail a written test but be able to answer every question on an oral exam'.

2.3.2 Difficulty in academic tasks

LD secondary learners experience many different types of learning problems. Researchers (Lerner 1993:13; Mercer 1992:92) regard academic learning problems as the most widely accepted characteristic of individuals with learning disabilities. Examples of these learning difficulties are reading problems (bold mine), difficulty with mathematical reasoning and calculations, poor handwriting or motor skills and obstacles to the acquisition of speech (Lerner 1993:13; Mercer 1992:45-47). Hernandez (1989:114) states that the dysfunction related to the learning process should not be attributed to environmental, cultural, or economic situations and that the academic difficulties of LD learners mainly involve language and literacy. Mercer (1992:45-46) estimates that 50 percent of LD learners have language deficits and that children who have reading problems often have underlying language problems. Some researchers regard reading problems as the most common academic problem (Mercer 1992:46; Padget 1998:174) and Spear-Swerling & Sternberg (1996:17) emphasise that 75 percent of LD learners experience difficulties with reading.

Another point which many researchers emphasize is that the learning disabled learner has average or above-average intelligence (Black 1997:35). Meeker (1989:217, 224) calls them bright learners who are not succeeding in school despite being born intelligent. Some LD learners are of average intelligence and learn certain things quickly. Ariel (1992:v) asserts that it was the recognition of learners with normal intelligence who have learning difficulties that brought about the establishment of the field of LDs nearly 50 years ago.

2.3.3 Discrepancy between achievement and potential or IQ

LD learners are usually identified on the basis of a discrepancy between what appears to be their potential and their actual classroom performance. A severe gap should exist between what the learner is potentially capable of learning and what the learner has in
fact learned or actual classroom performance. Discrepancy can be across one or more of the seven academic areas as indicated earlier (see 2.3) or across all the skill areas (Gaddes & Edgell 1994:33; Hernandez 1989: 114; Kirk, Gallagher & Anastosiow 1993:240; Lerner 1993:12-14; Mercer 1992:45; Rhodes & Dudley-Marling 1988:4).

Pronounced impairments in the development of specific skills (that interfere with academic achievement) relative to the level of skills expected on the basis of an individual’s education and intelligence, and the concept of underachievement is contained in this element of the definition. Another perplexing factor is the variability of performance, and the fact that the LD learner’s performance can vary from day to day (Lewis & Doorlag 1995:67; Smith 1988:29; Sternberg & Grigorenko1999:3).

Learners are evaluated to determine whether a discrepancy exists or not with limited success through various means, such as standardised achievement tests, classroom observation and intelligence tests (Clark 1995:33). Padget (1998:174) sees it as a discrepancy between IQ and reading achievement whilst Mercer (1992:357) reports that LD secondary learners commonly have achievement scores five to six years below their mental age. Miller, Butler and Lee (1998:1) elaborate on this point and maintain that LD secondary learners progress approximately one year for every two years of school attendance and that grade twelve LD learners often perform at a high fifth-grade level.

Sternberg and Grigorenko (1999:6) believe that individuals with learning disabilities often have enormous strengths that the educational system often fails to acknowledge and develop. Smith (1980:xi) aptly says ‘His wide scattering of abilities and disabilities makes him into a very uneven child who puzzles the adults around him’.

2.3.4 Neurological dysfunction

Learning disabilities are related to atypical brain function and as all learning originates within the brain, many definitions imply that learning disorders are caused by a dysfunction in the central nervous system (Gaddes & Edgell 1994:29; Lerner 1993:12; Smith 1998:29). Consider the following in this regard: ‘...central nervous system dysfunction means ... that the brain, perceptual systems, or both are not
damaged but work in a way that is different from those of children without learning problems’ (Kirk, Gallagher & Anastasiow 1993:225). Neurological dysfunctions produce perceptual, cognitive and motor impairments (see section 2.6.6) (Gaddes & Edgell 1994:28).

Perceptual problems refer to an inability to recognise, discriminate, and interpret sensations like visual and auditory stimuli. Mercer (1992:46-47) mentions some common perceptual visual and auditory disabilities like visual reception, visual discrimination, auditory discrimination and auditory reception. Neurological dysfunctions are intrinsic to the individual and brain related terms commonly used include brain injury, perceptual handicaps, minimal brain dysfunction, developmental aphasia and dyslexia ((Myers & Hammill 1990:10; Smith 1998:29).

Neurological conditions are difficult to determine by medical examination or external observations as the list of symptoms are broad (Lerner 1993:12). A list of neurological symptoms supplied by Myers and Hammill (1990:25) include the following: disorders of speech and communication, academic problems, disorders of thinking processes, impairments of concept formation, test performance that is uneven and unpredictable, impairments of perception, motor function disorders and attention and concentration disorders. If one applies all the exclusions in the exclusion clause in the NJCLD definition, neurological problems emerge as the main cause of LDs. Neurologist are adamant that teachers are unable to identify children with neurological deficits (Black 1997:35).

2.3.5 Exclusion of other causes

Although there is a growing acceptance that other conditions may occur alongside learning disabilities, these conditions should not be the direct or primary cause of the learning disability. The exclusion clauses in the Federal and NJCLD definitions clearly state that mental retardation, visual handicaps, emotional disturbances, hearing impairments and social, cultural or economic disadvantages cannot be the primary or direct cause of a learning disability (Gaddes & Edgell 1994:33; Lerner 1993:15; Myers & Hammill 1990:8). However the concept of multiple handicaps allows for learning disabilities to exist simultaneously with other conditions like brain tumours
and blindness (Myers & Hammill 1990:8). Other factors which are excluded as being the primary cause of learning disabilities are chronic illness like asthma or spina bifida, low achievement due to poor environmental factors like low income housing, dysfunctional families or having English as a second language (Black 1997:35), poor teaching, lack of motivation or interest, and psychological or emotional factors (Lerner 1993:14).

2.4 PREVALENCE

'How many learners with learning disabilities are there?' is a question commonly asked. The prevalence rates range from 2 percent to 30 percent, depending on which definition one uses (Feldman 1990:vii; Lerner 1993:15; Smith 1998:47). Estimates by experts in the field of learning disabilities vary widely and actual field studies have yielded diverse results. Until we have operationally precise criteria to identify such children we will have to be content with guesses (Myers & Hammill 1990: 14-17).

'At least one in every ten children of school age will have difficulties with one or more areas of the school curriculum, most commonly reading and spelling' (Prior 1996:1). Lewis and Doorlag (1995:66) maintain that a sizable portion of the school population consists of students with special needs. Research in South Africa puts this figure as high as 50 percent if one takes environmental factors into account (Kapp 1991:31). 40 to 50 percent of South African learners may experience learning barriers according to research done by the World Bank, NCSNET and NEPI (WCED Discussion Document: 1998).

Learning disabilities are to be found in children from all social classes (Lawrence 1988:86) and research offer overwhelming evidence that learning disabilities affect people in all nations, languages and cultures; research reports come from all over the world, for example, Denmark, England, The Netherlands, New Zealand, Australia, Czechoslovakia, Chile, Canada, Israel, South Korea, Thailand, South Africa (Lerner 1993:6) and Spain (Gonzalez & Valle 1999: 267).
More boys than girls seem to be identified as having learning disabilities. Research shows that boys outnumber girls sometimes as many as eight to one. Research by the U.S. Department of Education indicates that about 72 percent of LD learners are boys, and 28 percent are girls (Lerner 1993:21). Sternberg and Grigorenko (1999:159) say: ‘It has been common knowledge for a long time that there are approximately four times as many boys as girls identified as having dyslexia’. The Interagency Committee on Learning Disabilities’ report to the U.S. Congress (1987) states that ten percent of American children are affected by learning disorders, and that the incidence is higher among economically disadvantaged communities (Jordan & Goldsmith-Phillips 1994: Introduction).

2.5 AETIOLOGY

It is difficult to identify a single cause that will explain all learning disabilities. Smith (1980:26) feels that we should not overemphasise the causes of learning disabilities as the causes are beyond the control of parents and teachers. She feels that teachers waste time and energy looking for causes while they should be looking at how the child learns best. Educators can assist learners with the things they cannot do without knowing the causes of learning disabilities. Other researchers regard causes as important because it can eliminate feelings of guilt and engender hope for the future if parents know the causes. Professionals will be able to treat the child faster and more efficiently if they know the causes. Knowing the cause might serve as a point of departure for diagnosis, assessment and assistance for teachers. If the cause is known it can be treated and perhaps be prevented (Kapp 1991:383; Lewis & Doorlag 1995:82).

The aetiology of learning disabilities is a complex matter (Kapp 1991:383). Causes of learning disabilities include:

- Genetic factors
- Factors, which can result in some injury to the central nervous system before, during or after birth.
• Certain biochemical and metabolic factors like soft drinks, junk food additives, vitamin deficiencies and inner ear problems.


Bender (1993:8-9) only considers the neurological basis of learning disabilities and gives the following as causes: congenital neurological deficit, different perceptual and cognitive-linguistic processes, age by deficit interactions in learning disability subtypes. He maintains that children with learning disabilities behave as if they are brain damaged.

Some researchers view learning disabilities as initiating within the individual. Intrinsic factors include neurological dysfunctions and cognitive skill deficits. Other researchers view it as being initiated in the environment rather than in the child. Extrinsic factors include poor instructional programmes and parental neglect (Jordan & Goldsmith-Phillips 1994:6; Sternberg & Grigorenko 1999:25-28). Other researchers maintain that the interaction between individuals and environment is an important dimension (Jordan & Goldsmith-Phillips 1994:6; Spear-Swerling & Sternberg 1996:17).

In South Africa, the definition contained in the Consultative Paper No1 (1999:3) leans strongly towards extrinsic factors. This contrasts with the exclusion clause in the NJCLD definition. The Consultative Paper cites several reasons or causes for the differences in the learning needs of learners that lead to learning difficulties:

• Physical, mental, sensory, neurological and developmental impairments
• Cognitive differences
• Psychosocial disturbances
• Particular life experiences or socio-economic deprivation
• Negative attitudes to diversity
• Inaccessible or unsafe built environments
• Inflexible curriculum and inappropriate medium of instruction
• Inadequately or inappropriately trained educators and education managers
• Inadequate support services
• Non-recognition and non-involvement of parents

2.6 CHARACTERISTICS OF THE LD SECONDARY SCHOOL LEARNER

The term learning disabilities encompasses a variety of disorders, and no individual will display all of them (Lerner 1993:20). The adolescent with LDs should be viewed as an adolescent first and then as someone with learning needs. Numerous academic and social-emotional problems arise when the characteristics of the adolescent period interact with the learning disability.

Characteristics of the adolescent period, that can affect the learning process, include puberty, independence, peer-group pressure, rapid physical changes, conflicting feelings about security and freedom, developing sexuality, and self-consciousness (Lerner 1993:274-275; Mercer 1992:51). If educators are unaware of the typical adolescent development patterns they may regard usual normal behaviour as maladaptive (Ariel 1992:47).

‘Many different characteristics are associated with learning disabilities, but each individual is unique and will present only some of these characteristics’ (Lerner 1993:20). Furthermore, these identifying behaviours must have been present over a period of time as learners who do not have LDs may display some of these characteristics for a brief period of time (Mercer 1992:45). Research shows that LDs persist throughout adolescents and many LD secondary learners cannot cope with the increasingly complex academic demands of secondary schools (Seidenberg 1988:56).

A brief discussion of the characteristics of the learning disabled secondary learner, as identified by research, follows.
2.6.1 Poor academic achievement

Secondary school instruction focuses on content areas and not basic skills, however LD secondary learners still have problems in basic skills (Lewis & Doorlag 1995:93). LD secondary learners often display severe academic achievement deficits and typically score below grade-level expectancy (Mercer 1992:51). These learners struggle with reading, written language, mathematics, study skills, note taking, test taking, listening comprehension and monitoring writing errors (see section 2.6.6 and 2.7). Academic skills often plateau at the fifth or sixth grade level by the tenth grade and academic achievement could remain two to four years below grade-level expectancy (Kirk, Gallagher & Anastosiow 1993:237-238; Mercer 1992:51-52, 357, 359; Miller, Butler & Lee 1998:1; Miller & Mercer 1997:47).

Padget (1998:174) reduces the seven academic deficits (see 2.3) into three core symptoms: vocabulary and syntax of oral language; aspects of reading and spelling that involve learning the cipher; and mathematical concepts that organise the relationships among quantity, space and time (see section 2.6.6). If the core problem is reading and spelling it has implications for all content area subjects or learning areas, as these areas require gaining information from texts and demonstrating knowledge through written assignments and tests (Padget 1998:168). This will lead to deficiencies in the learner’s lesson participation and hence poor academic achievement (Bouwer & van Niekerk 1991:39-40).

Dyslexia is often described as an unexpected difficulty in learning to read, write and spell. The terms dyslexia and specific learning difficulties are used synonymously but lay people prefer the term dyslexia, whilst researchers and some authorities view reading difficulties as a specific learning disability (Riddick 1996:1). Research indicates that 80 percent of learning disabled children primarily have a reading disability (Feldman 1990:4). The term dyslexia is accepted as a subgroup disorder within the learning disability population (Kirk, Gallagher & Anastosiow 1993:231) and is often used to describe an unusual and severe reading disorder, where individuals experience extreme difficulty in interpreting visual or auditory material presented to them, irrespective of intelligence in other areas (Lerner 1993:385).
Although various definitions exist, the definition of the World Federation of Neurology is widely used: ‘Dyslexia is a disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence and socio-cultural opportunity. It is dependant on fundamental cognitive disabilities, which are frequently of constitutional origin’ (Riddick 1996:1-2). The British Dyslexia Association’s definition stresses the causes of dyslexia as well as its impact on other abilities thus: ‘... it is independent of overall ability and conventional teaching. When untreated there are significant limitations in the development of specific aspects of speech, reading, spelling, writing and sometimes numeracy – which may lead to secondary behavioural problems – although other areas of ability are unaffected’ (Riddick 1996:4).

Besides the aspects mentioned in the British Dyslexia Association’s definition listed above, many adolescents with dyslexia also have problems with poor concentration and poor attention. They experience difficulty in recognising the sequence of information and only focus on simple and literal word meanings. They are thus unable to discern subtle meanings (Hedderly 1996:40-41).

2.6.2 Cognitive and metacognitive deficits

Mercer (1992:358) says that LD secondary learners have deficient metacognitive skills and such learners with conceptual disorders are unable to organise thoughts and materials in a normal manner. These cognitive disturbances affect reading and listening comprehension skills. LD secondary learners approach their tasks passively which mean that they are less likely to use meaningful grouping of stimuli, verbal rehearsals and mental elaborations. They have difficulty in generalising learning across settings and they do not reflect on their performances. They also exhibit delayed or deficient executive functioning (Mercer 1992:358).

Mercer (1992:47) states that metacognition consists of: ‘(a) an awareness of the skills, strategies and resources needed to perform a task effectively, and (b) the ability to use self-regulatory mechanisms ... to ensure the successful completion of a task'.
LD secondary learners have deficiencies in learning strategies and have trouble learning new things. They are unable to master skills being taught and have deficient study skills. 85 percent have problems in test taking, note taking and study skills. Many LD learners have deficient listening skills and are unable to monitor writing mistakes or scan a reading passage. They also find lecture presentations problematic (Lewis & Doorlag 1995:66-68). Many LD secondary learners are unable to follow teacher’s instructions. Some learners have memory difficulties, perhaps because of their poor language skills, and cannot remember auditory and visual stimuli. LD secondary learners forget spelling words, maths facts and directions. They also have poor long-term and short-term memory for facts presented in the classroom ((Bouwer & van Niekerk 1991:40; Kirk & Gallagher 1993:237-238; Mastropieri & Scruggs 1998:138; Mercer 1992:48, 358-359; Smith 1980:66-67).

2.6.3 Social interaction deficits

LD secondary learners are inclined to use socially unacceptable behaviours in social settings, display immature problem-solving skills and are often unable to create strategies to solve their personal social problems (Kirk & Gallagher 1993:238; Mercer 1992:360). LD learners are often unable to predict the consequences of their behaviours. They have more problems with peer relationships and are generally less socially acceptable and popular than their peers. They cannot adjust their communication to the interests or level of language of their peers. They miscommunicate, and misinterpret social cues by not being able to integrate information from facial expressions, tone of voice, posture and body language. This causes distress, confusion and anxiety in social settings (Bender, Rosenkrans & Crane 1999:152; Foss 1991:129-132; Gaddes & Edgell 1994: 449; Kish 1991:20).

Frustrated by repeated academic and social failure, the learning disabled adolescent becomes disruptive, develops a poor or low self-concept and maladaptive thinking patterns. Other behavioural manifestations of social-emotional problems may include hyperactivity, perseveration, distractibility, dependency, aggression, delinquency, impulsivity, explosiveness, low tolerance for frustration, dependency, rebelliousness, stuttering, truancy, disobedience, day dreaming, untidiness, unhappiness, lack of

Friendships and peer approval are very important during the adolescent phase (Lerner 1993:277). Research shows that, the LD secondary learner has difficulty in handling the classroom social climate (Allen & Burns 1998:28). When learning disabled adolescents experience social rejection as a consequence of their social ineptitude and develop a sense of failure as a result of repeated academic failure (Foss 1991:133), they become isolated, withdrawn, stressed and depressed and could be risk for suicide (Bender, Rosenkrans & Crane 1999: 143-144; Epstein & Cullinan 1991:165; Foss 1991:133).

According to Kapp (1991:397) most researchers report that LD secondary learners feel inadequate and have unrealistic opinions of themselves because they experience continual failure and underachievement. They detrimentally under or over estimate themselves and they are unable to meet the expectations of parents and teachers. Their deficiencies are over-emphasized while their positive attributes are overlooked. Furthermore, Kapp (1991:397) maintains that the LD secondary learner has a poor self-concept, poor self-image and poor self-identity. Children need successful social experiences to build confidence and feelings of self-worth and many of the LD child’s behavioural manifestations such as aggression, withdrawal and over-compensation may be caused by a poor self-image (Kapp 1991:397; Lerner 1985:466).

2.6.4 Motivation deficits

LD secondary learners have serious motivation problems concerning schoolwork as they lack intrinsic motivation. They are inactive learners and exhibit learned helplessness (Smith 1998:254). They often fail to see the connection between appropriate effort and success, have difficulty with commitment to learn or perform and they have trouble setting and attaining goals. LD learners are deficient in various skills as outlined already. They are not motivated to improve these skills as continued remediation make them feel as if these skills are never going to improve, and success at school is based on passing content classes (Mercer 1992:357-358).
LD secondary learners doubt their intellectual abilities, have a low persistence level and believe their efforts are futile. They give up quickly on difficult things and success does not raise their level of confidence or bring much satisfaction as they attribute success to luck (Lerner 1993:277). They are diffident about future academic success and if they anticipate future failure they may refuse to do the assigned work; 'If I didn't try, I didn't really fail' (Smith 1998:267). Gearheart (1981:261) says that they are not interested in experiencing more failure, nor do they derive any pleasure from attending school to please adults.

They respond to pressure from educators to do more by actually becoming less productive. These LD learners frequently and characteristically shut down when they are pressurised to perform academically (Foss 1991:135). Lesson content problems, which could include too complex or vast volumes of information, also lead to lack of motivation (Bouwer & van Niekerk 1991:41). Painting (1983:66) calls such a student the task-avoidant child and says that they seem disinterested in doing well on school-related or other tasks, they avoid starting or completing tasks and they offer excuses for avoiding or not completing tasks. This is in direct contrast to what teachers expect. Mercer (1992:361) explains that teachers expect students to complete tasks, approach their problems proactively, set goals and demonstrate efforts to achieve goals.

These learners worry constantly about feeling competent, making mistakes, being teased, getting poor grades and being criticised (Bender, Rosenkrans & Crane 1999:147). Learned expectation of failure leads to 'diminished motivation' to achieve. As Smith (1998:267) correctly states: 'These teenagers tend to be more anxious than their non-LD peers about the possibility of failure'. Research shows that dropout rates of 25 to 50 percent for learning disabled students are common (Kish 1991:20-21). They avoid challenging tasks that they think they may fail, because they don't want to reduce their intellectual status in others' perceptions (Wong 1994:112). Keogh (1998:314) maintain that school is a risky business and that the publicness of success and failure is hard to cope with: 'Some students may respond by being compliant and uninvolved, but others may actively reject and devalue the tasks to be learned, becoming the class clowns or the disruptive problem children whose disruptive behaviour masks learning inadequacies'.
Mercer (1992:361) correctly states that a motivated child can learn more than others thought possible, just like an unmotivated child does not even come close to achieving his potential. Lerner (1993:277) maintains that it is extremely difficult to motivate LD adolescents to exert the effort to learn. Consider Ariel's (1992:47) description of the LD secondary learner; note the reference to baggage and the effect it has on the LD secondary learner:

The child with LD enters into adolescence carrying the burden of his learning disabilities that magnifies the frustrations, challenges, and rewards usually associated with this period. While the baggage differs with each adolescent, there are certain common denominators: a deep sense of being defective, a suspicion of helpful adults, and a fear of change. The child with learning disabilities who has experienced a prolonged history of school failure, inappropriate peer and social relationships, bitter interactions with adults, and general feelings of pervasive incompetencies enters the adolescent period with a disadvantage.

2.6.5 Attention deficits

A learner must remain focused on relevant classroom tasks and be able to shift attention to new tasks fairly effortlessly to attain success in school. Attention disabilities are less common among secondary learners, however they do display a common antisocial pattern involving aggression, school disruptions, and rule violations (Kish 1991:165). Learners with attention problems as listed below, find it hard to block out extraneous stimuli and are easily distracted by irrelevant stimuli. The following list of symptoms should highlight this area of the LD secondary learner:

- Poor concentration (needs to have instructions repeated, seems confused or misunderstands what is happening)
- Poor attention span, no sustained focus and distractibility
- Problems with organisation (difficulty in selecting, remembering, integrating and sequencing)
• Confusion about timing (confusion about passage of time, reversing the concepts of time, takes too much time to adjust to new situations, late getting to class, completing projects, pacing his progress, pacing during examinations, not being able to wait his turn, ordering and sequencing of information, can’t work on three subjects in one evening, and so on)

• Difficulty in receiving information

• Perseveration (continuation of an activity for too long almost mindlessly, once it has started and difficulty changing to another activity. Smith (1980:34) terms it ‘the one way kid’)

• Hyperactivity (excessive restlessness, acts before thinking, very demanding of attention, poorly controlled expression of feelings, makes careless mistakes, needs constant adult attention)

• Poor memory (has difficulty in remembering instructions completely or in the correct order, recalls factual information incorrectly or incompletely). Also see memory problems in cognitive and metacognitive deficits (section 2.6.2)


Short attention spans and the inability to concentrate for long periods at a time are common difficulties of adolescents with learning disabilities. Lerner (1993:277) states: ‘Given the long periods of concentration needed for studying and listening in class, these deficits can seriously impede progress in school’

2.6.6 Poor motor abilities

Poor motor abilities in the secondary learner include handwriting difficulties, note taking problems, spatial perception deficits, and confusion about directionality and time. Handwriting and note taking will now be discussed. This will be followed by a brief discussion on how spatial perception and time deficits manifest themselves in the LD adolescent.
2.6.6.1 Handwriting and note taking

Illegible handwriting is one of the most frequently listed of the thirty characteristics related to LDs (Kolstad, McCabe & Wilkinson 1997:217). Adolescents with learning disabilities have visual-perceptual difficulties (Riddick, Farmer & Sterling 1997:10-11), deficits in fine motor control (Wood, White & Miederhoff 1988:108), poor motor abilities, gross motor co-ordination deficits, spatial problems, and are awkward and clumsy: hence handwriting speed and letter formation is problematic; coupled with poor graphomotor skills and organisational problems producing written work is hard and LD learners are often unable to complete academic assignments (Foss 1991:128-29). Visual-motor problems when writing or copying result in work that appears sloppy, careless, unorganised and poorly spaced. LD learners also struggle to focus and follow when going from far-to-near or near-to-far vision, like looking at the blackboard and then back at the textbook (Macon[S.a.]:25).

Handwriting is linked to motivation, spelling prowess and reading speed. Writing speed is linked to physical maturity and improves rapidly during adolescence, and although some learning disabled adolescents may be to write at normal speed they are unable to maintain it over long periods; these students will have difficulty in examinations, written course work and taking notes, as handwriting is a major component of these activities (Hedderly 1996:39-42).

Handwriting is closely linked to note taking. LD secondary learners have to take notes from the blackboard, textbooks and from lectures. Research indicates that teachers lecture for 50 percent of class time (Hughes & Suritsky 1993:9). Despite the popular belief held by secondary teachers that note taking is easy, note taking is a complex skill (Riddick, Farmer & Sterling 1997:10-11) and involves various component skills like paraphrasing lecture information, distinguishing between main ideas and supporting detail, using abbreviations and symbols, understanding what is being said, and recording the information legibly and fluently (Hughes & Suritsky 1993:9).

Although note taking is important as it provides a permanent and transportable record from which to study many learners are unaware of what they are attempting to do when taking notes, some students write down everything while other students jot
down a few facts here and there that do not really explain anything (Hughes & Suritsky 1993:7; Macon [S.a.]:11). Learners often complain of not being able to write fast enough because of a slow writing speed and poor spelling (Hughes & Suritsky 1993:8). Dyslexic learners complain that writing tasks takes them longer to do and that they thus need more time than other learners to complete assignments (Riddick, Farmer & Sterling 1997:10-11).

2.6.6.2 Spatial perception and time deficits

When examining the characteristic pattern of strengths and weaknesses that may indicate a learning disability, the spatial factor is often the weakest (Foss 1991:129, 139). Space and time are organising systems, and the LD learner is often lost in space (Smith 1980:46-47). Savage and Young (1989:56, 163) state that a secondary school learner with residual learning problems still experiences difficulty in remembering the sequence of the months of the year. The confusion caused by noise and bustle plus a poor sense of spatial perception and directionality make finding the way to distant classrooms a grim adventure for LD learners. An inability to select important information, faulty recall of sequences, difficulty in visualising the passage and intervals of time, deficits in before and after concepts, poor co-ordination, lack of planning, and the inability to integrate several processes simultaneously are some of the problems experienced by LD secondary learners (Smith 1980:57-58).

Learning in general as well as reading, spelling, mathematics, geography and history are usually hard for the LD secondary learner as:

- Reading involves an ordered series of graphic symbols placed in space
- Mathematics involves groupings of angles in space, order and placement of numbers in space
- History involves putting events and people into chronological sequences or time slots
- Geography involves land space, water space and relationships in space
- Learning involves exploring new spaces and organising data in the mind and in time (Smith 1980:46; Young & Savage 1989:56-57).
As evidenced learning disabilities affect all spheres of scholastic achievement and has implications for all subjects and learning areas. Smith (1980:62) aptly lists other implications for schoolwork thus:

He’s a poor judge of time and lingers after class and then he is late to the next one. His timing is off in planning schoolwork. He can’t complete projects, can’t estimate the time needed for homework, can’t judge how much time to allow for each question on a test, can’t pace himself to produce a term paper, can’t do work on three different assignments in one evening, even when the assignments are very short.

2.6.7 Summary of the characteristics of the LD secondary school learner

To conclude this section on the characteristics of the learning disabled secondary school learner, a summary of the discussion (2.6 – 2.6.6.2) is provided in Table 2. The first column contains the characteristics of a LD secondary school learner and a brief description thereof. The second column holds the implications of the said academic deficits for academic tasks like reading, writing, note taking and examinations, as well as the effects on scholastic achievement.

As can be seen from the information in Table 2 the effects of learning disabilities have far reaching implications for the secondary learner. Educators are unaware of these effects and often label the LD adolescent as lazy and unmotivated. The discussion is continued in the next section where the demands of the secondary school are examined.
<table>
<thead>
<tr>
<th>Characteristics of a LD secondary school learner</th>
<th>Implications for scholastic achievement</th>
</tr>
</thead>
</table>
| Poor academic achievement                        | • Fails subjects; fails learning area course work like mathematics; or has to repeat a grade  
|                                                 | • Eventually pushed out of system before completing grade 12 |
| Cognitive and metacognitive deficits             | • Poor reading and listening comprehension  
|                                                 | • Lacks self-regulatory strategies to organise thoughts and materials  
|                                                 | • Weak test taking, note taking and study skills |
| Social interaction deficits                      | • LD learner becomes disruptive, develops feelings of inadequacy  
|                                                 | • Inability to predict consequences of behaviour  
|                                                 | • Display socially unacceptable behaviour like aggression, and rebelliousness |
| Motivation deficits                              | • Difficulty with commitment to learn  
|                                                 | • Not motivated to work on deficient skills  
|                                                 | • Shuts down when pressurised to perform |
| Attention deficits                               | • Incomplete tasks, seatwork, and so on  
|                                                 | • Poor memory  
|                                                 | • Hyperactivity, impulsivity  
|                                                 | • Inability to remain focussed on relevant tasks |
| Poor motor abilities                             | • Major implications for all activities involving writing like note taking and examinations  
|                                                 | • Difficulty with subjects or learning area courses involving concepts of space and time |

Source: compiled using information from the preceding discussion.

The next focus point of this study is the demands that the secondary school makes of all learners and the inability of the LD learner to cope with these demands.
2.7 INABILITY OF THE LD LEARNER TO COPE WITH THE DEMANDS OF SECONDARY SCHOOL

Another way of viewing the LD secondary learners' characteristics would be to look at their inability to cope with the demands of secondary school. Various researchers (Deshler 1998:30-31; Lerner 1993:278; Monda-Amaya, Dieker & Reed 1998:172; Rieth & Polsgrove 1994:118; Seidenberg 1988:59; Wallace & McLoughlin 1988:14) emphasise that LD secondary learners cannot cope with the demands of regular inclusive mainstream classrooms.

In order to be successful at school LD secondary learners have to acquire the same development skills and social capabilities as their non-LD classmates plus they need to cope with the specific demands of their particular learning disability (Kish 1991:23). LD secondary learners have to keep up with the fast pace of curricular coverage (Deshler 1998:300; Levine 1997:114).

Secondary educators consider the following behaviours most problematic; off-task behaviour, inappropriate peer interactions, non-compliance and problems in completing assignments (Bender 1993:154). Educators expect secondary learners to have fairly automatic mechanics of reading, writing and spelling; furthermore they must be able to understand, judge, analyse and check facts for accuracy (Young & Savage 1989:164). The LD secondary learner is still deficient in many of these basic skills and Lerner (1993:24) says: 'A radical change in schooling occurs at the secondary level, and adolescents find that learning disabilities begin to take their toll. The tougher demands of the ... senior high school curriculum and teachers, the turmoil of adolescence, and the continuous academic failure may combine to intensify the learning disability'.

Mercer (1992:352-356) lists the following as the demands of secondary school: social skills, demonstrating a will to learn, gaining information from written materials and lectures, demonstrating knowledge through tests, working independently with little feedback from the teacher, study skills, and teacher-pleasing behaviours. A brief discussion of the last six factors now follows, as the first two factors have been touched on elsewhere (see sections 2.6.3 and 2.6.4).
2.7.1 Gaining information from written materials and lectures

Secondary learners have to glean information from textbooks and lectures. Both tasks are difficult for the learner with LDs as they ‘primarily have difficulty processing information … their disabilities inhibit the processing of text, prevent the organization of information into memory, and impair the ability to maintain attention’ (Allen & Burns 1998:28).

LD secondary learners also experience problems with reading. Many still read very slowly as they: do not have word attack skills and are forced to stop frequently to figure out unfamiliar words; are unable to comprehend everything they read; tire easily when overloaded with reading assignments; are impulsive; exhibit poor concentration; show a slow grasp of main ideas; have a limited vocabulary; possess poor visual memory; display a disinterest in reading; and, old reversal problems resurface when they try to read too quickly (Young & Savage 1989:166). Also see dyslexia in section 2.6.1.

Research indicates that teaching in most secondary classes takes place via lecture-type presentations; most secondary learners with LDs cannot cope because of deficient note taking and listening skills (Ariel 1992:153; Mercer 1992:353; Seidenberg 1988:58). Gaining information from lectures is especially difficult for LD secondary learners as they cannot paraphrase, remember facts in a given order or write fast enough (Mercer 1992:353). Reasons why mainstreamed LD learners experience difficulty when taking notes during lectures are varied and include: auditory processing problems, visual processing problems, deficient motor skills, and an inability to discern main points (Wood, White & Miederhoff 1988:108).

Teachers rely heavily on textbooks, and as learners with LDs are not efficient readers they struggle to extract information from textbooks (Gersten 1998:163). Hernandez (1989:140) states: ‘Today, an estimated 80-90% of the school curriculum is based upon textbooks. Textbook-oriented activities account for about 75% of all classwork and 90% of all homework’. Research reveals that the readability levels of most textbooks exceed the grade level at which they should be used, and the organisation and flow of some textbooks are inconsiderate to the reader (Ariel 1992:153; Mercer
1992:352). Other factors that make obtaining information from written texts difficult are: most textbooks are too difficult for the LD learner; teacher-produced overcrowded mimeographed sheets; and, an extremely slow reading speed (Young & Savage 1989:164). Completion of lengthy reading assignments may contribute to LD learners’ experience of failure (Ariel 1992:153; Vallecorsa & deBettencourt 1997:173).

2.7.2 Demonstrating knowledge through tests and study skills

Learners often have to write class tests, complete quizzes and work sheets as part of a test; and, write monthly or quarterly examinations. Research points to the fact that the use of written tests is extensive and that most learners need good test taking and study skills to cope with the demands of testing (Mercer 1992:352-356). Learners experience mechanical problems while taking examinations such as: placement of answers in the wrong place; an inability to draw lines on a matching test; and, poor performance when having to use a separate answer sheet (Macon [S.a.]:23). Besides mechanical difficulties, learners may also experience difficulty with more complex tasks like reading the exam text, or answering exam questions (Gardill & Jitendra 1999:2; Rhodes & Dudley-Marling 1988:205).

Most educators regard study skills as basic skills, however as the demands of school increases, it becomes apparent that many learners have not mastered the study skills necessary for effective learning. Study skills are the learned abilities that individuals have for the purpose of acquiring knowledge and competence (Macon [S.a.]:6). Study sub-skills include: taking notes, using library reference materials, taking tests, writing reports, copying notes, adequate reading rate and time management (Hoover & Collier 1992:229; Mercer 1992:354). Weak study habits include the inability to organise and budget time, tardiness to start tasks, difficulty in completing tasks, and poor note taking skills (Macon [S.a.]:15). Students with LDs commonly forget to write down assignments and complete or hand homework in on time. They experience difficulty in breaking down projects into smaller units of work and find it hard to start working and to remain focussed (Smith 1998:416-417).
2.7.3 Expressing information in writing

LD students are reluctant writers as '... experience has shown them that ... putting pen to paper are invitations for criticism' (Rhodes & Dudley-Marling 1988:82).

Learners mainly have to write to record information in their notebooks, complete tests and produce written homework assignments. Educators often expect children to use a short-answer response by filling in a blank, spell a word or mark a correct answer (Mercer 92: 354). Very often the LD secondary learner who has spatial perception deficits will struggle with this task (see section 2.6.6).

Written composition is a difficult and complex task as there are various sub-skills involved, like: thinking about the theme or argument during composing, constructing a catchy heading or title, shaping content by expressing conceptualised ideas into words, and revising (reworking and testing ideas) the text (De La Paz, Swanson & Graham 1998:448; Means, Chelener & Knapp 1991:143). Writing is a process and involves planning, revising, editing, and producing a final draft (Isaacson & Gleason 1997:88).

LD learners experience mechanical writing problems like problems with spelling, punctuation and handwriting. Other problems LD learners experience are: not understanding the intended purpose of writing, inability to think about the reader, difficulty to organise ideas and thoughts, illegible handwriting, trouble generating enough information to put into words, ineffective revision practices, inability to detect flaws in their writing and poorly developed text production skills (Graham & Harris 1999:256; Isaacson & Gleason 1997:88).

Many LD learners have expressed a dislike for writing of any type (Del Giorno 1997:325). Some will avoid writing whenever possible and make disparaging remarks about their capabilities as writers. Some will devote very little effort to composing prose while others will have neutral attitudes about writing and be positive about their skills as writers (Graham & Harris 1999:255).
2.7.4 Working independently with little feedback

LD secondary learners struggle to pay attention and complete their work. Research concludes that teachers expect secondary learners to demonstrate independent work habits such as bringing materials to class, completing assignments and tasks without extra help from the teacher, managing their time, requesting help, working independently and developing plans for completing their work, as well as monitoring and checking their work (Mercer 1992:354).

Researchers are adamant that LD learners have difficulties with time on-task (Blick & Test 1987:203; Smith 1998:266; Wheddon & Bakken 1999:6). Smith (1998:266) remarks that more LD adolescents are involved in classroom disturbances than their non-LD classmates, while some LD learners are passively off task but not disturbing other learners. Research reveals that LD learners only spend about a third of class time on academic tasks and only seventeen percent of the time really engaged in relevant learning tasks (Lewis & Doorlag 1995:104; Prater 1992:22).

Factors that lead to off-task behaviours of learners are varied, and could be learner related as discussed above or teacher related. Le Francois (1994:297) maintains that ‘... jerky transitions and lesson interruptions are among the principal causes of students’ inattentiveness, restlessness, and misbehavior’. He provides the following examples of lesson interruptions:

- **Stimulus-bound** educators interrupt the lesson with inappropriate comments as they are easily distracted by external stimuli.
- **Thrusts** occur when the educator interrupts learners’ activities without prior warning or regard for their readiness.
- **Dangling** takes place whenever the educator interrupts an activity and then returns to it again later
- **Truncations** results if the educator does not return to the original interrupted activity
- **Flip-flops** are created by teachers jumping from one activity to another, and then back again to the original activity as if they have changed their minds
• *Overdwell*ing or lesson slow down comes about when teachers spend too much time on one aspect of the lesson, or a learner’s behaviour.

• *Fragmentation* happens whenever learners are made to wait unnecessarily. For example, the teacher gets children to come to the blackboard one at a time while the rest of the class is sitting and doing nothing; learning does not necessarily result by watching someone else.

### 2.7.5 Teacher-pleasing behaviour

Classroom survival skills are described as non-academic skills needed to meet the daily demands of a secondary school classroom and include daily class attendance, prompt arrival at class, being prepared for daily lessons, meeting deadlines, following directions, interacting with teachers appropriately. Other teacher-pleasing school survival skills that teachers expect and LD learners lack involve a whole range of activities including volunteering answers, and requesting assistance. The LD secondary learner is deficient in many of these critical skills and hence they are at risk of failure (deBettencourt & Zigmond 1990:18; Monda-Amaya, Dieker & Reed 1998:172; Seidenberg 1988:59; Snyder & Bambara 1997:534). Also see section 3.4.1.

### 2.7.6 Summary of the problems experienced by the LD secondary school learner and the implications thereof for academic achievement

The problems that LD secondary school learners experience are summarised in point form in *Table 3*. The first column contains the problems experienced by the learners with regard to the academic demands made on them and the second column contains the implications for academic achievement.
### Table 3: Summary of the problems experienced by LD secondary school learners

<table>
<thead>
<tr>
<th>Problems experienced by LD secondary school learners</th>
<th>Implications for academic achievement</th>
</tr>
</thead>
</table>
| Inability to gain information from written materials and lectures | • Cannot complete lengthy reading assignments  
• Incomplete class work and homework |
| Inability to demonstrate knowledge through tests and study skills | • Difficulty in writing tests, completing quizzes, worksheets, monthly or quarterly examinations  
• Experience mechanical problems when writing tests |
| Inability to express information in writing | • Written work is difficult, inadequate and often incomplete  
• Problems with spelling, punctuation and handwriting  
• Pay scant attention to writing and composing prose  
• They dislike writing and will avoid it |
| Inability to work independently with little feedback from teacher | • Exhibit a variety of off-task behaviour  
• Inability to manage time or develop plans to complete work  
• General tendency not to complete school related work and assignments |
| Inability to exhibit teacher-pleasing behaviour | • Lack materials necessary for learning  
• At risk for failure of subjects, learning area courses or even grades |

Source: compiled using information from section 2.7.

### 2.8 CONCLUSION

The historical background, definition, prevalence, aetiology and characteristics of learning disabilities have been discussed in this chapter, by way of a literature study. Various characteristics of the adolescent with learning disabilities have been
discussed. It was noted that adolescents with learning disabilities would display the described characteristics in varying degrees. As they enter secondary school with a history of failure and a lack of skills, success for these adolescents becomes increasingly more difficult. The LD adolescent is heavily burdened by the demands of a regular secondary classroom.

The causes of learning disabilities may be due to intrinsic factors, extrinsic circumstances, or the interrelation of both sets of factors. The social-emotional aspects of learning disabilities were also discussed. The effects of academic failure on the learning disabled adolescent, was highlighted. The effects of learning disabilities on the self-concept, interactions with schoolwork and social relationships were emphasised. Various facets of school-related academic demands like note taking and study skills were discussed, as well as the deficits of the LD secondary learner in this regard.

An effort to understand the adolescent with learning disabilities has been made to facilitate teacher understanding of the need for effective interventions. Often adolescents with learning disabilities receive inadequate educational support. Research indicates that if LD secondary learners are taught skills like teacher-pleasing behaviours and working independently without constant teacher assistance, they stand a good chance of achieving a measure of academic success.
CHAPTER 3

INTERVENTION MODELS AND THE ROLE OF THE EDUCATOR

3.1 INTRODUCTION

There is a scarcity of remedial facilities for secondary learners (see 1.2.2); hence it was almost impossible to obtain South African literature sources despite an ERIC and South African database search. Consider the following quotation that illustrates this point:

It is clear that of the learners categorised in the past as having ‘special needs’, only a small percentage of learners with disabilities have received appropriate education in either ordinary or specialised contexts. At the same time, although national and provincial legislation has made provision for ‘special needs education’ at the respective levels, the reality is that such education has only been taking place at primary school level (NCSNET 1997:24).

The discussion therefore focuses on American models and approaches with the express purpose of gleaning relevant elements for the compilation of a South African programme.

Several different curriculum models and instructional approaches for assisting secondary learners with LDs are being used in schools, mainly in resource rooms. Research shows that certain approaches, depending on the teaching of academics in resource rooms with the goal of mainstreaming LD learners, are inadequate as they rely on elementary remedial models (Ariel 1992: 152; Rieth & Polsgrove 1994:119). Traditional models tend to focus on the academic area in which the learner is experiencing difficulties, for example, like reading and not much attention is paid to underlying abilities like perceptual skills (Rhodes & Dudley-Marling 1988:6-7).

The first section of this chapter sets out to examine some traditional and contemporary secondary school models or approaches, followed by a critique of these models or approaches. The next section provides a discussion on the classroom needs
of LD secondary learners in mainstream classes. In the last section of this chapter the writer's programme will be described.

3.2 TRADITIONAL ASSISTANCE MODELS

A number of traditional models will be discussed to determine their worth for the programme to be designed.

3.2.1 Basic skills instruction model

Basic skills instruction focuses on the learners' academic deficits and emphasises improving abilities like reading and mathematics by using remedial procedures at the learners' level of functioning. This approach often focuses on corrective programmes and the remediation of skills corresponding to the learner's achievement level. Most schools offer these programmes (basic skills remediation, survival skills lessons, and instruction of learning strategies) in resource rooms. Research shows that 51 percent of American schools that responded to a survey use this approach (Ariel 1992:151 - 152; Kapp 1991: 412; Kirk, Gallagher & Anastasiow 1993:255; Lerner 1993:249,283; Mercer 1992:365).

Learners who have not yet mastered the basic skills to adequately cope with content subjects are found at secondary schools, and basic skills instruction is used with the goal of sequentially improving the learner's skills to ensure success across content areas. The premise of this approach is that if learners acquire the basic skills they will become independent learners. Some researchers claim that the brain is a limited-capacity processor and basic skills have to be fairly automatic for cognitive processing (Clarizio, Craig & Mehrens 1987:116; Kirk, Gallagher & Anastasiow 1993:255; Mercer 1992:365).

Basic skills are identified, broken down into smaller learning units and taught to learners over a period of time (Mercer 1992:365). Research indicates that mathematical problem solving is enhanced when the basic skills are overlearnt and automatic, and that skills have to be directly taught as they are not learnt just by exposure to subject content (Clarizio, Craig & Mehrens 1987:116).
3.2.2 Tutorial instruction model

The tutorial instruction model is basically a content-oriented approach where learners are helped in specific content subjects by a remedial specialist in the resource room (Ariel 1992:151-152; Kapp 1991:412; Lerner 1993:283-284). In this approach another teacher is responsible for the delivery of the content, ‘... but the learning disabilities teacher provides short-term assistance in mastering key aspects of the content in which the student is experiencing difficulty or failure’ (Mercer 1992:366). Tutorial instruction can occur inside the mainstream classroom where existing learner strengths are used. Research indicates that this approach is used in 24 percent of American schools that responded to a survey (Ariel 1992:152; Gearheart 1981:265; Lerner 1985:250).

The main aim of this model is to provide assistance to LD secondary learners in mainstream content subjects so that the learner can remain in the mainstream class (Ariel 1992:151). Some research findings indicate that this model does help children to pass exams (Seidenberg 1988:59).

Tutorial efforts consist of multiple task analysis and the use of alternative means of instruction rather than simply reteaching learning matter already presented in the mainstream classroom (Gearheart 1981:265). The focus is on the actual work the LD secondary learner has to study in mainstream education class. The resource room educator, who should have knowledge about the requirements of all academic subjects in which the learner may be experiencing difficulties, helps the struggling adolescent by further teaching and explanations (Kapp 1991:412; Lerner 1993:284). The demands placed on the secondary learner are lessened by: providing tuition in content areas, offering equivalent or parallel content courses, and employing alternative content courses where adapted textbooks and reduced content are used (Mercer 1992:366). Activities like study techniques and test taking skills are often included in this approach (Gearheart 1981:265-266).
3.2.3 Functional skills instruction model

The functional skills instruction model follows a novel curriculum and emphasises equipping LD secondary learners with skills to function in society after exiting from the secondary school system, rather than coping with subject content; and, takes place in a self-contained classroom (Ariel 1992:151; Kapp 1991:412). A self-contained class implies that LD learners are not part of the mainstream curriculum but follow a supported programme delivered by a special education teacher in a separate classroom in the mainstream secondary school. This approach was used by 17 percent of respondents in a survey (Lerner 1985:249; Strasburger; Turner & Walls 1999:63,71).

The main focus of the functional skills approach is to teach survival skills to LD secondary learners so that they can cope with the demands of life outside of school and get along in the world of work. Academic content is directed to learners’ career and life needs. The curriculum includes subjects like consumer banking information, completion of a variety of application forms, personal financial information, self-care skills, life skills, career planning, guidance towards the attainment of a vocational identity and counselling for self-identity formation (Ariel 1992:152; Kapp 1991:412; Lerner 1993:249,284-285).

The separate curriculum that these learners follow is different from the normal high school curriculum and provides subjects like reading, for example, that is directed towards relevant areas of career requirements such as looking up directions, understanding advertisements, or reading a driver’s instruction manual (Lerner 1985:249).

3.2.4 Work study model

Work study programmes, that form the basis of the work study model, can best be described as special modified vocational-preparation programmes for use by the disabilities or resource room teacher for a group of LD secondary learners (Gearheart 1981:267). This approach is used by 5 percent of respondents in a survey (Ariel 1992:152; Lerner 1985:250).
Although work study programmes are most often carried out by a single teacher in a small self-contained classroom, work study programmes sometimes take place in alternative schools that were initially organised for educable mentally retarded learners. These schools are designed to be different from traditional schools, and the teachers are comfortable with teaching in non-traditional ways (Gearheart 1981:266-268). One aspect of career education is the specific vocational training experience at secondary level (Lewis & Doorlag 1995:93).

The goals of these programmes are to provide more information about work habits, the acquisition of skills to get along with other employees and, to obtain knowledge about the requirements of employers while in an environment that permits guidance, feedback and support from the school supervisor and employer (Gearheart 1981:267-268). The learners often work with a LDs specialist and this approach works for LD learners who are not motivated by the secondary school environment (Lerner 1993:285). Easing the transition from school to the world of work is the main focus of this approach (Lewis & Doorlag 1995:93).

In vocational preparation programmes that are embedded in the work study model, job and career related skills are taught to a small group of about 10 to 15 adolescents (Gearheart 1981:266). Besides containing career education, the work study model also incorporates preparation for other work roles. Career education provides content area information for the solution of daily problems such as reading menus, making change and selecting appropriate items to buy. The acquisition of work related skills like typing, mechanical drawing and welding; and, the understanding of basic work habits like punctuality and task completion also form part of career education (Lewis & Doorlag 1995:93).

Engaging learners in closely supervised, actual job site work using various adaptive teaching procedures prepare the learners for off campus work. Work placements may be similar to those used for educable mentally handicapped learners, but because of their intelligence, LD learners find success in much higher levels of employment (Gearheart 1981:267). For one half of the day LD secondary learners receive instruction in career-related issues and job skills, and the other half of the day is spent

Furthermore, the work study programme could run for a year or two. The programmes are sometimes associated with outside agencies for grading and accreditation. The programmes may be integrated with a limited amount of standard academic classes or it may be a stand-alone programme (Gearheart 1981:267-268).

To conclude the discussion on traditional models and approaches, some placement options for LD secondary learners are listed.

### 3.2.5 Placement options for LD secondary learners

Traditional approaches mainly occur in resource rooms or self-contained classroom settings (see 3.1 & 3.2.3). In a study conducted by Strasburger, Turner and Walls (1998:68) the following five placement options where secondary school LD learners received instruction, were identified:

1. Private school, specialising in learners with learning disabilities.
2. Private school providing small classes; but not specifically directed at learning disabled learners.
3. Public school resource room including study hall, tutoring, study skills ranging from, as needed to one period a day, and mainstreamed academic core courses in regular classes.
4. Public schools self-contained classrooms for learners with learning disabilities in which core academic courses were not mainstreamed.
5. Public school, no services; having core academic subjects with no special educational services in the secondary setting.

The South African reality is different in that placement options for LD secondary learners are almost non-existent; our situation would mainly reflect number five above. At primary school level we find some specialised programmes and facilities like special education classes attached to ordinary schools and the system where
learners enrolled in ordinary classes are withdrawn from time to time for specialised assistance (NCSET 1997:25).

3.3 CONTEMPORARY APPROACHES AND MODELS

The basic skills remediation approach still dominates nearly all programmes for secondary learners (Ariel 1992:150). Consider the following quotation which mentions the past perspective of the LDs field, yet clearly spells out the future educational focus for LD secondary learners: ‘For years resource rooms and instructional settings have served as predominant service delivery models for secondary students with mild disabilities ... increasingly however, students with mild disabilities are making the transition from pull-out programs to inclusive learning environments’ (Monda-Amaya, Dieker & Reed 1998:171). Three contemporary approaches in general use, namely, learning strategies approach, collaborative models and classroom accommodations, modifications and compensatory teaching, are described below.

3.3.1 Learning strategies approach

Learning strategies is a generic term and includes cognitive and metacognitive strategies. The focus of learning strategies is to teach adolescents how to learn rather than to teach them content (Kapp 1991:413). Cognitive training is an approach where the child learns how to analyse a task and the strategies required to solve problems. The central idea in metacognition is to get learners to think about the nature of learning and to develop control over tools for learning (Feldman 1990:17; Joyce & Weil 1996:51).

The main purpose of this approach is to equip learners with cognitive and metacognitive strategies that ‘... will improve their coping and problem-solving skills in academic, social, and vocational settings’ (Rieth & Polsgrove 1994:119). Metacognition makes children aware of their own thought processes and it is a way for teachers to determine how well children have understood the learning experience (McKay 1995:96; Viljoen 1993:115).

The strategy instruction model (SIM) and Zigmond’s model described below are two examples of learning strategy approach models

### 3.3.1.1 Strategy instruction model

A popular learning strategy is the strategy instruction model (Deshler 1998:31). The specific-strategy instruction approach involves the teaching of skills like paraphrasing and mnemonics: learners are taught a skill and content simultaneously (Mercer 1992:366). There are three distinct components of SIM: a core curriculum, an instructional component and an organisational component.

The main goal of this model is to provide students with a set of cognitive and metacognitive strategies that will improve their coping and problem-solving skills in academic, social and vocational settings (Rieth & Polsgrove 1994:119). Research shows that LD learners quickly and efficiently learn this powerful strategy (Deshler 1998:31).

The core curriculum includes the teaching of task-specific strategies related to content areas; executive strategies that focus on problem-solving; social skills strategies that facilitate communication; motivation strategies that helps learners to set goals and monitor their own progress; and transition strategies that prepare children to meet the challenges of the future, whether college or job related (Rieth & Polsgrove 1994:120).

The instructional component includes a set of procedures that clearly spell out how the strategies will be taught and consists of acquisition strategies, generalisation procedures, maintenance procedures, group instructional procedures, and material and instructional modification procedures (Rieth & Polsgrove 1994:120). The
instructional procedures for teaching learning strategies include self-questioning, error monitoring, verbal rehearsal, self-control training and organisation strategies (Lerner 1985:252-253).

The communication component consists of procedures that will ensure cooperative planning by the school staff like management procedures providing operational guidelines, evaluation procedures for providing implementation feedback to educators and teacher training and adoption procedures to facilitate uniformity in implementation (Rieth & Polsgrove 1994:120).

Furthermore Rieth and Polsgrove (1994:120) favour the following as appropriate practices in secondary schools: indirect instruction, attendance to macro-instructional factors like time management, careful lesson pacing, establishing high performance expectancies; the use of empirically validated teaching methods and the use self-regulatory strategies to enhance learner motivation (Rieth & Polsgrove 1994:120).

3.3.1.2 Zigmond’s model

The following information on Zigmond’s model is from Lerner (1993:282 – 283) and Rieth and Polsgrove (1994: 121).

Zigmond’s model contains some similarities to SIM and consists of four components that he feels are necessary for the success of any secondary school programme. The four components are intensive instruction in reading and mathematics, explicit instruction in survival skills, successful completion of grades required for secondary school and explicit planning for life after secondary school.

Intensive and efficient remediation instruction is provided in reading and mathematics as many LD learners fail English, social studies and science courses because of academic deficits in reading and mathematics.

Survival skills instruction include: teacher-pleasing behaviours, strategies how to stay out of trouble, study skills and test taking skills. Teacher pleasing behaviours include all behaviours that will make teachers see LD secondary learners in a positive light
like making eye contact, looking interested in the lesson, volunteering an answer and looking busy. The underlying premise is that LD adolescents need explicit instruction in how to be good learners. Learners are taught to use self-monitoring forms for this purpose. Alternative ways to respond to problematic situations at school are taught and the study skills section includes organising time and information, using a textbook, note taking skills, studying for and taking tests, and metacognitive skills like summarising content area and how to proofread a paper. Zigmond regards this component as vital because of well-documented proof of social skills deficits of LD learners: having social skills will lead to greater acceptance of the LD learner by their peers and teachers. Learners will be able to form social networks that will be important for them later in life as well.

To be successful in secondary school LD learners must take and pass courses that lead to the attainment of a secondary school certificate. Attention is given to all aspects of school and classroom life that will lead to successful completion of mainstream ninth grade courses like punctuality, active and efficient participation in the learning process, regular attendance of lessons, and completion of assignments.

LD learners receive vocational counselling and training as part of this component of Zigmond’s programme. Studies show that 12 to 30 percent of LD adolescents go to college so it is important to provide opportunities that prepare them for the transition to life after secondary school. Training is also provided to help learners plan for rewarding post-school occupations and employment.

### 3.3.2 Collaborative models

For the purposes of readability the term LDs teacher will be used; and refers to all teachers, like resource room teacher and special education teachers, who have skills to work with children in support classes or resource rooms.

‘Collaborative assistance is a systematic study of the student, the subject, and the materials that may need to be adjusted in order to promote learning’ (Levine 1997:112). In this model two teachers are working together to define problems, coordinate regular and special education services, and determine which interventions
will be used and by whom (Levine 1997:112). This collaborative approach involves two teachers teaching in the same classroom simultaneously (Boudah, Schumacher & Deshler 1997:297).

Two teachers hold joint responsibility for solving common problems and providing ways for learners to best learn the materials. The LDs teacher provides some direct service in the general education classroom by teaching strategies to children. The LDs teacher is trained in prescriptive teaching and in strategy development for learners and often assumes the role of learning mediator. Sometimes the LDs teacher, to facilitate the academic progress of LD learners in mainstream, provides consultative services to the regular classroom teacher. Subject area teachers play a major role working alongside the LDs teacher. The subject area teacher is good at presenting learning matter to a classroom of learners in interesting and motivating ways and thus assumes the presenter role in the secondary classroom (Boudah, Schumacher & Deshler 1997:297; Levine 1997: 110; Strasburger, Turner & Walls 1998:72).

Reasons for the use of the collaborative model are: learners who received adequate support with opportunities for independence at secondary school level seem to be more successful at college level, children learn how to learn more effectively and to become independent learners by mediating their own learning of subject-matter content using strategic skills, independent learners achieve greater success in school and get better grades and there are better learning and employment opportunities outside of school for independent learners (Boudah, Schumacher & Deshler 1998:298; Strasburger, Turner & Walls 1998:71).

Skills taught using the collaborative model include coping with larger amounts of course work, social skills, test taking procedures, and taking responsibility for one’s own learning (Strasburger, Turner & Walls 1998:71).

### 3.3.3 Classroom accommodations, modifications and compensatory teaching

Accommodation and compensatory teaching refers to a process whereby the learning environment of the learner, either some of the elements or the total learning environment, is modified to promote learning (Gearheart 1981:261; Lewis & Doorlag
Accommodations and compensatory teaching include: adapted teaching techniques, modified academic requirements, flexible administrative and classroom management practices, or a combination of these and other factors (Allen & Burns 1998:29; Gearheart 1981:261). This approach focuses on the environment and not the learner: the learning environment is changed in such a way that the older child can learn and achieve success despite his academic deficits or weaknesses (Kapp 1991:413).

The curriculum shifts from the acquisition of basic skills in primary schools to the use of basic skills as tools to gain information from increasingly more content bound subjects at secondary school level. However, a number of LD learners have not acquired the basic skills of reading, writing and mathematics. For these learners to benefit from classroom instruction, modifications should be made (Lewis & Doorlag 1995:288). Modifications include curricular adaptations, instructional adaptations, management adaptations and environmental adaptations. Classroom modifications include any changes in the educator's instructional strategies and methods that lead to improved learner performance (Lewis & Doorlag 1995:46).

Curricular adaptations include: changing the criteria of task performance like speed, accuracy and amount of work; altering the characteristics of the content area; administration of oral class tests; use of special texts; and, reduced workload. Educator instructional adaptations involve special advance preparation of the LD secondary learner by pre-learning a technical vocabulary, providing individual instruction relating to abstract concepts or tutoring in study skills (Ellis 1997:326-327; Gearheart 1981:268; Lewis & Doorlag 1995: 272; 288).

Management adaptations include course substitution or replacement, special planning to balance heavy subjects and, the replacement of written language requirements with oral language requirements. Environmental adaptation strategies include changing the seating arrangements of children so that certain learners are near to the blackboard or teacher and locating learning materials so that all learners have easy access to them (Gearheart 1981:268; Lewis & Doorlag 1995:46, 288).

Some of the reported social and academic benefits and improved learning outcomes for LD learners of this approach include: improved ability to handle the presentation
of content-area information which leads to mastery of content, better preparation for test taking situations, enhanced capacity to work independently, heightened awareness of expectations for classroom behaviour and increased ability to be more focused and self-directed (Burns & Allen 1998:29).

3.4 CRITIQUE OF TRADITIONAL ASSISTANCE MODELS

The next few pages will be devoted to a critique of the traditional assistance models previously described (see 3.2). Attention will be given to the strengths and shortcomings of the traditional assistance models, namely, the basic skills instruction model, the tutorial model, the functional skills model, and the work study model.

3.4.1 Strengths and shortcomings of the basic skills instruction model

Some research indicate that the strengths of this model include enhanced problem-solving skills for learners; children become independent learners when basic skills are acquired; learners acquire specific study skills like using textbooks effectively and studying for a test; and, children achieve a measure of success in content subjects (Clarizio, Craig & Mehrens 1987:116; Mercer 1992:365).

A large body of research evidence reveals some of the shortcomings of the basic skills models being practised in resource rooms as: it lacks elements of self-directed learning, self-evaluation and decision making skills; it uses primary school level remedial techniques and procedures with secondary learners; progress in gaining these basic skills is so slow that the secondary learner loses motivation; it holds a passive view of the learner; and, instructional efforts are diverted away from content (Ariel 1992:150-151; Hresko & Reid 1988:213; Kapp 1991:412; Mercer 1992:365).

Other shortcomings are: LD secondary learners become bored with this model because of the overemphasis on basic skills and the lack of complex cognitive activities; and, LDs do not disappear when children learn basic skills in reading, mathematics, spelling, and writing: in fact these learners will continue to have problems with memory, language and organisation of materials (Gersten 1998:163). Rieth and Polsgrove (1994:118-119) maintain that traditional models are not
successful as LD secondary learners show a lack of progress during secondary school, bunk classes and display tardiness, consistently fail subjects and grades, are less likely to graduate than non-LD learners and, they often quit school with serious consequences for society. LD secondary learners are often unable to cope with the demands of secondary school after receiving assistance through traditional models.

3.4.2 Strengths and shortcomings of the tutorial instruction model

Some strengths of this model include: learners are able to remain in mainstream settings; learners are assisted to obtain mastery in content area subjects; learners pass exams in this model; and, alternative methods of instruction reduce the demands of secondary school for the LD learner.

Some shortcomings of the tutorial model include the following: learners do not acquire the background knowledge necessary for mainstream curriculum success; it is only a short term solution for learners; LD secondary learners will always be dependent on others for academic assistance as they have not acquired any skills or strategies to work independently; and, the instructional methods do not bring about permanent and lasting changes in work habits (Mercer 1992:366; Siedenberg 1988:59). According to Monda-Amaya, Dieker and Reed (1998:172) research shows that pull-out programmes have mainly been unsuccessful.

3.4.3 Strengths and shortcomings of the functional skills instruction model

Some strengths of this model include: LD adolescents are taught skills to cope with the demanding life of work after school and adolescents acquire basic life skills like reading so that they can function fairly independently in society (Lerner 1985:249; Lerner 1993: 284-285).

Some shortcomings of this model are that the learners are not part of the mainstream and they follow a novel and separate curriculum (Ariel 1992:151-152; Kapp 1991:412; Strasburger, Turner & Walls 1998:63,71). Learners might be stigmatised and limited in their career options.
3.4.4 Strengths and shortcomings of the work study model

Some strengths of the work study model include: learners acquire work related knowledge and skills; at the end of the course they will possess actual work site experience; transition from school to world of work will be easier as a larger portion of the school day was spent on work shadowing or work site placement; learners might find success in certain levels of employment; and, learners remain in school and are taught by educators who are comfortable with creative and innovative teaching strategies (Gearheart 1981:267; Lewis & Doorlag 1995:93). Although alternative school placement is never the first option for LD secondary learners, it might be a viable placement option for LD learners who at risk, are experiencing behavioural difficulties and are in danger of dropping out of school. Learners are motivated by the non-traditional curriculum at the school and the comfort level of educators teaching LD secondary learners in non-prescriptive ways (Gearheart 1981: 266-268).

Some shortcomings of the work study model are: learners are not mainstreamed; education takes place in a special class or school; and, learners follow a separate curriculum (Gearheart 1981:267-268). Work options might be limited and adolescents might be stigmatised for having attended a special class or school.

3.5 CRITIQUE OF CONTEMPORARY APPROACHES AND MODELS

A discussion on the strengths and shortcomings of the contemporary models (see 3.3) namely, the learning strategies approach and models, collaborative models and classroom accommodations, modifications and compensatory teaching now follows.

3.5.1 Strengths and shortcomings of the learning strategies approach and models

Learning strategy approaches provide inefficient learners like LD students a systematic way of learning, remembering, or directing their learning and to generalise these strategies to all areas of the curriculum (Lerner 1993:121). Other strengths of the learning strategies approach are: LD adolescents learn effective alternative ways
to approach their studies and, LD learners are able to generalise strategies across tasks and settings when they are proficient in a strategy (Deshler 1998:31-33).

Strengths of cognitive strategies include: it is effective for a wide variety of ages, developmental levels, and types of academic and behavioural difficulties; cognitive strategies are adaptable to one-on-one situations as well as to groups of children as most educators don’t have unlimited time to spend just with one child; self-management skills can be transferred to other areas of the LD secondary learners' lives and will last for a lifetime; no expensive kits or educational equipment are required as the basic principles of cognitive strategies can be adapted for various needs; the strategies can be used for all children including non-LD children as research is starting to reveal that efficient learners can become even more efficient when they are taught cognitive strategy techniques (Orlando & Bartel 1989:339-340).

Two shortcomings of this approach are: educators would require training to implement the teaching of learning strategies and, teachers have to play a major role over an extended period of time which could cut into time for content area subjects (Deshler 1998:31-32).

3.5.1.1 Strengths and shortcomings of the strategy instruction model (SIM)

Strengths and shortcomings of this model would be similar to those of the learning strategies approach as outlined above. Some added strengths of this model are: content specific cognitive skills such as defining, comparing, reasoning, and summarising can be taught in the content-classroom (Levine 1997:115). Furthermore, teaching LD and non-LD learners cognitive strategies does not appear to be that difficult (Wong 1994:118), the gains of an acquired strategy is long lasting (Lamb, Bibby, Wood & Leydon 1998:493-494) and studies show that cognitive strategies help LD learners to concentrate and therefore reading and attention improved (Feldman 1990:17). Lastly, the improvement in metacognitive skills leads to an improvement in academic performance (Viljoen 1993:115).
3.5.1.2 Strengths and shortcomings of Zigmond's model

Zigmond's model (see 3.3.1.2.) incorporates aspects from the basic skills instruction model, the functional skills instruction model, the work study model and the learning strategies approach. The strengths and shortcomings of this model will thus echo the strengths and shortcomings of the models already given. Further positive elements of Zigmond's model are that LD adolescents stand a greater chance of success in mainstream classes as learners are exposed to a variety of teaching and learning techniques and strategies; and, educators might become increasingly more positive towards learners and feel more motivated to make curriculum changes, adapt assessment criteria and make classroom accommodations. Also, learners might stay at school longer and not swell the growing number of delinquents and school dropouts. Classroom discipline might improve and learners might remain on task for longer periods.

3.5.2 Strengths and shortcomings of Collaborative Models

Teachers working together collaboratively and delivering direct and effective teaching can be regarded as the main strength of the collaborative model (see 3.3.2). Collaborative teaching leads to successful mainstreaming of LD secondary learners and, independence is fostered by inclusion in regular classes. There needs to be effective cooperative planning between the regular classroom teacher and the resource room teacher (Boudah, Schumacher & Deshler 1997:297; Levine 1997:112).

One shortcoming could be that the LDs educator and the subject area educator need to understand what their roles are with regard to providing the integrated instruction; the two educators involved need to have a good working relationship. They need to know how they are to interact and relate to each other and how they are to interact with learners during class. Educators fear failure. It makes them reluctant to tackle collaborative approaches to teaching (Boudah, Schumacher & Deshler 1997:297; Harris, Bennet & Preedy 1998:51).
3.5.3 Strengths and shortcomings of classroom accommodations, modifications and compensatory teaching

Compensatory teaching strategies can be used with older LD learners to: bypass the learner's basic academic skills deficiencies in order to teach content area subjects; to compensate for the reading and writing problems of secondary learners; and, to enhance the LD secondary learners chances of success in the mainstream classroom (Lewis & Doorlag 1995:272; 288). Classroom accommodations that reduce content but create thoughtful classrooms can: facilitate the achievement of learning and development of deep knowledge structures, enhance the teaching of big ideas, promote elaboration of concepts, strengthen the links between classroom learning and real-world contexts, lead to the integration of thinking skills and strategies into the curriculum and lead to watering up of the curriculum and not watering down of the curriculum as is commonly feared by teachers (Ellis 1997:326). However, accommodations, modifications and compensatory teaching require cumbersome changes and the support of administrative and instructional staff (Seidenberg 1988:59).

The definitions of the various models and approaches, the educators responsible for implementation of these models or teaching approaches, and the places where traditional and contemporary intervention occurs, have been explored in this section of chapter 3. The details of each model or approach have been briefly touched on and the strengths and shortcomings of these models have been discussed. Contemporary models discussed mainly focussed on strategies or techniques that ordinary classroom teachers could use in mainstream classes without much training or expensive educational equipment, whilst traditional models focussed more on pull-out models where learners receive instruction in the resource room by a specially trained educator like the LDs teacher.

The focus will now shift to the role of the educator as this has implications for any assistance programme.
3.6 THE ROLE OF THE EDUCATOR

As most secondary LD learners are mainstreamed in regular classrooms the learning environment provided by educators is critical to their academic achievement. Regular classroom educators should be prepared to recognise and address the needs of these learners (see section 3.5.3). Some researchers feel that whole school policies for special needs may have very little impact in the mainstream classroom as too much depends on the attitude of the individual teacher and the role that the teacher is prepared to play (Bouwer & van Niekerk 1991:41; Consultative Paper on Special Education Needs 1999:20, 52; Hernandez 1989:114; Lewis & Doorlag 1995:86; NCSNET 1997:63; Riddick 1996:204). This underlines the importance of all teachers having training in this area and not just those who are interested. Mercer (1992:188) succinctly says the following in this regard: 'It is clear that major changes are needed in the delivery of services to problem learners, and that these services need to be the responsibility of regular as well as special educators. It is also clear that teachers are the central players in bringing about change in practice' (bold mine).

Educator beliefs and attitudes will determine what role they play with regards to the mainstreamed LD secondary learner.

3.6.1 Educator beliefs and attitudes

LD adolescents are unable to learn effectively in a hostile and unsupportive environment. What educators believe about LDs influences what they do about LDs. Negative and discriminatory attitudes towards differences also contribute to learning barriers. Educators need to adjust their thinking about the purpose of teaching and education, LD adolescents, and how to teach them. Research reveals that subject area teachers are having difficulty accepting LD learners and other at-risk adolescents in their regular mainstream classes. Also, many regular classroom teachers who have little or no training in dealing with LDs generally do not believe that LD learners can succeed in mainstream classrooms. Although there has been a gradual change in the learner population very little change has taken place in educators (Burden 2000:36; Kavale & Reese 1991:141; Levine 1997:107-109).
Research indicates that educators are less positive about increased responsibilities toward LD learners. Educators also feel that they lack the time, training or support to successfully implement inclusive education. Research also indicates that educators have made few changes in their classrooms to address the needs of the LD learner over the years. Although regular secondary school educators believe that learners should display appropriate, self-directed behaviour in their classrooms, many educators are unwilling to teach these skills or to employ accommodations in their classrooms for LD learners. Regular secondary educators can play an important role in the prevention and treatment of school learning problems; with appropriate instruction, learners with LDs can achieve success in the mainstream classroom (Jenkinson 1997:171; Lewis & Doorlag 1995:86; Scruggs, Mastropieri & Boon 1998:34; Snyder & Bambara 1997:534).

If we believe that the purpose of teaching is to increase capacity to learn then real teaching can be regarded as teaching children how to learn. The most important outcome of all education and instruction should be the learners’ increased ability to learn more easily and effectively: the acquisition of knowledge and skills should lead to mastery of the learning processes (Joyce & Weil 1996:1-3; Lemmer 1999:42-43).

The attitude of the educator influences the educator-learner relationship. Learners pick up behavioural cues from their teachers. Educators could display a lack of empathy or support, show impatience, adopt a critical attitude, maintain harsh discipline, and show a lack of understanding towards a LD learner. Sometimes educators withdraw from personal involvement with learners. Educators need to show a willingness to accept LD learners and should try to assist them by making time to collect the required information about learners. Educators need to plan for the LD learner and work together with others (parents, other educators, and so on) in a professional and tactful manner. Lastly educators should critically evaluate their own conduct (Bouwer & van Niekerk 1991:41; Jenkinson 1997:173; Kapp 1991:77).

When LD school dropouts were asked what would have helped them to remain at school for a longer period of time, their primary response was that educators needed to change their attitude and treatment of LD learners (Kortering & Braziel 1999:81).
To summarise the above discussion, one could then say that LD secondary learners need educators to:

- Recognise the special needs of the LD secondary learner.
- Accept that they have a central role to play in assisting the LD secondary learner.
- Teach learners the self-directed behaviour they expect.
- Teach LD learners how to use learning strategies to become powerful learners.
- Show unconditional acceptance of the LD secondary learner.
- Make teaching accommodations for the LD secondary learner.
- Facilitate learning in an enjoyable way.
- Critically evaluate their conduct in regard to the LD secondary learner.

In the next section we will look at the role of the educator and then discuss some specifics about how the educator can create an effective learning environment for the LD secondary school learner.

3.6.2 The role of the educator

Educators are in a prime position and have a responsibility to assist learners in realising their potential, as teachers often spend more time with learners than their parents. In accordance with the principles of inclusive education the learner is now kept in the regular class for as long as possible. The role of the educator with regard to the LD adolescent is a dual one: identification of problems, and rendering of assistance (Dreyer 1994:71; Kapp 1991:755, 404).

Five key roles that educators now have to assume will be described. These key roles are: creating a supportive learning environment, practising sound classroom management, ensuring positive classroom interactions, making appropriate curricular adaptations and using a variety of teaching strategies.
3.6.2.1 The creation of a supportive learning environment

Supportive teaching can be described as the provision of special education in the regular classroom setting by the regular educator. Supportive teaching is concerned with making the curriculum accessible to all learners. The same educator, who in the past had usually been encouraged to refer learners experiencing difficulties to someone else for intervention, is now expected to provide this type of assistance (Jenkinson 1997:173; Kapp 1991: 75-76; White Paper No 6 2001:15).

Educators can create a supportive learning environment by providing low intensity support for the LD learner in the classroom. This involves the preparation of multi-level lessons, that is, educators can prepare main lessons with adaptations that cater for the needs of individual learners. It implies that educators should have knowledge of the learning needs of all learners, have knowledge of all the possible needs within any learning context, understand barriers to learning and LDs, and have knowledge of possible curricular adaptations (Engelbrecht, Kriegler & Booysen 1996:83; Jenkinson 1997:116; Kapp 1991:75-76; NCSNET 1997:59; White Paper No 6 2001:19).

Creating an orderly atmosphere and attractive working environment is part of creating a supportive learning environment in the classroom. To summarise this section one can say that the educator now has to be able to do the following:

- Identify children with learning problems, which presupposes that educators all possess knowledge of the basic principles and possible forms of assistance.
- Set learning objectives and adjust the content and rate of expected progress accordingly, which assumes that all educators have received adequate training in OBE.
- Formulate the objectives of the classroom support, based on the observations of the learner' behaviour and evidence of academic work as obtained from portfolios (Burden 2000:28).
- Offer remedial help to LD learners within the class context.
- Apply basic assistance techniques and evaluate the progress thereof.
3.6.2.2 *Sound classroom management*

Sound classroom management involves management of the learner, the teaching environment and the curriculum. Educators should focus on the development of good teaching strategies to acquire a generic competency to deal with diversity and barriers to learning. Educators should concentrate on facilitating integration and respect for diversity. Teaching approaches should be flexible and teaching and learning materials should accommodate all learners. Part of classroom management entails continuous assessment of learner progress and needs, and the effectiveness of teaching strategies. One should also evaluate the capacity of the school system to support the teaching and learning process (White Paper No 6 2001:19-20; NCSNET 1997:59-61).

Means, Chelener and Knapp (1991: 263) advocate a new role for teachers that require both a letting go of the dispensing knowledge role and an assumption of power on the educator’s part. The educator needs to become a coach rather than a dispenser of knowledge. Educators should give learners more decision-making powers in selecting work. Educators should play an active role in monitoring the product of learner activity, as well as monitoring the process whereby the learner achieves that product. They should engage in intellectual on-the-spot coaching and feedback based on what the learner has done.

3.6.2.3 *Positive classroom interactions*

Positive classroom interactions are enhanced when the educator abandons the obvious leadership role as the director who dispenses knowledge in front of a class of docile students and assumes the role of the person who selects and develops meaningful learning activities and guides learners (Means, Chelener & Knapp 1991:264-265). Positive classroom interactions come about when educators help learners develop their skills and assist adolescents in learning about themselves instead of just transmitting knowledge.

When teachers act as mentors they inspire and motivate learners because all children, whether highly gifted or disadvantaged seem to benefit from mentoring. Some researchers maintain that the best teacher-learner relationship is the mentor-protégé
relationship and is fundamental to improving services for learners with educational difficulties in the regular classroom. Teachers have to develop a radical new vision of the teaching process.

When the classroom teacher holds the central role of both planner and mediator of learning, the educator teaches not only the content but also the strategies needed to make the learning content meaningful. The regular mainstream educator changes from being a content teacher to a content-strategic teacher by presenting learning strategies in a sustained fashion in conjunction with subject content. In this way the metacognitive skills of all learners developed (Deshler & Bulgren 1997: 122; Dreyer 1994: 71-72).

3.6.2.4 Appropriate curricular adaptations

New policies see educators playing a pivotal role in curriculum development that is centred on the needs of the learners. Educators should begin to be aware of their skills in curriculum development and not overemphasis learner progress or lack thereof. Educators are called upon to provide a flexible curriculum that responds to the differences among children. Teachers can respond by using flexible teaching approaches, appropriate technology and any assistive device or mechanism that will allow learners to actively and effectively engage with the curriculum (NCSNET 1997: 59-60).

Educators will have to adjust their teaching styles to make the present curriculum accessible to all learners. Educators are thus encouraged to choose from a variety of possible lesson formats when planning a learning activity. Regular educators are going to have to teach learners to read and study with greater comprehension. Teachers need to rethink their fondness for lecturing to passive learners and their comfort with learners predominantly doing seatwork while the teacher monitors. Educators should be exposed to new and novel ways of learning and accessing knowledge so that learners can effectively develop new perspectives from learning area content. Learners should be encouraged to play an active role in accessing the curriculum. This implies that the curriculum should be flexible. In a nutshell: educators need to examine the curriculum and identify all possible difficulties and,

3.6.2.5  The use of a variety of teaching strategies

This concept of using a variety of teaching strategies is closely coupled to the preceding concept. Putnam (1998:10) urges teachers to break out of their current mould of teaching LD learners:

Many teachers believe that they have insufficient training in methods of adapting instruction to such students. They find it difficult to imagine breaking out of the mould of traditional teaching approaches. To some instructors, whole- class lecture and discussion, including the teachers role as the "sage on the stage" is a good model simply because it has such a long history and has worked for them in the past.

Educators need to reflect on the reasons for the non-evolvement of teaching practices. The world is changing at a rapid pace; learners need new skills to cope with this new world. It stands to reason that teaching methods and skills have to evolve as well.

In providing assistance to the LD secondary learner there are various roles that educators could embrace: they could become coaches and provide on-the-spot intellectual coaching and feedback, they could become facilitators by planning and mediating learning, they could monitor the progress of learners (process and product), they could become nurturing mentor-teachers and embrace the mentor-protégé relationship, or they could become content-strategic teachers and develop the metacognitive skills of learners. They could collaborate with colleagues to provide support for the LD child. However, educators need a tremendous amount of support if they are to assume any of these new roles.

Now that the role of the educator has been examined the focus will shift to the value that traditional assistance models and contemporary models and approaches hold for the development of a RSA (own) programme.
3.7 THE VALUE OF TRADITIONAL ASSISTANCE MODELS AND CONTEMPORARY MODELS AND APPROACHES FOR A RSA (OWN) PROGRAMME

In the absence of adequate South African literature sources, and being mindful of the direction in which South African education is heading, the information from American sources and about American secondary school approaches and models have provided valuable frameworks and points of departure for a South African programme. Many of the current educational policy changes are modelled on what is judged to be the best of international educational practices. It is important for learning disabilities in South Africa to be connected to the mainstream academic thinking and research internationally. Many researchers elsewhere and in RSA regard America as the major trendsetter of western educational reform (Engelbrecht, Kriegler & Booysen 1997:ix: Vakalisa 2000:13-27).

The assistance programme developed for this study includes elements from all models or approaches previously discussed except functional skills instruction and work study models. During the literature study, the general ideas, salient features and underlying principles of the models and approaches were captured and reported (see 3.2 – 3.3.3), while the specific strategies and ideas were carefully chosen, collected and gradually compiled into the assistance programme (see appendixes 2 & 7).

Basic skills instruction techniques have been included in the assistance programme. Vocabulary, spelling and reading strategies have been included for mainstream educators to use. The value of basic skills instruction techniques resides in the fact that:

- Educators are provided with remedial procedures to improve the spelling, vocabulary and reading skills of learners.
- Educators are given tools to assist learners to master the basic skills.
- Educators are equipped with skills to help learners achieve success in content areas.
- Educators are enriched with knowledge about how to assist adolescents to become independent learners.
• Educators are supplied with knowledge about how to break skills down into simpler units so that it can be explicitly taught.

A learning strategies approach focuses on equipping learners with cognitive and metacognitive strategies that will improve the learners’ coping and problem-solving skills in academic settings. Learning strategies facilitate memorisation and the assimilation of knowledge. A large number of learning strategies have been included in the assistance programme developed for this study so that:

• Educators have knowledge about assistance techniques and strategies.
• Educators have access to a range of learning strategies that they can use to teach LD learners to become powerful learners.
• Educators are equipped to provide remedial assistance in the classroom.
• Educators can apply basic assistance strategies on their own.
• The range of strategies and ideas may intellectually stimulate educators.
• Educators may develop a wider repertoire of approaches to LD learners.
• Educators can compile a programme that suits the diverse learner needs in their classrooms.

Research indicates that learning strategies are valuable tools for educators to use (see 3.5.1), however not all educators are comfortable teaching learning strategies. A large number of compensatory teaching strategies have thus been included in the writers assistance programme to encourage educators to make accommodations for the LD secondary learner in the mainstream class. The value of compensatory teaching strategies and modification ideas lies in the fact that it provides educators with a wide range of compensatory teaching strategies if they choose not to teach the learning strategies. Compensatory teaching strategies can be used in conjunction with the learning strategies.

The focus now shifts to the description of the assistance programme developed for this study. See Table 4 for a summary of the assistance programme.
<table>
<thead>
<tr>
<th>Strategies to improve vocabulary</th>
<th>Strategies to improve spelling</th>
<th>Strategies to develop reading proficiency</th>
<th>Strategies to help learners remain on-task</th>
<th>Strategies to improve memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some facts about vocabulary (and reading)</td>
<td>Some facts about spelling</td>
<td>Some facts about reading</td>
<td>Some facts about on-task behaviour</td>
<td>Some facts about memory</td>
</tr>
<tr>
<td>Learning strategies to improve vocabulary</td>
<td>Learning strategies to improve spelling</td>
<td>Learning strategies to develop reading proficiency</td>
<td>Learning strategies to help learners remain on-task</td>
<td>Learning strategies to improve memory</td>
</tr>
<tr>
<td>- Pre-reading strategies</td>
<td>- Self correction strategies, e.g. word bank</td>
<td>- Strategies to develop reading fluency</td>
<td>- Strategies to increase on-task behaviour in the classroom</td>
<td>- Specific memory aids (mnemonics)</td>
</tr>
<tr>
<td>- During reading strategies</td>
<td>- Other strategies, e.g. 4-step-look-cover-write-check-approach</td>
<td>- Strategies to develop reading comprehension</td>
<td>- Strategies to improve note taking</td>
<td>- Increasing wait time</td>
</tr>
<tr>
<td>- Other strategies, e.g. keyword method</td>
<td></td>
<td>- Other strategies</td>
<td></td>
<td>- Rehearsal techniques</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>- Test taking tips for learners</td>
</tr>
<tr>
<td>Compensatory teaching strategies and modification ideas to improve vocabulary</td>
<td>Compensatory teaching strategies and modification ideas to improve spelling</td>
<td>Compensatory teaching strategies and modification ideas to develop reading proficiency</td>
<td>Compensatory teaching strategies and modification ideas to help learners remain on-task</td>
<td>Compensatory teaching strategies and modification ideas to improve memory</td>
</tr>
<tr>
<td>- General strategies, e.g. core list of vocabulary words</td>
<td>- Word games and puzzles</td>
<td>- Reading guide</td>
<td>- Strategies to improve note taking</td>
<td>- Attention getting cues</td>
</tr>
<tr>
<td>- Content enhancement strategies, e.g. provide graphics and reduce the amount and complexity of the text content</td>
<td>- Weekly revision</td>
<td>- Advance organiser</td>
<td>- Strategies to improve lectures</td>
<td>- Visual imagery</td>
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<tr>
<td></td>
<td>- Computers</td>
<td>- Index cards</td>
<td>- Strategies to improve lectures</td>
<td>- Visual illustration of mathematical facts</td>
</tr>
<tr>
<td></td>
<td>- Visual record of improvement</td>
<td>- Cues to help learners decode information</td>
<td>- Strategies to improve directions and instructions</td>
<td>- Multi-sensory approaches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognition of key words</td>
<td>- Accommodations to improve quality of projects</td>
<td>- Doodling as an aid to concentration</td>
</tr>
<tr>
<td>Compensatory teaching strategies and modification ideas to improve vocabulary</td>
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<td>- Accommodations to improve quality of projects</td>
<td>- Doodling as an aid to concentration</td>
</tr>
</tbody>
</table>

Source: compiled using information in the assistance programme (see appendix 7).
3.8 DESCRIPTION OF THE ASSISTANCE PROGRAMME FOR THE LD SECONDARY SCHOOL CHILD

A brief explanation of the organisation and layout of the information in the assistance programme precedes a description of the assistance programme. The five fields of the assistance programme will be listed and discussed (see Table 4).

3.8.1 Organisation and layout of the information in the assistance programme

The information in each field is grouped under three main headings, namely, some facts about the specific field, learning strategies, and compensatory teaching strategies and modification ideas.

3.8.1.1 Some facts about each specific field

Some facts about each specific field (vocabulary, spelling, reading, on-task behaviour, and memory and test taking skills) have been included so that:

- Educators are provided with some information about that skill.
- Educators are provided with a different perspective about that skill which might encourage them to adjust their thinking about that skill.
- Educators are assisted in understanding the special needs of the LD secondary learner as far as a particular skill is concerned.
- Educators are encouraged to critically evaluate their conduct with regard to the LD secondary learner.
- Educators are assisted in developing a wider understanding of the difficulties LD learners face.

Educators might find the information useful and it might motivate them to attempt some of the strategies given. It is hoped that some of the information will make educators think about the learning process and what it is they expect from learners. Many learning strategies are supplied for the same reasons, but also with the hope that
LD learners will be assisted to acquire the skills necessary to cope with the rigorous demands of school.

3.8.1.2 Learning strategies

Learning strategies are techniques, rules or principles that facilitate the learner’s ability to learn, solve problems, remain on-task and complete assignments independently. The educator’s role is to provide instruction on how to use the strategy and perform tasks that will promote successful work completion in the classroom (Mcfarland 1998:151). Initially educators play a major role in providing instruction in learning strategies; later the learners play the major role in using the learning strategies to master subject content, as they become independent learners.

3.8.1.3 Compensatory teaching strategies and modification ideas

The term, compensatory teaching strategies, has been coined for the purposes of this research and includes accommodation strategies as well. Accommodation and compensatory teaching refers to a process whereby the learning environment of the learner is modified to facilitate learning and include: adapted teaching techniques, modified academic requirements, flexible administrative and classroom management practices, or a combination of these (Allen & Burns 1998:29; Gearheart 1981:261). The learning environment is changed in such a way that the older learner can learn and achieve success despite LDs (Kapp 1991:413).

The term modification ideas include modification practices. Classroom modifications include any changes in the educator’s instructional strategies and methods that lead to enhanced learner performance and include curricular adaptations, instructional adaptations, management adaptations and environmental adaptations (Lewis & Doorlag 1995:46). Educators play a major role in changing their teaching strategies to accommodate LD learners; learners will be better able to master content despite not actually employing learning strategies.
3.8.2 Five fields of the assistance programme

The assistance programme contains five fields (see Table 4). Although the fields should be integrated it is described separately solely for the purposes of clarification. The first field is about strategies to improve vocabulary, the second field deals with strategies to improve spelling and the third field has to do with strategies to improve reading. The fourth field contains strategies to remain on-task and the fifth field focuses on strategies to improve memory.

A collection of strategies to improve vocabulary consists of pre-reading activities, strategies during reading and general learning strategies. Spelling strategies consist of self-correction strategies for learners, word clusters, flashcards, and other learning strategies. The section, strategies to develop reading proficiency, contains strategies to develop reading fluency and comprehension as well as general learning strategies. Each section ends off compensatory teaching strategies and modification ideas. The first three fields of the assistance programme have strong basic skills instruction overtones. The field helping learners to remain on-task contains information for educators about giving directions as well as a section on directions for educators to teach to learners, strategies to improve note taking, how to follow lecturer cues and how to take notes from the chalkboard or lectures. Educators have expressed the view that learners struggle to remain on-task inside and outside the classroom with the result that notebooks are often incomplete and tasks seldom completed and handed in (see 5.3.5). Strategies to improve memory include information on memory aids like mnemonics, visual imagery and test taking tips for learners. Educators have indicated that this is an area of concern as most LD learners show poor academic results and often fail courses and grades.

3.9 HOW THE PROGRAMME IS SIMILAR TO AND DIFFERS FROM OTHER APPROACHES AND MODELS

The main similarity to other models or approaches is that the assistance programme contains elements from most of the models and approaches discussed, especially learning strategies and compensatory teaching practices. Another similarity is that like most instructional approaches for LD learners it places the primary focus on an
external agent, the educator in this instance (Cavalier, Ferretti & Hodges 1997:167-168). Like most other programmes it depends on learners acquiring skills to help them cope with the secondary curriculum. Like other models it assumes that once learners have acquired specific skills they will become independent learners and the skills will be retained for a long time. Educators will probably link many ideas and strategies in the assistance programme to those suggested in the new educational policies of OBE and inclusive education.

The following are some of the main differences of the assistance programme to other models or approaches:

- The assistance model is eclectic and contains elements from all the models discussed except the functional skills instruction and work study models.
- It is different in that it does not have one theoretical base but borrows from several.
- The programme can be carried out in the least restrictive environment, that is, the regular classroom (Cavalier, Ferretti & Hodges 1997:167-168).
- The programme is focused on regular secondary content educators in mainstream education.
- The programme is for use in the classroom with the whole class; all the learners and not just the LD learners will benefit from the learning strategies and compensatory teaching practices.
- The programme is not aimed at a small pullout group in a resource room; it is aimed at whole class or multi-level teaching.
- Educators can implement these strategies without training, or fancy expensive equipment.
- Educators have the freedom to choose the strategies they think will work and design their own programme using any number of strategies they deem fit.
- Educators could opt for teaching accommodations if they feel the learning strategies take to much time and energy, or if they feel they lack confidence in their skills to teach learning strategies.
- The programme is fluid and contains a wide range of strategies and modification ideas in an attempt to cater for the diverse learner needs and teaching styles of educators.
- Educators have the freedom to choose the strategies or accommodations they like and find palatable into a unique programme for their needs and that of the learners.
- The programme can be changed from time to time as the learning needs of the learners change.
- The programme is focussed on the mastery of content in a regular mainstream class, and not focused on basic skills instruction only.
- The assistance programme contains some facts for educators which might stimulate educators into new ways of looking at their given situations and what they are trying to achieve with learning disabled learners.

3.10 CONCLUSION

Education of learning disabled learners in mainstream classes is desirable and practical. It is not cost efficient to have a dual system of regular and special education. All LD learners are not served within the special school system. Research favours the viewpoint that adolescents with LDs can be served more effectively within a regular classroom setting. Our greatest challenge thus is to improve the quality of instruction at classroom level and to provide adequate educational programmes for the LD secondary learner.

The policy of inclusion has been accepted as a South African reality. The policy of inclusion makes high demands on the mainstream educational system, especially regular classroom educators. It is very important for all regular educators to accept their new role as facilitators of learning and their accompanying responsibility regarding the identification of and assistance to learners experiencing learning difficulties. Schools will have to broaden their perspective to include programme components that respond to the immediate needs of LD secondary learners.
CHAPTER 4

RESEARCH DESIGN

4.1 INTRODUCTION

Chapter one set the context of the study by outlining the aims of the study. In chapter two the nature of learning disabilities and characteristics of learning disabled secondary learners were explored. We discussed various intervention models in use for learning disabled secondary learners in the previous chapter. The research was undertaken with a view to developing an assistance programme for use in mainstream South African secondary schools. Chapter four provides a description of the research design and methods used in this study.

4.2 RESEARCH PROBLEM, AIMS AND RATIONALE OF THE EMPIRICAL RESEARCH

The research problem concerns the development of an assistance programme. LD learners in the secondary school need assistance at classroom level. Educators do not have the know-how to assist these learners. There is thus a need for a programme containing guidelines to assist regular educators to improve the academic tasks of LD children in mainstream secondary schools. The research challenge is to uncover strategies that educators can use with the whole class and not just the LD learners. The research aims and rationale of the research study will now be given.

The general aim of the study is thus to research and design a comprehensive assistance programme for mainstream secondary educators. The specific aim is to develop an assistance programme containing guidelines, tips, as well as teaching and learning strategies. Secondary educators and colleagues at education support centre level will evaluate the assistance programme. These recommendations from regular secondary teachers and education support centre personnel will be used to develop and improve the assistance programme. The rationale of the research study will now be explained.
From research findings presented thus far, it is evident that most educators are hesitant and fearful about teaching learners with learning disabilities. The researcher accepts that most educators do want to assist learners and thus feels that compiling a particular intervention package is a worthwhile undertaking. The assistance programme is eclectic and contains numerous in-class support teaching and learning strategies. Numerous cost-effective strategies are included so that educators can select the strategies that they find most palatable. A number of assumptions underpin this research rationale and will now be listed.

This study assumes that most educators want to help learners who experience difficulties even though they have never received training in special strategies and do not possess the skills needed to deal with these learners. This study also assumes that mainstream secondary educators are willing to acquire and use intervention skills needed to cope with the diverse learner needs in the classroom. It is felt that if educators were provided with teaching strategies they would be able to cope with the diverse range of learning needs in the classroom, hence their feelings of helplessness and inadequacy would be alleviated.

4.3 RESEARCH SETTING, OUTLINE OF THE RESEARCH DESIGN AND THE RESEARCH METHOD (QUALITATIVE RESEARCH)

4.3.1 Research setting

The study has been restricted to the Mitchells Plain area in the Western Cape for practical reasons only. There are fifteen secondary schools in the area and these schools are representative of a wide spectrum of learner needs and socio-economic conditions (Gasant 1994: 1-3). Learners attend state or state subsidised schools where the learner-educator ratio is high and the possibilities for providing individual assistance is almost non-existent.

The researcher has built up personal contacts in the area and this will facilitate communication, gaining entry to the schools as research sites and the execution of the empirical study. The close proximity of schools provides for easy access and contributes to low evaluation costs (Jansen 1999:204). The fact that the researcher
already knows participants at schools, is aware of most of the ethical issues that might arise, has an idea of how disruptive the research might be and has an understanding of the theoretical context of the target group, were all issues considered by the researcher (De Vos 2001:47). Details of the research to be undertaken follow.

4.3.2 The research design

Various qualitative data collecting processes and techniques as outlined in the research design plan below in Table 5, will be used in this study.

<table>
<thead>
<tr>
<th>Table 5: Research design plan</th>
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</thead>
<tbody>
<tr>
<td>Research process</td>
</tr>
<tr>
<td><strong>Phase one: Exploratory and observational research</strong></td>
</tr>
<tr>
<td>Begin the collaborative process with Educator G</td>
</tr>
<tr>
<td>Uncover theoretical evidence to support what Educator G is doing</td>
</tr>
<tr>
<td>Draw up an initial assistance programme containing hints and tips (see Appendix 2)</td>
</tr>
<tr>
<td>Verify usefulness and relevance of items included in initial assistance programme</td>
</tr>
<tr>
<td><strong>Phase two: Compilation of the successive assistance programme</strong></td>
</tr>
<tr>
<td>Collect and verify additional data</td>
</tr>
<tr>
<td>Prioritise and limit items to be included in the successive assistance programme design</td>
</tr>
</tbody>
</table>
Develop first draft of the successive assistance programme for evaluation by experts | Use all data from phase one and two to compile the successive programme; it is important for researchers to have their ideas in place before consulting experts (Strydom 2001b:180)

**Phase three: Evaluation of the successive assistance programme (now just called assistance programme)**

Select experts to evaluate first draft of the assistance programme | Use Delphi technique; ask three educators at schools where focus group discussions were held and three colleagues at education support centre to evaluate assistance programme (non-random sampling).

Evaluation of second draft of the assistance programme | Continue with Delphi technique and get experts to give final comments; finalise assistance programme.

Prepare final draft of the assistance programme

The research design is described in phases for no other reason than to aid the explanation thereof. A few brief comments on qualitative research as it applies to this research, are supplied in the next few paragraphs.

4.3.3 **The research method (qualitative research)**

The research undertaken will be qualitative. Qualitative research can best be described as being exploratory, descriptive and interpretative research. In qualitative research procedures are not strictly formalised, there is less scientific control, and a more philosophical method of operation is used. Qualitative research does not provide the researcher with a step-by-step plan or a fixed recipe to follow.
Qualitative researchers interact with those they study in various ways and admit the *value-laden* nature of the research by reporting their values and biases. They use inductive logic and accept that individuals involved in the research construct reality. The main idea of qualitative research is to purposely look for participants who will best answer the research question (De Vos 2001:45-47).

Sometimes the phenomenon has to be observed before it can be described. Observational research involves simply observing every day practices and thus may be considered to be more objective than surveys because no questions are asked. However, interpretation may be inaccurate or biased and the motive for behaviour cannot always be uncovered (Brink 1999:104).

Exploratory research is used in this study to provide an understanding of the problem confronting the researcher, i.e. the design and compilation of an assistance programme for secondary learners. Exploratory research is useful in providing alternative courses of action and gathering additional data about the research problem (Brink 1999:97).

### 4.4 DATA COLLECTION METHODS

Preparation for data collecting that involves the setting, deciding who will be interviewed and the research process was discussed in the preceding section of this chapter. To collect data on the assistance programme the researcher used several forms of data collection techniques that will now be described.

#### 4.4.1 Sampling methods

Two methods of non-random and non-probability sampling, namely accidental and purposive sampling, have been used in this study. Accidental sampling, also called convenience or available sampling, is done when you survey people who are ready and available. Time and energy is not spent on getting every ready, willing and able person in the population to participate in the study (Bernhardt 1998:260; Brink 1999:116). For reasons already stated (see 4.3.1), it was decided to only use educators at schools that the researcher serves as a school psychologist in this research study,
that is, six of the fifteen secondary schools. No specific criteria were used to select schools other than convenience sampling.

Educators that showed a keen interest in the topic were asked to evaluate the assistance programme. Judgement sampling, also termed purposive sampling, thus occurs when researchers choose participants that they consider as representative of the population. Non-random sampling in this instance also implies that schools not in the area did not stand a chance of being selected for the study. Schools were chosen purely on the researcher's opinion of their representativeness. Unstructured in-depth interviews as it was used in this research will now be explained.

4.4.2 Unstructured in-depth interviews

Unstructured in-depth interviews are regarded as open-ended conversations around the research topic and can be used to elicit research-relevant data. Although qualitative research is non-directive, the in-depth interview is conducted with a definite research agenda to gain information about the specific phenomenon being researched. Participants are guided through unstructured, spontaneous discussion about the research topic. Data obtained is used to develop, reformulate and expand hypotheses with the specific purpose of contributing to knowledge base about a social phenomenon. Such data can also be used to draw up questionnaires or to reveal issues that can be followed up in greater detail. Researchers should be mindful of the fact that participants could be biased in their responses in this face-to-face type of interview if they want to impress the interviewer (Carpenter, Ashdown & Bovair 1996:226; Brink 1999: 106-107, 111; Schurink 2001:298-299).

4.4.3 Focus group discussions

Focus group discussions will be held to elicit information from participants. Focus group discussions is a qualitative data-gathering method and is characterised by open discussion between specifically chosen persons under the leadership of a group leader who is trained in handling group dynamics (Schurink, Schurink & Poggenpoel 2001:313). During focus group discussions participants share feelings, experiences, facts, opinions, perceptions and their motives around a certain topic. The facilitator
focuses the discussion on the topic and prevents people from going off at a tangent. Small groups of relatively homogeneous persons who hold diverse opinions constitute focus groups. Focus group discussions are usually held in a series. It is a type of personal survey and the facilitator asks questions in a face-to-face situation and records the responses. The researcher has facilitated several workshops and focus group discussions with educators ranging from groups of eight to 100 and is genuinely interested in hearing people's thought and feelings. The researcher is able to articulate her thoughts clearly, admit her biases, maintain a sense of humour and be flexible. During these focus group discussions educators were encouraged to stop the facilitator and ask questions, comment on other participants contributions, and to freely express their differences of opinion. Most focus group discussions in this study were conducted with more than twelve persons and each session lasted for about two hours. The researcher used a list of question (see Appendix 1) to help her remain focused. The researcher is aware that feelings often get churned up during these discussions and always stayed behind for people who needed to talk after the group discussion (Brink 1999: 106-107, 110).

4.4.4 Group administered questionnaires

Participants who are part of a group complete a questionnaire individually without discussion. Sometimes the facilitator conducts a discussion with the whole group before completion of the questionnaire. The main advantages of this method is that it is cost and time effective, the facilitator is present to answer any questions that might arise, and there is immediate completion and collection of the questionnaires. The researcher worked around the possible disadvantages of finding a suitable venue by using the staff rooms at schools. The teachers in these staff rooms were regarded as captive audiences (Fouche 2001: 155-158).

Questionnaires are instruments with closed or open statements that respondents have to react to (Fouché 2001:152). In this research two simple ordinal type questionnaires were designed so that participants could rank the presented items according to the criteria of importance, seriousness or urgency. The educators thus had to prioritise the items to be included in the assistance programme as well as list the effects of poor reading skills on academic performance (Bernhardt 1998:239; Fouche 2001:152, 162,
One simple data collection-cum-rating scale tool was also designed. All tools used in this study were designed for manual completion, and set up for manual tallying and analysis.

4.4.5 The Delphi technique

The Delphi technique was used as a tool to evaluate the assistance programme for secondary learners. The Delphi technique is a group decision-making technique that can be used informally or formally. A panel of experts is selected. Experts are regarded as people who have daily knowledge in the specific field and as far as possible should be representative of all possible types of experience that the practice can offer (Strydom 2001b:181). A questionnaire or document containing data about the specific research problem is given to participants to comment on.

The technique is used to obtain information and judgements from participants without actually physically bringing the participants together. The selected panel of experts give input on the specific problem by listing their ideas, thoughts and opinions in a concise manner. This knowledge based and subjective data (ideas, opinions, comments on strengths and weaknesses of the first draft) is incorporated into a second draft and disseminated to all experts again. The same panel of experts have to evaluate the second draft. The Delphi technique needs a coordinator to request information from participants, integrate the data received and incorporate it into the original design and be responsible for communication with the various participants. (Cline 2001: 1-3; Strydom 2001b:180-181; Stuter 2000: 1-6; TK 2000: 1-2). The researcher fulfilled all these roles in this study and the panel had to comment on the first and second draft of the assistance programme for secondary school learners.

Six experts, that the researcher felt were best placed to assess the assistance programme, were chosen. Three educators who had shown immense interest and insight into the topic, were chosen from educators at schools where the researcher had held focus group discussions. The researcher feels that educators are experts by virtue of the fact that they have to deal with LD learners on a daily basis. Three colleagues at education centre level, which the researcher deems to have appropriate qualifications,
knowledge, experience and expertise in the field of learning difficulties, learning barriers and LDs were also asked to evaluate the assistance programme.

4.5 ETHICAL CONSIDERATIONS

Ethics are the basis upon which the researcher ought to evaluate his conduct. Ethically guided decision-making when conducting research should become part of the researcher's life style. As the researcher will be accountable for all consequences of his research decisions, the ultimate responsibility for ethical conduct rests solely with the individual researcher (Strydom 2001a:23-24). The researcher is not infallible and often has strong self-interests (Kamper 2000:47). For the purposes of this study the following ethical considerations were continuously borne in mind: obtaining informed consent, protecting vulnerable research participants, violation of privacy, actions and competence of researchers, publications, cooperation with collaborators, and restoration of participants or respondents.

4.5.1 Obtaining informed consent

Participants should receive accurate and adequate information about the research. The onus is on the researcher to provide all relevant information in clear, understandable and unambiguous language. Participants should be told what is expected of them and be given information about the process and duration of the research process. Research indicates that participants who have a clear understanding of the research process and what is required of them are in a better position to make an informed decision about whether they want to get involved with the research or not. In this way the researcher would probably get the full knowledge and cooperation of the participants. It is thus important to develop an appropriate, informed procedure to gain consent for each investigation (Carpenter, Ashdown & Bovair 1996:221; Strydom 2001a:25-27; Kamper 2000:43).

Although the researcher is unable to predict all possible problems, all unforeseen situations should be handled in the best possible ethical manner. Further ethical considerations include: the giving of correct factual information without placing undue pressure on, or misleading, prospective participants; explaining to participants
that they are free to terminate their involvement at any time; and, regarding participants as partners in the research and not just as mere subjects.

4.5.2 Protecting vulnerable research participants

It is often erroneously assumed that teachers can take care of themselves. However, teacher participants are also vulnerable by virtue of their unique situation. Their vulnerability could be greater because researchers might be less sensitive than if they were working with adolescents or elderly participants. Relationships or their employment situation might be affected. Responses provoked during participation in the study could trigger past hurts, recall negative behaviour, or it could lead to new or renewed personal harassment. Care should be taken to safeguard the physical comfort and emotional well being of all participants and they should receive information about the potential impact of the research before they agree to participate (Strydom 2001a:25; Kamper 2000: 46-47).

The researcher completely agrees with Kamper (2000:48) that all educational researchers, including postgraduate students, should subscribe to an educational research ethical code. The responsibility remains with the educational researcher to:

- Plan for the prevention of almost all possible harmful research effects.
- Have thorough knowledge of the focus group or participants.
- Be aware that expectations that could be awoken or raised needs to be discussed, met or addressed.
- Obtain the informed consent of influential people (like the principal).
- Repair or minimise the effects of unforeseen harmful research effects after the research in the most ethical manner possible (Kamper 2000:47: Strydom 2001a:25).

4.5.3 Violations of privacy

There are two underlying principles to consider in this category: personal privacy and the notion of confidentiality.
Personal privacy is an elusive idea and is difficult to define. However, personal privacy can be regarded as the individual’s right to decide when, where, to whom and to what extent he will reveal his beliefs, attitudes and behaviour. Participants should not be forced into revealing more than they want to. Covert methods to get participants involved in the research should be avoided. Participants should be allowed to decide about their involvement in the research without undue interference or pressure (Strydom 2001a:27-29; Kamper 2000:43).

Confidentiality refers to the handling of information in a confidential manner. Confidentiality thus places a strong obligation on the researcher to ensure the privacy of subjects and the information that they divulge. The underlying idea in confidentiality is that the identities of participants should not be generally known and the use of proper scientific sampling techniques should guard the privacy of participants. It is felt that perhaps only the researcher and a limited number of colleagues should know the identity of the participants. This applies whether the participants have specifically requested confidentiality or not.

The research report should be written in such a manner that it ensures the privacy of participants. Using averages instead of releasing information about individuals or institutions that may be identifiable by the researcher or others is recommended (Strydom 2001a:27-29).

4.5.4 Actions and competence of researchers

Researchers are ethically bound to ensure that they are competent and appropriately skilled to undertake the proposed research or investigation. The entire research project should run its course in an ethically correct manner. Reasons for the research should indicate how the researcher plans to honour the ethical guidelines. A detailed research plan should be drawn up to guide and monitor the research (see 4.3.2). Researchers should undertake a study and familiarise themselves with the prevailing norms, values and climate in the community before commencement of the research. The researcher has a wealth of knowledge and experience of the context of the study, having been involved in education in the area for nineteen years, and has built up relationships of
trust with various educators over the years (Carpenter, Ashdown & Bovair 1996:221; Strydom 2001a:30-31).

Furthermore, the researcher should: acknowledge all research implications that might be imposed by a professional career code, be committed to scientific integrity, limit personal and institutional interests in the interest of professionalism and participant needs, and hold a firm belief in the inherent value of participants (Kamper 2000:44).

4.5.5 Publications

The ultimate aim of any research understanding is that others will use the research. Dissemination of research findings should be made at academic and community levels. An accurate and objective written report of the research findings is important, as other researchers will rely upon the findings. The report should thus contain all the information needed for readers to understand the process and research methods. The researcher is duty bound to ensure that the research study proceeds in an ethically correct manner and that no individual is purposely deceived by the research findings (see 4.4.4). Other important considerations are:

- A written form of the research findings must be produced for it to be regarded as research.
- The report must be written in simple, clear and unambiguous language to prevent misappropriation by the press, general public or colleagues.
- Reports should be written honestly and distortions and manipulation of research findings should be avoided.
- Mention shortcomings and errors in any part of the process or data collection tools clearly.
- Release the findings of the research so that it will be available for others to use.
- Acknowledge all sources used to avoid plagiarism (Bernhardt 1998:179; Strydom 2001a:32-33; Kamper 2000:41-44, 47).
4.5.6 Cooperation with colleagues

Colleagues were involved in study, either formally or informally. A formal contract between parties is preferable as it minimises misunderstandings. All parties concerned know what their roles are and what activities they have to perform. Sometimes colleagues help with the narrowing down of a relevant research problem or they assist with drawing the most suitable sampling frame. The researcher found the support and assistance from colleagues invaluable; bouncing ideas off colleagues, getting comments on rough drafts, advice, evaluation of the assistance programme proofreading the thesis, and so on. All contributions ethically deserve careful consideration, credit and recognition (Carpenter, Ashdown & Bovair 1996:220; Strydom 2001a:31–32).

4.5.7 Restoration of participants

A research project should always be seen as a learning experience for the researcher and participants. One cannot always predict the effects or results of research on participants. Debriefing sessions can be held after the completion of the research to complete the learning experience. Debriefing sessions held in a supportive and therapeutic manner will provide participants the opportunity to process their experiences. Debriefing also helps to minimise harm, correct misperceptions and misconceptions, deal with unmet expectations, and meet obligations that were agreed upon during research. An interview can be held with participants after the research has been concluded to share information that was withheld during the research process (Strydom 2001a:33–34).

In the absence of a uniform educational research policy the researcher is mindful of the following: the rights that her employer the Western Cape Education Department (WCED) has over her as a school psychologist, her code of conduct as a member of the South African Council of Educators (SACE) and her affiliation to the National Union of Educators (NUE).
4.6 THE RESEARCHER AS INSTRUMENT

The researcher plays various roles during the research process. A brief description of educational research as intervention research and the roles the researcher played will be provided.

Educational research can be regarded as a type of social service. It has a strong service motive and is geared towards the interests and needs of the clients (Kamper 2000:44). Educational research can thus be viewed as intervention research. Intervention research has been described as research directed towards developing innovative interventions (Schurink & Strydom 2001:11). This type of research has a specific intervention purpose and is focussed on clarifying a given situation or finding alternative solutions to practical problems. Researchers and policy makers have to take the needs and ideas of communities into account. The researcher supports the view held by De Vos (2001:18) that no development could take place without involving communities in planning the type of service they require, especially if one is involved in educational research. Educators largely determined what categories of interventions were to be included in the assistance programme (De Vos, Schurink & Strydom 2001:11, 18).

The researcher was thus involved in educational research and played the following five roles as the research process unfolded.

- **Consumer role:** the researcher as a consumer needs to know how to find relevant information, have knowledge of the situation in the field, and should be able to translate research finding into specific and appropriate interventions.

- **Knowledge creator:** the researcher should produce a written form of the research findings and inform others about it.

- **Disseminator of knowledge:** research findings may be published or distributed to the general public, colleagues, or participants in the research if relevant. The researcher plans to disseminate this knowledge via teachers union newsletters, conference presentations, workshops with educators, and copies
of the actual thesis will be made available to all schools and colleagues that participated in this research.

- **Contributing partners:** during the research, the researcher collaborates with others and performs different functions like, identifying practice problem areas, prioritising problems, creating practice methods from various sources and promoting new practice ideas.

- **Integrator:** the researcher-practitioner needs to engage the entire spectrum of available knowledge and skills in the continual improvement of their practice to find and use best practice interventions (De Vos, Schurink & Strydom 2001:13-14).

### 4.7 THE ANALYSIS OF THE DATA

The data obtained during fieldwork has to be processed and written up in clear and unambiguous language for the research to be valid. Data analysis involves describing all aspects of the research and transforming raw data into an easily understandable research report. Completed questionnaires and interview notes have to be analysed carefully as outcomes from the research report may have important implications for practice. The report should contain all findings including the following: conclusions, trends and categories, differences, unexpected events, obstacles, negative occurrences, discoveries, personal examples, quotes from participants, surprises and learnings. The written research report is a document and contains information that can be used for decision-making (Brink 1999:119-122; Carpenter, Ashdown & Bovair 1996:222; Strydom 2001b: 187; Levine 1997:117-120; Vallecorsa & de Bettencourt 1997:186).

The thirty pages of field notes taken whilst conducting unstructured in-depth interviews and facilitating focus group discussions, the 76 completed group administered questionnaires and the comments and suggestions contained in the answer books or on the assistance programme itself will be analysed and used in the results and the discussion of the results. The information gleaned from the raw data will be used to describe the research process, expand the knowledge base about LDs, uncover teaching and learning interventions that educators find palatable and to gain
insights into the attitudes, beliefs and perceptions of educators. Attempts will be made to provide data in context and in enough detail to ensure easy interpretation. Simple tables will also be used to illustrate results.

4.8 CONCLUSION

Chapter four contains the research setting and a table setting out the research design for this study. It outlines the research methods, types of sampling to be undertaken, considers the ethical aspects of research and briefly discusses educational research as a type of qualitative research. It outlines the Delphi technique that will be used as a tool to evaluate the assistance programme and briefly sketches how the panel of experts was chosen.

Chapter five will be devoted to the findings of the empirical research. Findings of the in-depth interviews, focus group discussions and the evaluation of the assistance programme using the Delphi technique will be presented. Simple tables will be used to highlight some research findings.
CHAPTER FIVE

DISCUSSION OF THE EMPIRICAL RESEARCH RESULTS

5.1 INTRODUCTION

This chapter will describe the results of the unstructured in-depth interviews, focus group discussions and group administered questionnaires in a narrative form. Some easy to understand information will be provided in easy to read tables. A panel of experts evaluated the assistance programme for secondary learners. The programme was developed using the information from the data collection methods mentioned above as well as the literature study. The results of this evaluation will be provided in the last section of this chapter.

5.2 RESULTS OF THE UNSTRUCTURED IN-DEPTH INTERVIEWS

A series of interviews was initially conducted with educator G at school 1 when the researcher was a guidance teacher at the school. From careful observation it became apparent that learners who were experiencing problems in other educator's classes were coping well in his class. There was an obvious difference between the work they produced in his class and the work they produced in other classes.

During interviews it become apparent that Educator G used simple techniques that helped learners to focus and produce work of a fairly good quality. Educator G placed the learners experiencing difficulties in focusing, as Educator G termed it, in the front of the class and only gave instructions once they were paying attention. Educator G felt that if they were attentive the rest of the class was too. Instructions were given in a sequential order and Educator G waited till the children had executed that step before proceeding to the next step. Instructions of common transactions were boldly printed in simple, unambiguous language on colourful charts and posted on the walls in strategic places. The learners were taught to refer to these steps when they could not remember what to do. In this way instructions for all the major operations in Accounting, now termed Economic Management Science (EMS) were clearly visible on the classroom walls. Due dates for all assignments were always posted on the same
specific place on the chalkboard, so that learners could check when projects had to be handed in. Detailed records of learner progress were kept. Educator G was genuinely interested in the learners and parents were consulted as soon as it become apparent that a learner was experiencing learning difficulties.

Other educators at the school were often amused at his methods and attributed it to the fact that he had taught at a primary school before coming to the secondary school. This single observation alone, lead to the researcher's exploration of educators' perceptions of education. What educators valued about education in general and schooling in particular became a nagging thought. Educator ideas and opinions around teaching the LD secondary adolescent also became important. This resulted in a list of questions being drawn up that was used during focus group discussions with educators (see Appendix 1).

Information obtained about Educator G's way of working guided the researcher to search for evidence in the literature to support what he was doing. The researcher started using these methods and found that learners experiencing difficulties were able to focus and complete written class work. The preliminary literature study uncovered many of the techniques that Educator G used. This culminated in the compilation of the initial assistance programme for secondary learners containing hints and tips for educators (see Appendix 2).

The initial assistance programme was compiled after the in-depth unstructured interviews and preliminary literature study and consists of eight sections namely: general, giving directions, helping children get organised, study hints and self-monitoring, compensating for reading problems, compensating for visual motor problems, taking and using notes and listening skills. The main purpose of compiling the initial assistance programme was to elicit responses from educators during focus group discussions. The researcher also wanted to explore how palatable and useful educators at other schools would find these methods.

At this time a list of identifying features of the learning disabled child was also compiled as the researcher thought educators might find it a useful tool.
A follow-up interview with Educator G a few years later revealed that he was still achieving success with his methods. He was also asked to comment on the successive assistance programme as an expert panel member. He declined the offer due to pressure of work but asked for a copy of the assistance programme.

Focus group discussions were held at various schools as part of the exploration phase of the research. The aim was to collect data on educator attitudes that would impact on the type of intervention strategies they were willing to use.

5.3 RESULTS OF FOCUS GROUP DISCUSSIONS

Focus group discussions were held with the view to promoting educator reflection on ways of improving teaching and learning activities to accommodate the LD adolescent. The researcher also used focus group discussions to: motivate educators; encourage exchange of ideas and information; and, to initiate a process that would allow the staff to develop ways of adapting the curriculum to cater for LD adolescents.

5.3.1 Results of focus group discussions at school 2

Two focus group discussions were held at school 2. Forty educators were present at both focus group discussions. The first focus group discussion was held in an attempt to gauge educators' ideas and knowledge about the concept LDs. Educator attitudes toward LD learners and education in general were also explored using the questions in Appendix 1. There was sharing of information about the nature of LDs to orientate educators to the fact that it is hard for LD learners to progress at secondary school. The second focus groups discussion centred on the role educators could play in assisting LD learners, including a discussion on the initial assistance programme.

Focus group discussions at school 2 revealed that educators have a vague idea of the term learning disabilities. One educator, whose wife was an occupational therapist, had a real understanding of the nature of learning disabilities and how it affected secondary learners. Researcher input on the nature of learning disabilities served as a means of informing educators about LD. Educators found the information sharing part of the discussion very enlightening. Most educators felt fairly confident about being
able to identify LD learners and rejected the use of a checklist to identify such learners. They felt it would lead to indiscriminate labelling of learners and that it would be a dangerous tool in the hands of some educators. This finding surprised the researcher.

Educators at school 2 went on to design a reading programme for their learners as they felt the initial assistance programme (see Appendix 2 & Table 5) designed by the researcher did not address their needs. All educators worked with learners experiencing reading difficulties one afternoon a week. The rejection of the list of identifying criteria for LD learners was not the response that the researcher had expected. Thus it was decided to conduct focus group discussions with educators at school 3 to verify the findings.

5.3.2 Results of focus group discussions at school 3

Besides the verification of findings as stated above, focus group discussions were held at school 3 as the researcher needed to continue the collaboration with educators about an assistance programme for secondary learners. Two information-cum-focus group discussion sessions were held with about two thirds of the staff. Educators were able to identify learners who experienced learning difficulties and decided against using set criteria to identify LD learners. This finding was the same result as at school 2 and lead to the criteria list idea being scrapped. Educators commented freely and felt that they were not qualified to offer any comments on the initial assistance programme, let alone offer any kind of intervention themselves. They felt that it was the work of experts at the school clinic, now called education support centre. They did admit, like the educators at school 2 that a large percentage of their learners were struggling to read. However, they did not see it as their job to provide assistance to these learners. Despite the focus group discussions, the school still regularly referred learners to the education support centre for psychometric assessment and academic assistance.

The learnings from this series of focus group discussions are: educators, who do not necessarily have background knowledge about LDs, can identify learners experiencing learning difficulties or who have LDs and they do not need a list of
criteria or identifying features to help them do so. Educators do need in-service training so that they can better understand these learners and provide classroom support for them.

School 4 was chosen as the next school to work at as they had heard about the focus group discussions and had requested it.

5.3.3 Results of the focus group discussions and group administered questionnaire at school 4

In addition to all the previously stated reasons, the aim of the focus group discussion now centred on the verification of previous findings, obtaining focus for the compilation of the successive assistance programme, ascertaining what remedial items teachers would find palatable, and determining which items educators would be most willing to implement. Previous discussions had left the researcher with the vague feeling that educators were unwilling to implement any strategies unless pushed. It was also the continuation of the wide consultative process that the researcher needed as she was working in a small geographical area.

Thirty-six staff members were involved in the process at school 4. Two sessions were held after school in the school's library. One session was devoted to information about learning disabilities and the concerns teachers had. The following session, held a week later, was devoted to completion of the simple data collection-cum-rating tool questionnaire and feedback from educators about what type of intervention strategies they are already using or, would be most likely to use in their classrooms.

Questions that teachers asked during the first focus group discussion included the following:

- When a teacher has a temper tantrum can it really damage the child?
- How will you know if a child really is LD or just plain lazy?
- How do you treat a LD child whose behaviour is affecting the rest of the class?
• Shouldn’t one get children in a technical school if they have learning
difficulties?
• Do LD learners belong in a mainstream school?

The questions give one an indication of the general attitude of educators towards LD learners. Educators still expect outside help when learners display signs of learning difficulties or LD. The first question reveals that some educators became angry when learners exhibit learning difficulties or have LDs. The second question could mean that educators do not understand the concept LDs. The last two questions indicate that some educators feel that LD learners should not be in mainstream secondary schools.

To expedite matters, a slight variation on group administered questionnaires was used. Teachers were placed into groups of six (six groups each containing six members). Each group had to discuss and complete questions 1 – 4 (see Appendix 3) for only one section of the initial assistance programme (see Appendix 2). One group was assigned to comment on one section only and then feedback their comments, opinions, thoughts, feelings, and suggestions to the bigger group and the researcher. No group was asked to comment on section H (an oversight on the part of the researcher), and sections E and F were combined for the purposes of the activity only. Educators were asked to respond individually without discussion, as is the case normally with group administered questionnaires, to remedial items that they would use (see question 5 in Appendix 2). It took ten minutes for the groups to complete questions 1 to 4, and a further ten minutes for individual educators to complete question 5. All thirty-six educators present completed questions 1 – 4 in the group context, and question 5 individually.

The response to the various sections in the initial assistance programme by the small discussion groups will now be described, starting with the response to the first question. Please refer to Appendixes 2 and 3 throughout the discussion.
5.3.3.1 \textit{Response to question 1: Can it be implemented?}

Educators assigned to assess sections A to F of the initial assistance programme, felt that all items in these sections could be implemented immediately. One educator in the group that had to assess section G felt that only item 5 (take notes at the end of meaningful sections of work) could be implemented immediately, four members in that group felt that items 1, 3 and 6 could be implemented in the near future after educators and learners had received some training, and one educator felt that item 2 (learners write notes in their own words) and item 4 (spend 10-20\% of your time only writing notes) could only be implemented in the distant future. From these responses it is clear that a large part of classroom time is spent in taking notes and educators feel that learners do not possess the necessary skills to write notes in their own words. Educators still experience the need to give learners copious, detailed notes. \textbf{Table 6} summarises the above-mentioned information.

\begin{table}[h!]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
Section & Now & Near future & Distant future \\
\hline
A & All items & & \\
& 6 group members & & \\
\hline
B & All items & & \\
& 6 group members & & \\
\hline
C & All items & & \\
& 6 group members & & \\
\hline
D & All items & & \\
& 6 group members & & \\
\hline
E & All items & & \\
& 6 group members & & \\
\hline
F & All items & & \\
& 6 group members & & \\
\hline
G & Only item 5 & Items 1, 3, & Items 2 & \\
& 1 group member & 6 & \& 4 & 1 group member \\
\hline
\end{tabular}
\caption{Response to question 1: When can the remedial items be implemented?}
\end{table}
5.3.3.2 **Response to question 2: Would you be able to implement it?**

The purpose for asking this question was to ascertain if teachers would be able to implement the type of remedial strategies listed in the initial assistance programme. 100% of the educators in the six groups indicated that they would be able to implement the strategies (items) listed. See Table 7. This response implied that the researcher was on the right track when selecting strategies to include in the assistance programme.

<table>
<thead>
<tr>
<th>Group assigned</th>
<th>Section</th>
<th>Yes</th>
<th>No</th>
<th>Maybe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>A</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 2</td>
<td>B</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 3</td>
<td>C</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 4</td>
<td>D</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 5</td>
<td>E &amp; F</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 6</td>
<td>G</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
</tbody>
</table>

**Table 7: Response to question 2: Would you be able to implement it?**

5.3.3.3 **Response to question 3: How much effort would it require?**

This question was included to test the palatability of intervention strategies to teachers. This question focused educators' attention on how much effort and preparation time an item would require. Implied in the simple question was also the underlying thought, how much training does this intervention strategy require? From the information in Table 8 it is clear that educators felt that most remedial items
would require an average amount of effort to implement. Educators felt some sections would require too much effort.

<p>| Table 8: Response to question 3: How much effort would it require? |
|---------------------------------|--------------------|----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Group assigned</th>
<th>Section</th>
<th>Not much</th>
<th>Average amount</th>
<th>Too much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>A</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 2</td>
<td>B</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 3</td>
<td>C</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 4</td>
<td>D</td>
<td>All items</td>
<td>3 group members</td>
<td>All items</td>
</tr>
<tr>
<td>Group 5</td>
<td>E &amp; F</td>
<td>All items</td>
<td>6 group members</td>
<td></td>
</tr>
<tr>
<td>Group 6</td>
<td>G</td>
<td>All items</td>
<td>1 group member</td>
<td>All items</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 group members</td>
<td></td>
</tr>
</tbody>
</table>

From this response the researcher concluded that only intervention strategies that required little or average effort on the part of the educators stood a chance of being implemented. The group that was assigned to comment on section G were divided in their opinions: one educator felt that the items on note taking would not require much effort; three educators in that group felt that it would require too much effort to implement and only two educators felt that it required an average amount of effort. The researcher wonders how much assistance learners will actually receive in note taking given this varied response from educators.

No groups commented on question 4.
5.3.3.4 Response to question 5: Which five remedial items are you willing and able to implement right now?

All educators had to list three items from the initial assistance programme they were willing and able to implement. The purpose of this question was for educators to personalise some of the information presented during the feedback session and to force educators to start thinking about intervention strategies for LD learners. The types of remedial items educators chose informed the type of strategies that were selected for the successive assistance programme. The researcher admits that the responses could have been influenced by the preceding discussion. See the tabulated responses in Table 9. The last nine responses that indicate strategies (items) that educators can use or that require a mind shift on the part of the educators, received the lowest response rate. One can assume that educators are grappling with the thought of providing assistance to LD learners. 41,6% of educators noted that they are willing to help children with note taking, this implies that educators see this as an area of deficiency. Teaching children memory skills or tricks received the second highest number of responses.

It is apparent from Table 9 that educators chose easy items that require little teacher input or planning. Most responses centred on memory and note taking skills of the learners. Most responses involved having learners develop skills; only five responses indicate behaviour change on the part of the educator, namely: it is interesting to note that of the possible 57 items only 21 were selected. The deficits in learner skills that the educators identified were similar to those uncovered during the literature study.

The researcher can only assume that some of the items not chosen were regarded as too cumbersome or time consuming to implement. For whatever reason, educators decided that more than 50 percent of the strategies were unpalatable. The researcher decided to compile an assistance programme containing a wide range of strategies so that some strategies would be chosen and LD adolescents would receive some relief in the regular mainstream class.
Table 9: Response of 36 participants to question 5: List the remedial items you are willing and able to implement right now

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>Frequency</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Help with note taking (5 items)</td>
<td>15</td>
<td>41,6</td>
</tr>
<tr>
<td>2</td>
<td>Help children remember important facts/teach memory tricks</td>
<td>12</td>
<td>33,3</td>
</tr>
<tr>
<td>3</td>
<td>Encourage use of the tape recorder</td>
<td>11</td>
<td>30,5</td>
</tr>
<tr>
<td>4</td>
<td>Vary ways to give instructions/give good instructions</td>
<td>7</td>
<td>19,4</td>
</tr>
<tr>
<td>5</td>
<td>Use pens that produce black lines</td>
<td>6</td>
<td>16,6</td>
</tr>
<tr>
<td>6</td>
<td>Verbal testing</td>
<td>6</td>
<td>16,6</td>
</tr>
<tr>
<td>7</td>
<td>Help learners get organised</td>
<td>5</td>
<td>13,8</td>
</tr>
<tr>
<td>8</td>
<td>Teach listening skills</td>
<td>4</td>
<td>11,1</td>
</tr>
<tr>
<td>9</td>
<td>Help learners with action steps of project</td>
<td>4</td>
<td>11,1</td>
</tr>
<tr>
<td>10</td>
<td>Give typed worksheets (with borders)</td>
<td>3</td>
<td>8,3</td>
</tr>
<tr>
<td>11</td>
<td>Teach students to use all their modalities when studying</td>
<td>3</td>
<td>5,5</td>
</tr>
<tr>
<td>12</td>
<td>Give less work/simplify work for learners</td>
<td>2</td>
<td>2,7</td>
</tr>
<tr>
<td>13</td>
<td>Give learners a choice of projects</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>14</td>
<td>Allow use of computers or typewriters</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>15</td>
<td>Use peer helpers</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>16</td>
<td>Help learners with reading</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>17</td>
<td>Limit distractions</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>18</td>
<td>Use revision questions</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>19</td>
<td>Set learning priorities and teach accordingly</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>20</td>
<td>Find materials paralleling textbook but written at a lower grade level</td>
<td>1</td>
<td>2,7</td>
</tr>
<tr>
<td>21</td>
<td>Lower level of acceptable standard of work in note taking</td>
<td>1</td>
<td>2,7</td>
</tr>
</tbody>
</table>

Further discussions with educators at school 4 uncovered the fact that six teachers at the school were already using strategies to assist learners experiencing difficulties.
These strategies included:

- Allowing learners to tape lessons.
- Oral testing of learners.
- Using mind maps and trigger charts.
- Using a textbook written at a lower grade level with grade 8 and 9 learners.
- Demonstrating how things need to be done.
- Giving learners individual attention during practical lessons.

The rest of the staff, although very interested, indicated that they were reluctant to use any strategy as they felt they did not have the necessary expertise. This is exactly the sentiment expressed by the majority of educators at school 3. Educators did however have the following suggestions for management of LD learners at their school: that a management team be established that looks at identifying learners who might be LD so that all educators are aware of these children; written work of learners also needs to be assessed and managed; concessions for the assessment of LD learners have to be made; and that the school needs to set clear boundaries concerning the behaviour of LD learners as some educators felt these learners were 'getting away with murder'.

The main shortcoming of the focus group discussions was that thirty-six educators made the two focus group discussions rather difficult to facilitate. The researcher was mindful of the limited time and had to ensure that educators remained focused on the topic. More time should have been allocated for teachers to ventilate, about education related activities, not necessarily LD related. Educators saw the researcher as a department official and needed time to offload their feeling about the education department in general. Educators expressed a reluctance to provide interventions for LD learners in their classes. Those who did indicate a willingness to implement strategies, chose strategies that require the minimum effort and that would benefit the whole class, like drawing a line around the page to assist the learner who is experiencing spatial perception difficulties. Another shortcoming was that the items listed in the initial assistance programme were not clearly numbered when educators had to assess the sections.
Although the researcher had gathered an abundance of data and insights, with the impending introduction of OBE it was decided to hold focus group discussions at two more schools to see if teacher attitudes had changed. Another aim of the focus group discussions at this point was to discuss existing policy changes. Results at school 4 had shown how many intervention strategies educators find unpalatable, so wide collaboration was still necessary.

3.4 Results of focus group discussions at school 5

Two focus group discussions were held at school 5. Ten educators who form the teacher support team (TST) at the school attended the first focus group discussion. They felt that all the educators should be part of the discussion and a date was set for the second focus group discussion. Only twenty educators attended, including the ten TST members. Educators were reluctant to attend and felt overburdened as they were already committed to two other curriculum related after school training programmes. It was thus difficult to hold any further focus group discussions at the school.

5.3.5 Results of focus group discussions at school 6

At school 6 only 50 percent of the educators chose to stay for the discussions. More discussion time was built into the process and a session was scheduled where educators could groan about the changing education system. We eventually ended up having four focus group discussions. The mood was more relaxed with the result that educators were more forthcoming. Educators were outspoken and like educators at other schools they expressed the opinion that they not really feeling adequate about using strategies with LD learners. Educators asked the following questions:

- How do you prevent an ordinary child from using the LD route?
- What is the difference between a learning disability and a learning barrier?
- Should one try to prevent children from using the LD route?
- Are we dropping standards when we make concessions for LD children?
- How do you deal with the defiant child?
• Is OBE really coming or will it be scrapped before implementation in the secondary school?
• How will OBE impact on reading and writing skills of learners given all the negative publicity?
• If we make compensations for slow writing speeds, how will children learn to write? We had quite a debate around the issue of how much writing actually takes place in the classroom. Some teachers strongly defended the fact that children needed to write copious notes from the board and insisted that this was a useful skill for the job market. Other educators concede that with the advent of computers it was not really necessary to write such a lot and that photocopied notes are all that children need to study from (see Table 9).
• What strategies are available for educators?
• My teacher's training did not include assistance for LD learners. How do I teach them?
• Where will I find the time to do planning and preparation for this type of assistance?
• Will the other children in the class suffer if I spend so much time with the LD learner?
• How will the LD adolescent feel about being singled out? Teenagers do not handle this type of attention well.

Due to difficulties at the school, it was not able to continue the focus group discussions and implement the assistance programme as planned. School 6 invited the researcher to facilitate a workshop for twelve members of the teacher support team on learning disabilities. The opportunity was grabbed to start the discussion at another school. The process also fizzled out as educators were overwhelmed with work and had many workshops to attend in the afternoons. Despite the initial interest it was impossible to schedule a date for a follow-up sessions. Schools are very busy places.

An intensive literature survey was then undertaken to uncover effective teaching strategies, with the express purpose of compiling the successive assistance programme. At this point a request come from school 1 to assist them with a reading
programme. The next section of this chapter deals with how the study was continued at school 1.

5.3.6 Results of focus group discussions and group administered questionnaires at school 1

After the discussion with the principal and guidance teacher a focus group discussion was set up with the grade eight and nine educators. These educators felt that the learners were struggling to read and thus not coping with the academic demands of secondary school. Some of the educators blamed OBE for the fact that learners could not read as well as expected. Twenty educators completed a simple rating type questionnaire to assist with the prioritising of fields to be included in the successive assistance programme for learners. See the Table 10.

Using the group administered questionnaire technique the following information was obtained from educators at school 1. The questionnaire was compiled mainly using information from the literature survey and insights gained during the focus group discussions and contained key points the researcher wanted to test. Educators had to choose seven items that they felt were important and that the educator could possibly help the LD learner with. Although the information exists in books, the researcher needed to know what educators regarded as important. Twenty educators completed the questionnaire. It took about fifteen minutes to complete. Educators had great difficulty in choosing the 7 items and expressed the sentiment that factors impact on each other. One teacher felt that difficulty in remaining on-task (item 15) and concentration problems (item 19) should have been one. Table 10 depicts the total number of responses each item received.

Once educators had listed their priorities the responses were manually tallied. The educators’ preferences were similar to that uncovered in the literature survey (see chapter two) and the impressions gained at other schools during focus group discussions. In fact many secondary school learners were still being referred to the school clinic where the researcher works for reading and spelling problems. The following items received priority by the educators at school 1.

Table 10
<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Reading problems (fluency and comprehension)</td>
<td>17</td>
<td>85</td>
</tr>
<tr>
<td>2 Mathematics (reasoning and/or calculations)</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>3 Poor handwriting skills</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4 Inadequate writing skills – language usage, syntax, generating ideas</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>5 Ineffective study skills or learning strategies</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>6 Poor note taking skills (notes chronically incomplete)</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>7 Poor test taking skills (class tests/examinations)</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>8 Limited vocabulary (general and/or learning area specific)</td>
<td>11</td>
<td>55</td>
</tr>
<tr>
<td>9 Spelling difficulties</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>10 Memory problems</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>11 Displays socially unacceptable behaviour e.g disrespect, impulsive, socially inept, withdrawn, unpopular with peers</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>12 Behaviour problems, disruptive in class, aggressive, clowning around</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>13 Lacks motivation (passive)</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>14 Attention deficits (timing and direction)</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>15 Difficulty in remaining on-task</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>16 Inability to gain information from lectures/teacher presentations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Lacks teacher-pleasing behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Inability to complete and/or hand in projects and assignments</td>
<td>11</td>
<td>55</td>
</tr>
<tr>
<td>19 Concentration problems</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>20 Working independently with little teacher feedback</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>
The five items that received the most responses were chosen as the five fields of the successive assistance programme. Table 11 lists the five items that received the most responses.

<table>
<thead>
<tr>
<th>Identification of field</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading problems and lack of understanding</td>
<td>85</td>
</tr>
<tr>
<td>Limited vocabulary</td>
<td>55</td>
</tr>
<tr>
<td>Inability to complete or hand in projects and assignments</td>
<td>55</td>
</tr>
<tr>
<td>Memory problems</td>
<td>50</td>
</tr>
<tr>
<td>Spelling difficulties</td>
<td>50</td>
</tr>
</tbody>
</table>

Educators were also asked what they viewed as their role in regard to the poor reading skills of their learners. The following question was posed to them: do you use intervention strategies, or is your role to help the learner to survive in the classroom? A heated debate followed: fifty percent of the educators felt that they had to do remediation work with the learners, while the other half felt that they had to help the child experiencing reading difficulties survive in the classroom.

Twenty respondents also completed a second group-administered questionnaire. Educators had to pinpoint 7 items that affected the child’s scholastic performance the most. All items had to do with reading skills. Educators had no difficulty in completing the questionnaire that took about 10 minutes to complete. Educators did not have any other item to add for consideration. These results seem to indicate that educators feel that the lack of reading skills affect the learners’ understanding of the text and this eventually leads to failure. Table 12 contains the response each item received.
Table 12: Response of 20 participants to the effects of poor basic reading skills on LD or non-LD secondary learner

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lack of motivation (reluctance to engage in learning tasks)</td>
<td>9</td>
</tr>
<tr>
<td>2 Reduced self-esteem (behavioural manifestations)</td>
<td>4</td>
</tr>
<tr>
<td>3 Lowered confidence (passive, refusal to attempt new/difficult tasks)</td>
<td>8</td>
</tr>
<tr>
<td>4 Emotional problems (depression, performance anxiety, labile)</td>
<td>4</td>
</tr>
<tr>
<td>5 Limited independent learning (demands attention)</td>
<td>12</td>
</tr>
<tr>
<td>6 Inability to keep up with classmates</td>
<td>6</td>
</tr>
<tr>
<td>7 Inability to keep up with/follow teacher</td>
<td>9</td>
</tr>
<tr>
<td>8 Inadequate involvement in learning process</td>
<td>7</td>
</tr>
<tr>
<td>9 Lack of understanding the topic/ text material</td>
<td>16</td>
</tr>
<tr>
<td>10 Difficulty in completing written assignments/homework on time</td>
<td>11</td>
</tr>
<tr>
<td>11 Limited general vocabulary impacts on oral expression</td>
<td>9</td>
</tr>
<tr>
<td>12 Limited learning area specific vocabulary impacts on learning</td>
<td>2</td>
</tr>
<tr>
<td>13 Limited general vocabulary impacts on written expression</td>
<td>7</td>
</tr>
<tr>
<td>14 Limited learning area specific vocabulary impacts on written work</td>
<td>5</td>
</tr>
<tr>
<td>15 Inefficient and ineffective mastery of learning area content</td>
<td>6</td>
</tr>
<tr>
<td>16 Learning area failure, e.g. LLC or HSS, and so on – can’t read or comprehend test/examination question paper</td>
<td>11</td>
</tr>
</tbody>
</table>

The seven areas that are mostly affected are: lack of understanding of the topic or text, limited independent learning, difficulty in completing written assignments or homework, learning area failure, limited general vocabulary, lack of motivation (time on-task) and inability to keep up or follow the teacher. There appears to be a correlation between the seven points identified in the second questionnaire and five points identified in the first questionnaire. From the information provided in the table below, one can see that the seven points can be neatly fitted into the five diverse fields of the assistance programme. Most educators identified time off-task as the main consequence of poor reading skills. See Table 13.
Table 13: Connection between 5 fields of the assistance programme and 7 items that reading affects.

<table>
<thead>
<tr>
<th>Item identified from second questionnaire</th>
<th>% of response</th>
<th>Connection with field of the assistance programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of understanding of the topic or text</td>
<td>80</td>
<td>Reading</td>
</tr>
<tr>
<td>Limited independent learning</td>
<td>60</td>
<td>Time on-task</td>
</tr>
<tr>
<td>Difficulty in completing written assignments or homework on time</td>
<td>55</td>
<td>Time on-task</td>
</tr>
<tr>
<td>Learning area failure</td>
<td>55</td>
<td>Memory and study skills</td>
</tr>
<tr>
<td>Limited general vocabulary</td>
<td>45</td>
<td>Vocabulary</td>
</tr>
<tr>
<td>Lack of motivation (time on-task)</td>
<td>45</td>
<td>Time on-task</td>
</tr>
<tr>
<td>Inability to keep up with or follow the teacher (time on-task)</td>
<td>45</td>
<td>Time on-task</td>
</tr>
</tbody>
</table>

Most educators forget to respond to the last question on the questionnaire (see Appendix 4), namely, what percentage of grade eight learners would you regard as being poor readers? The researcher also overlooked this response and forgot to remind participants to complete it. Although only nine educators completed this question the results give an indication of what educators think the prevalence of learners with reading problems, and by implication LDs in their mainstream classes are.

This particular question was included as the researcher was interested in ascertaining what educators thought the percentage of learners in their classes could be regarded as being poor readers or by implication LD. Three educators indicated that 50-59 percent of the children in their classes were poor readers. The lowest figure chosen by an educator was 20-29%. This bears a strong correlation to what the literature survey revealed (see chapter 2). One educator, whose response is not included in the table below, was rather undecided and ticked off three blocks, that is, 60-69, 70-79 and 80-89. It is thus evident that teachers hold different opinions on what constitutes reading difficulties, hence the difference in the estimated amount of learners with reading problems. See Table 14.
Table 14: What percentage of your grade eight learners do you regard as being poor readers?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Frequency of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 9</td>
<td></td>
</tr>
<tr>
<td>10 – 19</td>
<td></td>
</tr>
<tr>
<td>20 – 29</td>
<td>1</td>
</tr>
<tr>
<td>30 – 39</td>
<td>2</td>
</tr>
<tr>
<td>40 – 49</td>
<td>2</td>
</tr>
<tr>
<td>50 – 59</td>
<td>3</td>
</tr>
<tr>
<td>60 – 69</td>
<td></td>
</tr>
<tr>
<td>70 – 79</td>
<td></td>
</tr>
<tr>
<td>80 – 89</td>
<td></td>
</tr>
<tr>
<td>90-99</td>
<td></td>
</tr>
</tbody>
</table>

The last phase of the research design, that is, the evaluation of the assistance programme for secondary learners now follows.

5.4 EVALUATION OF THE ASSISTANCE PROGRAMME

The initial assistance programme (see Appendix 2 & 5.3.3) was expanded to include the strategies uncovered during the literature study. Most of the items in the initial assistant programme were included in the successive assistance programme. The Delphi technique was used to evaluate the successive assistance programme. The programme designed for this study will now just be referred to as the assistance programme, as the word successive was only used to describe the research process until the compilation of the assistance programme was completed (see Table 5 in 4.2.3).

The selection of the panel of experts and their contributions will be described in the next section of this chapter.
5.4.1 Selection of panel of experts

Although eight educators were originally approached, only six educators agreed to be part of the panel chosen to evaluate the assistance programme using the Delphi technique. The educators were chosen from three schools where the researcher had held focus groups discussions and who had shown a keen interest in the topic and had informally implemented some of the learning tips and strategies contained in the initial assistance programme. All of the educators are qualified teachers and have more than ten years teaching experience in the secondary school. Three colleagues from the education support centre where the researcher works were also chosen as experts. They regularly evaluate and compile intervention strategies for LD learners and displayed an avid interest in the work being undertaken by the researcher. See Table 15.

Table 15: Biographical details of the panel of experts

<table>
<thead>
<tr>
<th>Participant</th>
<th>Origin</th>
<th>Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educator A</td>
<td>School 4</td>
<td>12 years teaching experience in the secondary school, guidance counsellor and life skills teacher</td>
</tr>
<tr>
<td>Educator B</td>
<td>School 5</td>
<td>Qualified remedial teacher as well, was co-ordinator of the teacher support team (TST), now been appointed to education support services, has twenty years teaching experience in the secondary school</td>
</tr>
<tr>
<td>Educator C</td>
<td>School 5</td>
<td>Twenty years teaching experience in the secondary school, deputy principal at school, member of TST at school</td>
</tr>
<tr>
<td>Educator D</td>
<td>Education support centre</td>
<td>School psychologist who is currently completing his MEd in educational psychology, has experience in lecturing students at university level, has worked in support services for about six years</td>
</tr>
<tr>
<td>Educator E</td>
<td>Education support centre</td>
<td>Learning support facilitator, been in support services for about fifteen years, received extensive training in inclusion, OBE, multiple intelligences, trains ELSEN educators, and part of OBE training team in the province</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Educator F</td>
<td>Education support centre</td>
<td>School psychologist for about fifteen years, also a trained remedial teacher, doing PhD in multiple intelligences</td>
</tr>
</tbody>
</table>

The panel of experts thus consisted of three school-based educators and three education support centre-based educators. Comments on the overall format of the assistance programme will now be discussed. Please refer to appendix 7, unless otherwise indicated, throughout this discussion.

### 5.4.2 Comments on the overall format of the assistance programme

Only two of the six experts used the 24-page answer booklet (see Appendix 8) formatted for the evaluation of the assistance programme. Most experts chose to write their comments on the assistance programme itself. The main problem, in hindsight was that the educators had to wade through two booklets. The assistance programme itself consisted of 40 pages at that point. One of the shortcomings of the answer booklet was that it contained too many variables that participants had to consider and the format was rather confusing. It was at variance with the purpose: to make it easy for participants to respond. The researcher personally collected the responses, and used the opportunity to elicit verbal responses from the participants as well.

Educator F pointed out that the first question on the response booklet should have been two questions as it dealt with two different aspects. At that stage it was too late to change the question as all the experts had already returned their first responses. They did assure the researcher that they had considered both aspects of the question in their response.
Educator E was concerned with the arrangement of the diverse fields of the assistance programme and wanted to know if the researcher had a specific reason for the order of the programme. It was suggested that the order of the fields be rearranged so that the fields build up on each other. The suggestion was: ‘I would change it around i.e. reading fluency and comprehension are more higher order skills - so rather start with the pre-reading activities and re-arrange the order e.g.

- How to improve spelling
- How to follow directions
- How to improve spelling
- Remain on task
- Reading fluency
- Reading comprehension
- How to assist learners in completing assignments’

The order of the fields of the assistance programme was changed as the detailed reasons that Educator E gave found favour with the researcher who had overlooked the logical flow of the programme. The original order was: strategies to developing reading proficiency, strategies to improve vocabulary, strategies to help learners remain on-task, strategies to improve spelling, and strategies to improve memory. The order thus become: spelling, vocabulary, reading, time on-task and lastly, strategies to improve memory.

Two experts asked for a reduction in the use of numbering. They felt it was too confusing. They suggested the use of bullets to aid readability. They felt this would aid educators looking for specific strategies in the programme. In this manner information could be found at a glance and educators did not have to wade through a sea of words. Paragraphs were thus changed to point form with bullets for easy reading.

Educators A, E, asked for the format of the second paragraph on the first page of the programme to be changed as it was not clear to them what was to included in the
assistance programme. The format was changed from a paragraph to a point form to accommodate the suggestion made by the three experts.

Three educators asked for an index at the beginning of each section, as the wording of the various subheadings tended to be confusing, for example, learning strategies was often repeated. This was done to aid the readability of the programme. It was also suggested that each section of the programme start on a clean page for the sake of clarity.

Educator F was very concerned with technical aspects like numbering, underlining of information, boxing of information, the lack of linking sentences between headings. He did find the strategies complete and felt that something should be said about why the programme was so bulky.

One expert, Educator D, was concerned about how the information was going to be disseminated to the educators. Educator D expressed the idea that workshops would help as many educators needed coaching in these skills. It was felt that not all educators would know what to do by just reading up about a teaching or learning strategy. During the verbal feedback session, Educator D did however, concede that most items were clear and understandable and that educators would be able to teach or implement the item or strategy without much training.

Educator A wrote the word good twice next to the boxed information on how to teach a learning strategy. During verbal feedback the researcher was told that it was a good idea to include that kind of information, as most educators did not know how to teach a strategy to the learners. Some comments on the overall impression of the experts of the actual items included in the assistance programme will now be highlighted.

5.4.3 Comments on the actual items included in the assistance programme

The researcher wanted to know if the intervention strategy, hint, tip, or accommodation, often referred to, as item in this study was clear and understandable. The reason for that aspect was that the researcher was concerned about the language usage and needed reassurance that educators would understand the item. All experts
felt that the language was simple and, that regular educators would understand the item. The second aspect of the question wanted to ascertain if educators could implement the item without much training. Five of the six experts felt that educators could implement after reading about it, only educator D, as mentioned previously felt that educators would need some coaching for certain items.

Thus, one can say that all experts felt most of the items included were easy and that educators could implement them. No changes were suggested to any of the items listed; this can partly be attributed to the painstaking research the researcher had undertaken to determine what type of intervention strategies regular educators would find palatable.

Comments, made by the experts, on individual items included in the assistance programme will now be given.

5.4.3.1 Comments on items included in strategies to develop reading proficiency

Educator F questioned the feasibility of timed reading described in the last part of the reading section and the use of tape recorders in our schools as described in the section, another method of assisted reading. Educator F felt that these methods were too sophisticated for the schools and should be omitted. The researcher has left these strategies in as it is felt that educators are creative and innovative; also children do have access to tape recorders and many inexpensive digital watches have a timing mechanism. It was never the intention of the researcher to advocate for the use of expensive equipment. The opposite is in fact true: the researcher advocates cost-effective strategies.

Educators C and D asked for the format of the section named 7 main comprehension skills to be changed from the current paragraphs to a point form format to make it more reader friendly. Educators could see at a glance what they can do with the learners. Comments from the experts indicated that they felt the original paragraph format was too dense. These changes were affected.
Educator D felt that the programme should include the making of a big book as used in the whole language approach. This request was not followed up as focus group discussions with educators revealed that most educators were willing only to implement strategies that involved little effort.

As regards the section on assisted reading, Educator D felt it was important that learners be encouraged to tape themselves. Peer tape recordings were also some of the suggestions this expert made.

Educator C requested that scanning, study reading, self-questioning strategy, and some facts about reading and spelling, should be converted to a point form format, as the paragraphs were too dense. The paragraph format was retained; however the language was simplified and unnecessary details were deleted. Bullets were used to focus attention on the various headings.

Educator A felt that radio reading, tape recording of books, using an index card with and without a window were good strategies for educators to use to improve reading skills. This expert was taken with the simplicity of the strategies and felt that it stood a good chance of being implemented by educators.

Other suggestions on reading strategies that, were noted as comments made by the experts but not changed in the assistance programme are: box the information on repeated reading and sustained silent reading. The researcher decided to leave it unchanged as both sections contained too much information to box. It was felt that the box would not be effective in these sections.

5.4.3.2 Comments on items included in strategies to improve spelling

Two items in this field received comments. Educator A felt that the examples listed under spelling rules should be typed in bold. These changes were affected as it was felt that it would enhance the readability of this particular section. Educator A put two question marks next to the sentence: organise your lectures as a disorganised lecture is hard for learners to follow. This was omitted from the revised assistance programme
as the researcher felt it might offend educators. The purpose of this research is not to beat up on educators.

5.4.3.3 Comments on the section strategies to help learners remain on-task

The three school-based experts commented on the clock, radio, light technique. Educators A, B and C all requested that the information in this section be simplified or given in point form. The information was adjusted accordingly. The format was changed, the language was simplified, the information was arranged into paragraphs to reduce the sea of words and make the section more reader friendly.

5.4.3.4 Comments on the section strategies to improve memory

Under the section acrostics, the planet names were added to make the meaning of acrostics clearer, as suggested by Educator A. These changes were affected as the researcher felt it would enhance the impact of the example.

5.4.4 Comments on the assistance programme as a whole

From the preceding comments it is clear that most of the comments of the panel of experts was around the format of certain sections, and the order of the fields in the assistance programme. No comments were really made as to the actual items included in the programme. It could be that the experts regarded all the items as suitable, or perhaps they said things to please the researcher.

Some concluding comments on the assistance programme as a whole were:

"I did look at the text, it is very good. Very simple to understand" (Educator D).

'I think the strategies you suggest in this work can be implemented by teachers. Overall this work is clearly written and should be easy for teachers to implement. Well Done!' (Educator A).
'The strategies are complete and very detailed. Very comprehensive.' (Own translation) (Educator F).

5.5 SECOND EVALUATION OF THE ASSISTANCE PROGRAMME

The second evaluation of the assistance programme for secondary learners did not really evoke many comments from the panel of experts. They were all satisfied with the changes made and felt that the readability had been improved. Only Educator F commented on the amount of work still to be done in writing up the process. Three educators, two of who had been members of the panel asked if they could use the information in the assistance programme when they plan workshops with educators.

One colleague, who was not a member of the panel, requested a copy of the assistance programme when she saw another colleague evaluating it. This educator was tempted to try a few of the strategies with LD learners. Her main comment was that the vocabulary contained in the strategies themselves should also carefully be explained to LD learners. One should not assume that LD secondary learners are familiar with or understand the terms and concepts in the strategies. The researcher regards the research as a meaningful undertaking.

5.6 CONCLUSION

The names of schools and educators have been replaced with letters and numbers to ensure anonymity. Focus group discussions at schools revealed that educators hold diverse understandings of LDs and intervention strategies. Despite the prevailing policies on OBE and inclusive education, educators are still uncertain about whether they should use intervention strategies or not. It is also apparent that educators understand and implement interventions for LD learners differently, or sometimes not at all. It is evident to the researcher that it is more than just a mere matter of educators acquiring new skills to deal with the diverse learner needs in the classroom: educators will have to redefine their role in the classroom. Educators have evaluated a large proportion of the information in this chapter and it is hoped that it will serve as an impetus for educators to start reshaping their professional identities.
CHAPTER 6

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

6.1 INTRODUCTION

This study was undertaken in an attempt to alleviate the plight of the LD secondary learner. Chapter five describes the empirical study. Chapter six contains a summary of the literature study and the conclusions drawn from the empirical study. Limitations of the study will be discussed and recommendations will be made.

6.2 SUMMARY OF THE LITERATURE STUDY

Chapter one provides the introduction, analysis and statement of the problem of this research study while chapters two and three comprise the literature study. In the analysis of the problem, the awareness of the problem is clearly outlined (see 1.2.1), that is, LD adolescents are having a tough time in mainstream classrooms and educators do not feel equipped to deal with such learners. The effects of learning disabilities on adolescents are listed in the investigation of the problem (see 1.2.2) where the current situation in schools is also highlighted. The multi-faceted nature of the phenomenon of learning disabilities is acknowledged (see Table 1). The problem is stated as being the development of an assistance programme, that could be used by regular secondary educators, to improve the academic tasks of mainstreamed LD secondary learners (see 1.2.3). The general, specific and indirect aims of the research are mentioned (see 1.3). All the terms in the title of the dissertation are defined (see 1.4) and the abbreviations used in the study are listed (see 1.5). The method of research is briefly outlined (see 1.6) and the preference for using the internationally accepted term of learning disabilities despite the trend towards using terms like learning barriers and learning difficulties is also explained in chapter one.

Besides briefly describing the historical background of learning disabilities (see 2.2), chapter two explores the very nature of learning disabilities. Chapter two also touches on the difficulty of finding a common definition of learning disabilities (see 2.3). LDs manifest itself in many guises: uneven growth pattern, difficulty in academic tasks,
discrepancy between achievement and potential and neurological dysfunctions (see 2.3.1 – 2.3.4). The characteristics of the learning disabled secondary learner are listed and described as: poor academic achievement, cognitive and metacognitive deficits, social interaction deficits, motivation deficits, attention deficits involving poor spatial perception and timing difficulties, and poor motor abilities (see 2.6). It is evident from the literature study that the LD secondary learner is unable to cope with the rigorous demands of secondary school (see 2.7). Gaining information from written materials and lectures, demonstrating knowledge through tests, expressing information in written form, and working independently with little feedback are hard for LD learners (see 2.7.1 – 2.7.4). Implications of these problems on the academic performance of LD learners rounds off chapter two (see 2.7.6).

Chapter three focuses the attention on intervention models used with LD learners in various settings, some of which have proven to be ineffective or inappropriate now. Traditional assistance models (see 3.2) and contemporary approaches and models (see 3.3) are discussed with a view to gaining insights that will guide the development of a homegrown assistance programme. Contemporary approaches that have guided and shaped the researchers thinking are described in this chapter, namely: learning strategies approach, strategy instruction model, Zigmond’s model, collaborative models, classroom accommodations, modifications and compensatory teaching (see 3.3.1 – 3.3.3). A critique of all these models precedes the section of the chapter that deals with the emerging role of the educator amid the current educational transformation trends (see 3.6). OBE and the concept of inclusive education are mentioned in passing. What is important to note is that educators are now expected to provide support for the diverse learning needs of all learners in their classes. This is not as easy as it sounds because it means that educators have to identify the learning needs and plan and implement intervention strategies, a role which they have not been trained for. Educators are now expected to be facilitators of learning and are supposed to help learners accept responsibility for their own learning (see 3.6.2.1 – 3.6.2.5). The value of the models and approaches studied for this research for the development of a RSA programme is explained (see 3.7). A description of the writer’s programme is supplied (see 3.8) and the similarities and differences to other models and approaches are also given (see 3.9).
6.3 SUMMARY OF THE EMPIRICAL RESEARCH

The research problem, aims and rationale of the empirical research are clearly stated in the opening pages of chapter four (see 4.2). The research design plan that guided this study is supplied (see 4.3 & Table 5) and the data collection methods are explained (see 4.4). Notes on qualitative and intervention research as it applies to this study can also be found in chapter four (see 4.3.3). Details of how the unstructured in-depth interviews, focus group discussions, group administered questionnaires and the Delphi technique were used as tools, are all explained in broad terms (see 4.4.1 – 4.4.5). Ethical considerations like obtaining informed consent from participants and protecting vulnerable participants were discussed (see 4.5). We learnt that educators should also be regarded as vulnerable research participants. The responsibility and competence of the researcher was noted as of paramount importance (see 4.5.4) as the validity of the research findings depends on ethical behaviour on the part of the researcher. Violations of privacy and the notion of confidentiality were handled (see 4.5.3). How to deal with publications and the dissemination of knowledge to prevent misrepresentation by media and unscrupulous individuals was also touched on (4.5.5). A few notes on the value of cooperation between colleagues (see 4.5.6), the restoration of research participants (see 4.5.7), and the analysis of data (see 4.8) can be found in the concluding pages of chapter four. The varied roles that the researcher played in the research undertaking are highlighted (see 4.6) and the contributions that educators made during the collaboration process (interviews, discussions, completion of questionnaires, and evaluating the assistance programme) are duly noted.

Chapter five presents the findings of the empirical research. This discussion starts with the uncovering of simple intervention techniques used by an educator that prompted the initial research. Unstructured in-depth interviews, was an invaluable tool in this regard (see 5.2). Chapter five describes the progress of the focus group discussions (see 5.3 – 5.3.6), and the insights gained during the collaboration process with educators: schools are busy places and it is not easy to get a staff to commit to a date for focus group discussions. Educators are uncertain about the intervention strategies for LD mainstreamed learners and have many questions about education and the role they have to play. Educators also view teaching accommodations as a lowering of the standards. It was also revealed during the empirical study that
educators are reluctant to employ intervention strategies that they regard as requiring too much effort on their part. However, empirical research also uncovered the fact that a small percentage of educators in some schools are already using intervention strategies that do make a difference in the life of the LD adolescent (see 5.3.3.4). The challenge remains to extend this trend to all educators at all schools. Educators do recognise that secondary learners need assistance with note taking, memorising information, acquiring reading skills, expanding their vocabularies to broaden their understanding, and learning spelling tactics to enhance the quality of their written work (see 5.3.6 and Tables 12 &13).

A panel of experts comprising solely of educators evaluated the assistance programme and found it to be teacher-friendly and usable. Biographical details of the panel of experts that evaluated the assistance programme are supplied (see 5.4.1 & Table 15). Comments on the overall format of the assistance programme (see 5.4.2) and comments on actual items included in the assistance programme (see 5.4.3) are given. The second evaluation of the assistance programme and the few comments received are discussed in the concluding pages of chapter five (see 5.5).

The general aim of the research study was to garner enough information from the literature study and through a collaboration process with educators to develop an assistance programme. The specific aim to develop an assistance programme containing a variety teaching and learning strategies to assist the LD secondary learner was achieved. The programme was compiled using information from the literature study and from insights gained from collaboration with educators.

Several problematic areas were uncovered during the research. Firstly, during the empirical research it became clear to the researcher that many educators will need in-service training to implement strategies for learning disabled adolescents in secondary mainstream classes.

Another area of concern is the fact that although educators maintain that they can identify children who are LD or are experiencing learning difficulties, they are not always aware of the nature of LDs. LD secondary learners still receive very little
support from regular classroom educators. The researcher feels that educators are reluctant to implement strategies as they feel they lack the skills required. Many also do not regard it as their function despite new educational policies. Some educators feel the learners will best be served by placement at a special school. It is clear that educators have not received adequate training for the new role they are to assume. There is a huge gap between policy and the implementation thereof at classroom level.

Very few schools have school policies in place for support to the LD learner. Most educators are left to their own devices. Educators feel alone and overwhelmed and also need support. Mainstream schools face the dilemma of supporting the LD learner without doing an injustice to the other learners.

Teacher assistance teams, as mentioned in recent policy documents, have not been established yet at all schools. Educators are not clear about the role these teams can play in providing support for the LD learner.

Despite initial interest in the intervention strategies in the initial assistance programme, educators still do not feel confident or commit to the implementation thereof.

The researcher now realises that the assistance programme developed for this study will probably only be used by about one sixth of educators. Personnel at education support level seem eager to use information from the assistance programme when working with, for and alongside educators.

6.4 LIMITATIONS OF THE STUDY

South Africa is a multi-cultural country and the assistance programme is not modified to cope with all the cultural differences in our country. The study was conducted in English, which means that some of the information will not be applicable to other language groups.
The fact that this small-scale study was limited to a specific geographical setting that cannot be considered to be representative of the total population means that one needs to be cautious about generalising conclusions drawn from the study. The findings can be used to provide direction for future research on this topic.

Empirical evidence was not sought or gained that proves that implementation of the assistance programme would alleviate the plight of the learning disabled secondary learner.

New ideas may be accepted in principle, but how they become translated into action and implemented so that LD secondary learners benefit, remains a challenging area of research.

Teaching demands continuous adaptations of the curriculum to address the needs of the learners. No proper understanding of how educators change their practice was gained or considered. This aspect needs to receive serious consideration.

Learner opinions were not sought or canvassed. This assistance programme is after all about the LD secondary school learner. Would learners acquire coping strategies if educators used these intervention still needs to be investigated. Despite the failings of OBE, it does advocate that learners need to know about themselves as learners and their preferred manner of learning.

Subject or learning area related strategies were not included in the assistance programme. This was a request from educators during discussions that could not be worked into this study.

6.5 IMPLICATIONS AND RECOMMENDATIONS

Some implications of the research will be mentioned and then a few recommendations will be made.

Some implications of the research findings are:
• It is evident from the empirical research and literature study that LD adolescents are experiencing difficulties with the demands made on them at secondary school level. LD adolescents experience academic problems due to a lack of skills.

• The implementation of policy initiatives is important if educational reforms are to take place at the chalk face where it really matters. The way educators respond to the problems of LD may have lasting adverse or positive effects on learners.

• We are living in a changing world. Changes produce new challenges for educators and learners. Knowledge of change management is an essential ingredient if we are to be successful in our attempts at educational transformation.

• Schools lack the capacity to implement major changes and there are all kinds of implementation difficulties. It is not easy to change the way educators work. Teaching is essentially a personalised view of teaching and educators need to reflect on their practice. Despite the easy nature of the strategies, the problem still remains – how to get educators to change their way of teaching and adapting new practices.

• Personal transformation of the educator is what is required: educators will need to develop a new vision, perspective, purpose and skills. Educators need to become life long learners as embodied in OBE.

• The success of the assistance programme depends largely on educators for implementation. Many educators have not yet accepted this expanded role.

Limitations (see 6.4) and implications of the study call for the following recommendations:

• Lack of subject related strategies needs to be researched so that subject educators will be encourage to use intervention strategies for LD learners and learners experiencing learning difficulties.
• The results of this study reveal that LD secondary learners are at risk of failure especially because of poor reading skills. Further research with a bigger group could determine if these findings can be generalised to the broader population of LD learners. Further research in this regard is thus urged.

• In-service training of all educators should receive top priority. In-service training needs to focus on: how educators can develop an awareness and understanding of the LD adolescent, knowledge about the nature of learning disabilities, the wide variety of characteristics of the LD secondary learner, the far reaching implications of the LD on the secondary school learner, and how to offer meaningful support to these learners.

• Further research on how educators acquire new skills should be undertaken with the view to assisting teacher to acquire the multitude of skills that teaching now requires.

• The development of workshops to facilitate personal and professional growth of regular mainstream educators could be researched. In-service training needs to bring about a mind shift and the acquisition of new skills.

• It might be worthwhile to conduct similar studies in some of the other official languages of RSA. Translating the learning and teaching strategies into other languages is also recommended so that all LD children can benefit, irrespective of the language they speak and learn in.

6.6. CONCLUDING REMARKS

The empirical research undertaken shows that not all educators are ready to implement the new policy directives that advocate the support of all learners in the classroom, especially those who are experiencing learning difficulties. It is hoped that educators will use the assistance programme as a start when they prepare themselves for their new role.
Educators can be regarded as the key role players in bringing about the successful implementation of the new curriculum: this assistance programme cannot take the place of in-service training, but it could be used as a resource when training educators. It is difficult to bring about changes at classroom level: educators offer passive resistance behind their classroom doors. Educators could practice strategies from the assistance programme in the safety of their classrooms.

Teachers’ attitudes and beliefs impact on how they view and implement new educational policies. Perhaps parts of this study will motivate educators to take the plunge and implement teaching accommodations and strategies without fear of lowering the standards of acceptable teaching practice. Learners will enjoy learning and teachers might be re-invigorated when the diverse learning needs of all learners are met. Classrooms will change.

Finally it is hoped that the assistance programme contained in this dissertation can aid the current educational reform process by helping educators to acquire knowledge and skills relevant to the teaching now expected of them.
BIBLIOGRAPHY


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APPENDIX 1: QUESTIONS USED DURING FOCUS GROUP DISCUSSIONS

1. What is the ultimate aim of education?
2. How important is a neat handwriting?
3. How important is spelling?
4. What basic reading skills are essential for daily living?
5. How does one develop self-esteem in children?
6. How does one motivate children?
7. How much of the maths (or any other subject) taught at school does the average person use in everyday life?
8. How does one teach problem solving to children?
9. What is the value of writing copious notes from the board?
10. Should one give marks for a neat notebook? If yes, what percentage of the total marks should it be?
11. Why are oral examinations not allowed at school?
12. What is the purpose of exams?
13. Are we overemphasising reading and writing skills to the detriment of the development of other skills?
APPENDIX 2: INITIAL ASSISTANCE PROGRAMME THAT EDUCATORS WERE ASKED TO EVALUATE AND MAKE RECOMMENDATIONS ON (see 5.3.3).

LEARNING DISABILITIES: SUGGESTED REMEDIATION METHODS

A. GENERAL

1. Set learning priorities and teach accordingly.
   (These students cannot master everything).

2. For all class sessions, review previous materials, review materials to be presented, and help students to SUMMARISE the material just presented.

3. Eliminate classroom distractions.

4. Whenever possible, make alternative assignments – for incorrect or incomplete work, give an alternative assignment, not a redo of the original assignment.

5. Notice and respond to verbal and nonverbal signs of anxiety or frustration.

6. Have students helpers assist students.

(6 items; numbered 1 – 6)
B. GIVING DIRECTIONS

1. Take the TIME to give GOOD DIRECTIONS.
   • Be concise and give sequential steps for students to follow.
   • Have the learners' attention before you start.
   • Tell the students the purpose of the activity.
   • Give direct and uncomplicated directions.
   • Make sure written directions are legible.

2. VARY THE WAYS TO GIVE DIRECTIONS
   • Oral - direct from teacher or recorded tape
   • Written - on chalkboard or overhead projector
   • Demonstrate what has to be done.

3. CLARIFY DIRECTIONS BEFORE STARTING THE ACTIVITY
   • Work on an example together.
   • Display a completed project.
   • Encourage questions.
   • Have students start the activity, then walk around the room checking on student progress.

   Encourage students to write down, copy, or tape record directions.

(Besides the numbered items, count each dot as an item. Also count the italic sentence as one item). (16 items)

C. HELPING CHILDREN GET ORGANISED

1. Encourage students to keep only materials necessary for class on their desks.
2. Set TIME LIMITS for classroom activities.
3. Display due dates for assignments in class.
4. Give several short classroom activities instead of one long activity.

(4 items, numbered 1 – 4).
D. STUDY HINTS AND SELF MONITORING

1. Provide and teach memory tricks.

2. Teach and encourage students to use all the learning modalities (visual, auditory, and motor [note-taking]).

3. Teach students to proofread assignments and tests. The teacher or student helper could read the student’s work back to him until the student is capable of proofreading his own work.

4. Help students learn the ‘technical’ vocabulary of your subject.

   - Children have limited experience and it is easy for the teacher to ASSUME that experience is there when it is not!
   - Teachers use their subject language register frequently – learners don’t understand it.

5. Give the learner ACTION STEPS for the assigned project.

   E.g.  
   Collection of pictures  
   Find information (books, magazines, Internet, newspaper, etc.)  
   Draw your sketches  
   Fill in labels  
   Read the information gathered and underline the main facts  
   Write down or type main facts  
   Don’t forget to leave spaces for your pictures  
   Number your pages  
   Draw up your index  
   Compile your list of sources  
   Paste in pictures  
   Staple pages together or arrange pages in a flip file, etc.

   (5 items, numbered 1 - 5).
E. TO COMPENSATE FOR READING PROBLEMS

1. Explain the purposes of reading: critical analysis, overview, pleasure and appreciation, skim for main ideas, scan for specific information, and so on.

2. Find materials paralleling the textbook but written at a lower reading level.

3. Tell the students to use a ruler or blank white index card to hold reading place.

4. Have the students read silently, then aloud.

5. Have the student read silently and follow along while listening to a tape recording of a good reader.

(5 items, numbered 1 – 5).

F. TO COMPENSATE FOR VISUAL-MOTOR PROBLEMS

1. Encourage the use of a good tape recorder.

2. Lower standards of acceptable writing.

3. Encourage the student to use a computer or typewriter.

4. Tape lesson material and assignments for learners to use.

5. Encourage students to use pens and pencils that produce dark black lines.

6. If the student is expected to write in class, allow sufficient time or shorten assignment. Allow student to paste photocopied notes in his book.

7. Draw a border around each page, worksheet or transparency.

(7 items, numbered 1 – 7).
G. TAKING AND USING NOTES

In order for a student to take notes effectively, he must have the ability to IDENTIFY MAIN IDEAS and IMPORTANT DATA within a written or oral presentation and relate those. (1 item)

TIPS FOR NOTE TAKING : LEARNERS

- Write down the main ideas of what you have heard or read.
- Write your notes in your own words.
- Remember that notes do not have to be detailed.
- Try to spend 80 – 90% of your reading or listening and only 10% of your time writing notes.
- Do not try to take notes only at the end of chapters or at class breaks. Rather do so after meaningful sections.
- Write in words and phrases. Your notes are your own, so write them in the quickest way that makes sense for you.

TIPS FOR TEACHERS:

Teach a short hand abbreviation system using notations like:

w/  =  with
ie  =  that is
:.  =  therefore
&/+ =  and
=  =  is equal to
e.g. =  for example
≠  =  not equal to
imp. =  important, and so on.

(Count each dot as one item. Count tips for teachers as one item).

(8 items)
H. LISTENING SKILLS

Did you know:

We spend approximately 75% of our time speaking and listening?
The primary goal of listening is, understanding?
Listening instruction should be infused into other curricular areas?
More than 50% of the secondary school day is spent in listening?

ACTIVE LISTENING MEANS keeping thoughts directed on what is being said.
Teachers can encourage active listening in students by:

- Give each child a checklist. Children have to tick off each topic as it is discussed. (1 item)
- Have a 'word' every day that the children have to listen for. When the word is mentioned the children should all perform some activity e.g raise their right arms. (1 item)

TIPS FOR TEACHERS:

1. Teach students to listen for information.
2. Teach student's organisation by regularly summarising what has been said.
3. Teach students to be critical listeners.
4. Teach students to listen for appreciation:
   - What is the speaker hinting at?
   - What is the speaker saying indirectly?

(Count the two facts marked as items plus facts numbered 1 – 4)

(6 items)

Summary of number of remedial items in initial assistance programme

<table>
<thead>
<tr>
<th>Section A</th>
<th>Section B</th>
<th>Section C</th>
<th>Section D</th>
<th>Section E</th>
<th>Section F</th>
<th>Section G</th>
<th>Section H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>16</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>6</td>
<td>57</td>
</tr>
</tbody>
</table>
APPENDIX 3: FORM USED TO ASSESS REMEDIAL ITEMS IN INITIAL ASSISTANCE PROGRAMME

1. Can it be implemented?

<table>
<thead>
<tr>
<th>NOW</th>
<th>NEAR FUTURE</th>
<th>DISTANT FUTURE</th>
</tr>
</thead>
</table>

2. Would YOU be able to implement it?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>MAYBE</th>
</tr>
</thead>
</table>

3. How much effort would it require?

<table>
<thead>
<tr>
<th>NOT MUCH</th>
<th>AVERAGE AMOUNT</th>
<th>TOO MUCH</th>
</tr>
</thead>
</table>

4. Can you suggest any modifications to the 'remedial' item that might make it work for you?

<p>| | | |</p>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Which five remedial items are you WILLING and ABLE to implement right now?

<p>| | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
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<td>2</td>
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<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
APPENDIX 4: QUESTIONNAIRE USED TO DETERMINE THE EFFECTS OF POOR BASIC READING SKILLS ON SCHOLASTIC PERFORMANCE

How does poor reading skills affect the LD secondary school learner?
Poor basic reading skills affects scholastic performance and might eventually lead to failure in learning area content, or grade failure at the end of the year.

**CHOOSE 7 ITEMS THAT YOU THINK AFFECTS THE CHILD THE MOST.**

<table>
<thead>
<tr>
<th>Affects of poor basic reading skills on LD or non-LD secondary learner</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lack of motivation (reluctance to engage in learning tasks)</td>
<td></td>
</tr>
<tr>
<td>2 Reduced self-esteem (behavioural manifestations)</td>
<td></td>
</tr>
<tr>
<td>3 Lowered confidence (passive, refusal to attempt new/difficult tasks)</td>
<td></td>
</tr>
<tr>
<td>4 Emotional problems (depression, performance anxiety, labile)</td>
<td></td>
</tr>
<tr>
<td>5 Limited independent learning (demands attention)</td>
<td></td>
</tr>
<tr>
<td>6 Inability to keep up with classmates</td>
<td></td>
</tr>
<tr>
<td>7 Inability to keep up with/follow teacher</td>
<td></td>
</tr>
<tr>
<td>8 Inadequate involvement in learning process</td>
<td></td>
</tr>
<tr>
<td>9 Lack of understanding the topic/ text material</td>
<td></td>
</tr>
<tr>
<td>10 Difficulty in completing written assignments/homework on time</td>
<td></td>
</tr>
<tr>
<td>11 Limited general vocabulary impacts on oral expression</td>
<td></td>
</tr>
<tr>
<td>12 Limited learning area specific vocabulary impacts on learning</td>
<td></td>
</tr>
<tr>
<td>13 Limited general vocabulary impacts on written expression</td>
<td></td>
</tr>
<tr>
<td>14 Limited learning area specific vocabulary impacts on written work</td>
<td></td>
</tr>
<tr>
<td>15 Inefficient and ineffective mastery of learning area content</td>
<td></td>
</tr>
<tr>
<td>16 Learning area failure, e.g. LLC or HSS, and so on – can’t read or comprehend test/examination question paper</td>
<td></td>
</tr>
</tbody>
</table>


What percentage of grade 8 learners would you regard as being poor readers?

Please tick the appropriate block.

What is the role of the learning area educator?

• To improve the reading ability (fluency and/or comprehension) of learners?

• To help the learner survive in the mainstream classroom in spite of poor reading ability?

'Today, an estimated 80-90% of the school curriculum is based upon textbooks. Textbook oriented activities account for about 75% of all classwork and 90% of all homework' (Hernandez 1989:140).

Research reveals that the readability levels of most textbooks exceed the grade level at which they are used, and the flow and organisation of some textbooks are inconsiderate to the reader (Ariel 1992:153; Mercer 1992:352).
APPENDIX 6: QUESTIONNAIRE USED TO PRIORITISE THE FIVE FIELDS OF THE ASSISTANCE PROGRAMME

An assistance programme for the LD learner in the secondary school.

LD secondary learners lack the skills to cope with the demands of secondary school. From the list of possible ‘problems’ that the LD secondary learner might experience, choose 7 that you regard as the most important /feel that the educator can help the learner with. Please tick the appropriate block

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reading problems (fluency and/or comprehension – gaining information from written text)</td>
</tr>
<tr>
<td>2</td>
<td>Mathematics (reasoning and/or calculations)</td>
</tr>
<tr>
<td>3</td>
<td>Poor handwriting skills</td>
</tr>
<tr>
<td>4</td>
<td>Inadequate writing skills – language usage, syntax, generating ideas</td>
</tr>
<tr>
<td>5</td>
<td>Ineffective study skills or learning strategies</td>
</tr>
<tr>
<td>6</td>
<td>Poor note taking skills (notes chronically incomplete)</td>
</tr>
<tr>
<td>7</td>
<td>Poor test taking skills (class tests/examinations)</td>
</tr>
<tr>
<td>8</td>
<td>Limited vocabulary (general and/or learning area specific)</td>
</tr>
<tr>
<td>9</td>
<td>Spelling difficulties</td>
</tr>
<tr>
<td>10</td>
<td>Memory problems, can’t follow directions, forgets instructions</td>
</tr>
<tr>
<td>11</td>
<td>Displays socially unacceptable behaviour e.g disrespect, impulsive, socially inept, withdrawn, unpopular with peers</td>
</tr>
<tr>
<td>12</td>
<td>Behaviour problems, disruptive in class, aggressive, clowning around</td>
</tr>
<tr>
<td>13</td>
<td>Lacks motivation (passive)</td>
</tr>
<tr>
<td>14</td>
<td>Attention deficits (timing and direction)</td>
</tr>
<tr>
<td>15</td>
<td>Difficulty in remaining on-task</td>
</tr>
<tr>
<td>16</td>
<td>Inability to gain information from lectures/teacher presentations</td>
</tr>
<tr>
<td>17</td>
<td>Lacks teacher-pleasing behaviour</td>
</tr>
<tr>
<td>18</td>
<td>Inability to complete and/or hand in projects and assignments</td>
</tr>
<tr>
<td>19</td>
<td>Concentration problems</td>
</tr>
<tr>
<td>20</td>
<td>Working independently with little teacher feedback</td>
</tr>
</tbody>
</table>

Thanks for your cooperation and willingness to participate in this study.
APPENDIX 7: ASSISTANCE PROGRAMME EVALUATED BY MEANS OF THE DELPHI TECHNIQUE

An assistance programme for the learning disabled child in the secondary school

The following programme contains a number of selected strategies and ideas for regular secondary educators to use in mainstream classrooms with LD learners. Research indicates that underachieving learners and regular learners who do not experience any learning difficulties also benefit from learning strategies.

The programme contains strategies to:

- Improve **vocabulary**
- Improve **spelling**
- Address the acquisition of **reading** proficiency
- Help learners remain **on-task**
- Improve **memory**

A learning strategy has to be explicitly taught and practiced several times for successful acquisition by learners. A few points on how to teach a learning strategy are supplied in the box below.

**HOW TO TEACH A LEARNING STRATEGY**

- Describe the strategy to the learners and discuss it with them.
- Model the strategy for the learners by thinking aloud during each step.
- Allow the learners to verbally rehearse the steps of the strategy till fairly automatic. Help them memorise it.
- Let the learners apply the strategy, using educator chosen examples. Give feedback to improve performance of the strategy.
- Allow more time for practice. Use grade appropriate materials. Give feedback.
- Create opportunities for multiple use of the strategy to facilitate generalisation.

Source: compiled using information from Bender (1993:186); Graham and Harris (1999:20); and, Kirk, Gallagher and Anastosiouw (1993:248).
HOW TO USE THIS PROGRAMME

A few ways to use this programme will now be described. Educators should feel free to create their own programmes to meet the diverse learning needs of their learners.

One way of using the programme would be to select a single strategy in an area where the learners display a glaring lack of skills and teach it to learners till they have acquired that particular skill. Another way could be to choose about four strategies from a section after determining the learner’s needs. Choose strategies that you find palatable, feel comfortable about teaching, and that most of the learners in the class will benefit from. Draw up a time table in accordance with the time you have available. The time table should reflect the number of sessions per strategy, dates when you propose teaching the sessions and the total number of sessions. Plan for practice sessions as well. To summarise:

- Determine the learner’s needs.
- Determine how much time you have to teach the strategies.
- Choose a few strategies, preferably not more than four, from a section to teach to the learner(s).
- Draw up a time table for the teaching of the chosen strategies, e.g., 12 x half hour sessions in the first quarter, and so on.
- Plan follow-up sessions to encourage generalisation.

After teaching the strategy and implementation thereof by the learners, evaluate the strategy for effectiveness. Modify the strategy if necessary.

You could compile a more elaborate programme spanning all five sections according to the needs of the learners. Pre-reading activities like vocabulary could precede higher order skills like reading comprehension. Your programme could be drawn up containing strategies in the following manner:

- Strategies to improve vocabulary
- How to follow directions and instructions
• How to improve memory
• How to improve spelling
• How to remain on-task
• How to develop reading fluency
• How to develop reading comprehension

A team of educators from one particular grade could collaborate and decide what skills to teach the grade. If the whole school approach is to be used, a group of educators could decide what skills will be focused on in various grades.

Alternatively, educators could opt for as many teaching strategies and modification ideas as they deem fit to address the learning needs of their learners.
7.1 STRATEGIES TO IMPROVE VOCABULARY

CONTENTS

7.1.1 Some facts about reading and vocabulary

7.1.2 Learning strategies to improve vocabulary

Pre-reading vocabulary learning strategies
- Preview and pre-learn a vocabulary list
- Discussion of ideas and vocabulary
- Computer presentation of words and definitions
- Look up words using a dictionary

Vocabulary learning strategies during reading
- Context clues and the SCANR method
- Word identification strategy: DISSECT
- The SCUBA-D method

Other vocabulary learning strategies
- Keyword method
- Word groups or semantic groupings
- Vocabulary games
- Precision teaching: SAFMeds and VOCABULARY SHEETS

7.1.3 Compensatory teaching strategies and modification ideas to improve vocabulary
- Some general strategies to improve vocabulary
- Strategies to enhance (vocabulary) content mastery
7.2 STRATEGIES TO IMPROVE SPELLING

CONTENTS

7.2.1 Some facts about spelling

7.2.2 Learning strategies to improve spelling

7.2.2.1 Self-correction strategies for learners
- Write it several ways
- Learn five new words at a time
- List of unconventional and conventional spelling
- Word bank or personal dictionary
- Word games
- Using a proof reader

7.2.2.2 Other spelling learning strategies
- Word clusters
- Flashcards
- 4-step Look-Cover-Write-Check approach
- Skywriting
- Spelling rules

7.2.3 Compensatory teaching strategies and modification ideas to improve spelling
7.3 STRATEGIES TO DEVELOP READING PROFICIENCY

CONTENTS

7.3.1 Some facts about reading

7.3.2 Learning strategies to develop reading proficiency

7.3.3 Strategies to develop reading fluency
   • Assisted reading
   • Repeated reading
   • Sustained silent reading

7.3.4 Strategies to develop reading comprehension
   • Skimming
   • Scanning
   • Study reading
   • 7 main comprehension skills

Other learning strategies to develop reading proficiency
   • Collaborative strategic reading (CSR)
   • Visual imagery strategy
   • Self-questioning strategy
   • Recognition of 4 types of comprehension questions
   • A textbook reading strategy
   • IQ-WHO technique to evaluate content in a chapter
   • Recognising reading patterns

7.3.5 Compensatory teaching strategies and modification ideas to develop reading proficiency
   • Reading guide
   • Advance organiser
7.4 STRATEGIES TO HELP LEARNERS REMAIN ON-TASK

CONTENT

7.4.1 Some facts about on-task behaviour

7.4.2 Learning strategies to help learners remain on-task

Strategies to increase on-task behaviour in the classroom
- Clock, radio, light technique
- Cue cards

Strategies to improve note taking
- Use abbreviations and symbols
- AWARE note-taking strategy
- Understanding the educator's cues

7.4.3 Compensatory teaching strategies and modification ideas to help learners remain on-task

7.4.3.1 Compensatory teaching strategies to help learners remain on-task
- Before the lesson
- During the lesson
- After the lesson

7.4.3.2 Compensatory teaching strategies to improve note taking
7.4.3.3 Compensatory teaching strategies to improve lectures
7.4.3.4 Modification ideas to improve directions and instructions
7.4.3.5 Teaching accommodations to improve the quality of classroom assignments or projects
7.5 STRATEGIES TO IMPROVE MEMORY

CONTENTS

7.5.1 Some facts about memory

7.5.2 Learning strategies

• Specific memory aids (mnemonics)
  • Rhymes
  • Patterns
  • Acronyms
  • Acrostics

• Increasing wait time before expecting an answer
• Rehearsal techniques
• Test taking tips for learners

7.5.3 Compensatory teaching strategies and modification ideas to improve memory
STRATEGIES TO IMPROVE VOCABULARY

7.1 Some facts about reading and vocabulary

When learners enter secondary school, the emphasis is no longer on vocabulary building, yet this skill is vital for learners to do well in tests and examinations (Macon a.[13]). Having to learn new and complex concepts mainly from lectures and textbooks is extremely challenging for LD secondary learners (Stump, Lovitt, Fister, mp, Moore & Schroeder 1992:207).

It is estimated that least able readers read 100,000 words per year, average readers id about 1,000,000 words per year and voracious readers read about 10,000,000 words per year. There appears to be a decline in the vocabulary skills of some learners with reading disabilities as their exposure to written texts is more limited than their peers. Most reading-disabled learners have limited reading vocabularies and difficulty with reading comprehension. Very little instruction in vocabulary may be taking place in the regular classroom (Carlisle 1993: 97-98).

Fluency in word recognition and the understanding of words contributes to increased comprehension; therefore vocabulary instruction for secondary learners is an important aspect of the language and content area classes. Many educators mistakenly assume that readers will automatically assimilate new words as they are introduced in the reading materials. Learners need direct instruction of almost any kind in vocabulary building. The majority of words encountered at the secondary level are of a technical nature related to the specific subject. Words and concepts are interrelated; so understanding vocabulary helps to lay the foundation for understanding concepts, especially in content areas (Schloss, Smith & Schloss 1990:247).

The estimated number of words in printed school English is about 88,500: educators should focus on teaching key vocabulary words as it may be impossible to teach every unknown word, given the large proportion of unknown words contained in textbooks and learning materials (Schloss, Smith & Schloss 1990:247). An average grade nine learner encounters between 3,000 to 4,000 new vocabulary words in one school year and they may learn as many as 1,000 new words a year; the process of inferring word
meanings from the context requires multiple exposure to that word (Carlisle 1993: 99). Although no data is available for our other official languages, the figures quoted gives one an indication of the vast volume of new words a learner has to learn every year.

7.1.2 Learning strategies to improve spelling

Learning strategies for improving vocabulary include pre-reading vocabulary learning strategies, strategies during reading, and other vocabulary learning strategies like the keyword method and vocabulary games, and so on.

Pre-reading vocabulary learning strategies

The following pre-reading learning strategies will be discussed: preview and pre-learn a vocabulary list, discussion of ideas and vocabulary, computer presentation of words, and looking up words in a dictionary.

• Preview and pre-learn a vocabulary list

Preview and pre-learn a vocabulary list for each chapter that is covered in the text (Macon [S.a.]:13) as each learning area has it's own terminology that varies according to grade levels (Young & Savage 1989:94). Educators could introduce the new vocabulary words before learners start to read the textbook (Rhodes & Dudley-Marling 1988:147). Previewing a vocabulary is important as the learner cannot understand what he has read unless he understands the commonly used words in a learning area; for example, words like agriculture, climate, manufacture, territory, conservative, amendment, inauguration are commonly used in Human and Social Sciences (HSS) (Isaacson & Gleason 1997:190; Young & Savage 1989:94-95).

Educators can assist learners to expand their vocabularies by having a vocabulary list, especially containing technical vocabulary, for each chapter that is covered in the text. If presented before the chapter it will assist learners as they read the material for the first time (Gearheart 1981:264; Gersten 1998:167; Macon[S.a]: 13).
• **Discussions of ideas and vocabulary**

Whole class or small group *discussions of ideas and vocabulary* provide a framework for learners for understanding and remembering the text. Activities implemented before reading that stimulates motivation and interest serves to uplift the poor reader’s information processing abilities. Educators could ask questions like: what do you think the main character should do? or, what stands in the way of the leading character reaching the desired goal? These kinds of questions will get learners to make predictions about the story (Billingsley & Wildman 1990:22-24; Carlisle 1993:101).

• **Computer presentation of words, definitions**

*Computer presentation of words, definitions,* and exercises may result in mastery of small sets of words; research indicates that working on vocabulary on the computer motivates LD learners. Using reading as an approach to vocabulary development focuses understanding of the topic- computerized presentations of text passages in which meaning of words not understood can be called up as needed is a useful tool. Educators could compile their own lists or use commercially available programmes (Carlisle 1993: 100-101; Gordon, Vaughn & Schumm 1993:179; Putnam 1998:186-187).

• **Look up words using a dictionary**

Teach learners to look up words in specific subjects that are unfamiliar by using a dictionary (Macon [S.a.]:13; Savage & Young 1989:94-95) or propose that learners read single sentences containing the word (Rhodes & Dudley-Marling 1988:147) prior to reading the text. Carlisle (1993:100) calls this the definitional approach and he cautions that this approach may not always help learners as dictionary definitions are often abstract, compressed and often decontextualised.
Vocabulary learning strategies during reading

Existing knowledge and a limited vocabulary affect comprehension. If learners are able to learn words from contexts it might improve comprehension (Carlisle 1993:101-102). Three vocabulary strategies to use during reading will be discussed, namely: context clues and the SCANR method, the DISSECT word identification strategy and the SCUBA-D method.

- Context clues and the SCANR method

Teach learners how to use context clues by providing learners with a paragraph that contains the words to be learned in context. Learners have to figure out what the words are and what they mean from the context (Macon [S.a.]:13; Rhodes & Dudley-Marling 1988:147).

Consider the following sentences from a science book we want to infer the meaning of the word livestock from: ‘Food from the sea is also an important resource. People eat fish and also feed fish to livestock. Seaweed has many uses’ (Carlisle 1993:99). Carlisle suggests that the learner replace the word livestock with a phrase or expression like ‘some kind of animal’ and then check the context for clues to support the answer. The learner then has to read the sentence with the substituted expression and see if it makes sense; if not, the learner has to replace the chosen expression with another word. See Figure 1 that contains a summary of the SCANR method outlined here.

Figure 1: SCANR Method

<table>
<thead>
<tr>
<th>S</th>
<th>Substitute a word or expression for the unfamiliar word</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Check the context for clues that support your substitution</td>
</tr>
<tr>
<td>A</td>
<td>Ask if the substituted word fits all the context clues. Read the sentence and see if the substitution fits all the context clues</td>
</tr>
<tr>
<td>N</td>
<td>Need a new idea. Replace the word or expression with a different idea if the one you’ve chosen doesn’t work</td>
</tr>
<tr>
<td>R</td>
<td>Revise your idea to fit the text</td>
</tr>
</tbody>
</table>

Another word identification strategy that learners might find useful is using the acronym: DISSECT (Bender 1993:186).

- **Word identification strategy: DISSECT**

The learners are encouraged to discover the word meaning by isolating the prefix, separating the suffix, saying and examining the stem of the word, checking with someone else or using a dictionary. See Figure 2 for a summary of the DISSECT strategy.

**Figure 2: The DISSECT word identification strategy**

<table>
<thead>
<tr>
<th>D</th>
<th>Discover the context</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Isolate the prefix</td>
</tr>
<tr>
<td>S</td>
<td>Separate the suffix</td>
</tr>
<tr>
<td>S</td>
<td>Say the stem</td>
</tr>
<tr>
<td>E</td>
<td>Examine the stem</td>
</tr>
<tr>
<td>C</td>
<td>Check with someone</td>
</tr>
<tr>
<td>T</td>
<td>Try the dictionary</td>
</tr>
</tbody>
</table>

Source: adapted from Bender (1993:186).

- **The SCUBA-D method**

The SCUBA-D mnemonic strategy has six steps for learners to use when they encounter an unfamiliar word. Learners are encouraged to memorise the six steps that tell them what to do when they do not understand a word. See Figure 3 that contains a detailed summary of the SCUBA-D method.

**Figure 3: The SCUBA-D method**

<table>
<thead>
<tr>
<th>S = Sound it out</th>
<th>Look at the whole word and sound it out</th>
</tr>
</thead>
<tbody>
<tr>
<td>C = check the clues in the sentence</td>
<td>Think about the meaning of other words in the sentence and guess a word that fits in the place of the unknown word</td>
</tr>
</tbody>
</table>
Other vocabulary learning strategies will now be explained. They are the keyword method, word games or semantic groupings, vocabulary games and precision teaching.

**Other vocabulary learning strategies**

- **The Keyword Method**

The keyword method is sometimes referred to as the keyword mnemonic method. The keyword method is a three-step memory enhancing technique that uses visual imagery. **The first step is recoding** and involves changing part of the vocabulary word into an easily remembered, similar sounding **keyword**, like ape for apex; **relating is the next step** and, this is done by integrating the keyword with the definition of the vocabulary word using imagination and **mental picturing**, for example, the ape sitting on the highest part of the mountain. In **the third step, retrieval**, the definition is **recalled** by thinking of the **interactive image**. Actual line drawings of the interactive image can also be used. Another example, ox (keyword for oxalis- a clover like plant) uses the interactive image of an ox eating the clover plant. In the keyword method each word is linked to a mnemonic cue, and often has a visual and phonetic component (Carlisle 1993:101; Mastropieri, Scruggs & Fulk 1990: 93; Mercer 1992:530).
• **Word groups or semantic groupings**

Have learners study **word groups**: words related to the same topic or general idea, for example, characteristics of people (physical- vigorous, agile, homely; social- tactful, affable, arrogant, brusque). Learners could use the words to describe a politician or athlete, or write a wanted advertisement describing a criminal or a missing person (Young & Savage 1989:94). Carlisle (1993: 99) suggests the use of root words and word family relations, for example, *friend, friendly, unfriendly, friendliness, friendship,* and *befriended* to facilitate vocabulary building.

Carlisle (1993:102) also suggests that educators: use unified set of words, often belonging to a semantic grouping (e.g., feelings) in discussions; choose a specified topic (like weaving) and provide rich instruction using multiple word meanings and exposure to words in diverse contexts; and, place emphasis on discussion of meanings, comparisons of words, and exploration of various aspects of word meanings in different contexts.

• **Vocabulary games**

Placing specialised vocabulary words on a grid can make vocabulary games, like word lotto. Write the definitions of the specialised words on individual cards. To play the game, the learner must match all the definitions to the correct words within a specified time limit (Young & Savage 1989:95). See Figure 4 for an example of a word lotto vocabulary game.

**Figure 4: Example of a word lotto vocabulary game**

<table>
<thead>
<tr>
<th>Emancipate</th>
<th>White Paper</th>
<th>Compromise</th>
<th>Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delegate</td>
<td>Judicial</td>
<td>Unionisation</td>
<td>Politicians</td>
</tr>
<tr>
<td>Legislature</td>
<td>HSS Words</td>
<td>HSS Words</td>
<td>Inauguration</td>
</tr>
<tr>
<td>Xenophobia</td>
<td>Elections</td>
<td>Petition</td>
<td>Democracy</td>
</tr>
</tbody>
</table>
Separate card with definition of one of the words on the lotto grid:

<table>
<thead>
<tr>
<th>Enter with ceremony</th>
</tr>
</thead>
<tbody>
<tr>
<td>upon undertaking of</td>
</tr>
<tr>
<td>presidency</td>
</tr>
</tbody>
</table>

Source: adapted from Young and Savage (1989:95).

- **Precision teaching of vocabulary: SAFMEDS and VOCABULARY SHEETS**

Precision teaching is a system for monitoring learner performance based on fluency of response and allows educators to ascertain if an instructional programme is working or not. Activities arranged through precision teaching present learners with tasks and set time limits for completing them. The number of correct and incorrect behaviours during a given period are counted, recorded and charted (Stump, Lovitt & Fisher 1992:207-212). Two examples of vocabulary activities paired with precision teaching techniques are: Say all facts a minute each day shuffled (SAFMEDS) and vocabulary sheets compiled by educators.

- **Say all facts a minute each day shuffled (SAFMEDS):**

Educators write keywords to be mastered on sheets and flashcards; these are then given to the learners who have to:

- Orally read the words on the sheets till fluency is achieved.
- Learn the meaning of the words by going through the stack of flashcards.
- Revise these words by shuffling the flashcards and practising for 2 minutes every day.
- Undergo a quiz or write a test to verify the effectiveness of the method (Stump, Lovitt & Fisher 1992:207-212).

**Vocabulary sheets**

Educators can compile a vocabulary sheet (see Figure 5) for almost any learning area and use in the manner described below:
Learners memorise 5 to 8 see-to-say words written on side I of a vocabulary card; learners read words for 1 minute 5 to 10 times a day (several repetitions).

Learners get opportunity to practice and review see-to-say phrases on side 2 of the vocabulary card (the meaning of the words on side 1) 5 to ten minutes a day in 1 minute intervals. (See Figure 8 for an example of a vocabulary sheet).

Learners quiz each other in pairs over the terms.

Learners then generate see-to-write word for 1 minute; learners write the definitions to keywords. This can also be done in pairs.

The procedure explained above is repeated on 3 days for two weeks. Learners then have a rest period for a week.

Two retention probe quizzes now follow. Learners get 3 minutes to complete as many items as possible. Classmates score the quizzes. Learners record and chart their marks. These scores can be recorded on student lists (Stump, Lovitt & Fisher 1992:207-212).

**Figure 5: An example of a vocabulary practise sheet**

<table>
<thead>
<tr>
<th>Side 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock</td>
<td>Mantle</td>
<td>Mineral</td>
<td>Crust</td>
<td>Core</td>
</tr>
<tr>
<td>Mineral</td>
<td>Core</td>
<td>Mantle</td>
<td>Rock</td>
<td>Crust</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Side 2</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A material that makes up the earth’s crust</td>
<td>The hot, rocky layer that surrounds the core</td>
<td>A material that occurs naturally and makes up rock</td>
<td>The thin, rocky, outer layer</td>
<td>The hot, partly liquid centre</td>
</tr>
<tr>
<td>A material that occurs naturally and makes up rock</td>
<td>The hot, partly liquid centre</td>
<td>The hot, rocky layer that surrounds the core</td>
<td>A material that makes up the earth’s crust</td>
<td>The thin, rocky, outer layer</td>
</tr>
</tbody>
</table>

7.1.3 Compensatory teaching strategies and modification ideas to improve vocabulary:

Schloss, Smith and Schloss 1990:247-248 offer the following general strategies for secondary school educators to help learners improve their vocabulary:

- Educators should preview reading materials to identify potentially difficult vocabulary words and introduce these words before learners begin to read.
- Educators may use structural analysis to emphasise the word’s meaningful elements. The procedure may involve examining the root word and various prefixes and suffixes.
- The educator can introduce a core list of vocabulary sight words by using the chalkboard, charts, overhead projector, handouts, flashcards, or computers.
- Definitions and descriptions can also be given to learners.
- Educators should teach those words that will be important to the learner’s future or will help the learner figure out related words.
- Educators must decide to what extent the new vocabulary should be part of the learners’ listening, speaking, reading or writing vocabulary, and adjust instruction accordingly. Educators should provide examples in which the vocabulary words are used correctly and provide multiple opportunities for learners to apply the word.
- Educators can assist learners acquire vocabulary words by being an enthusiastic model, and by reinforcing their use of new vocabulary words and terms.

The following information on how to enhance content mastery for LD secondary learners concludes the section on vocabulary strategies.

- **Strategies to enhance (vocabulary) content mastery**

To counteract the fact that textbooks sometimes lack logical sequencing of content, have dense and difficult vocabulary or present new information at a rapid pace, Munk, Bruckert, Call, Stoehrmann and Radant (1998:73-78) supply the following strategies to enhance content mastery:
• Prioritise material and reduce the amount and complexity of text content by eliminating less important information.

• Skip less important information or give a brief overview of it; use diagrams and sequence charts already in textbooks for this purpose.

• Photocopy relevant sections and highlight the main points for learners.

• Photocopy relevant sections and use a marker to black out unnecessary information before duplicating it for learners.

• Allow learners to pre-learn a vocabulary list in pairs (dyads).

• Paraphrase key passages or paragraphs for learners. Supply learners with a written copy of simplified passage or paragraph.

• Provide graphics when learners have to learn the names of parts.

The next section of this assistance programme contains strategies for improving spelling.
7.2 STRATEGIES TO IMPROVE SPELLING

7.2.1 Some facts about spelling

'Spelling requires more auditory and visual discrimination, memory, sequentialisation, analysis and synthesis, and integration simultaneously, than perhaps any other skill . . . spelling is a most complex ability requiring a combination of skills and abilities that are not fully understood by many' (Gearheart 1981:252-253).

The learner needs total recall of visualisation of letters and words (Gearheart 1981:252-253) and many LD learners display severe spelling deficits that worsen at secondary school level (Fulk & Stormont-Spurgin 1995:16). Recommending that such learners use a dictionary is futile: learners who are letter name spellers and think that elephant begins with l will never find elephant in a dictionary, no matter how easy the dictionary is (Rhodes & Dudley-Marling 1989:246).

'Correct and fluent spelling is a writing skill that is especially difficult for students with learning disabilities. They typically misspell two to four times more words in their writing than their normally achieving peers' (Graham & Voth 1990:447). Learners do not soak up spelling: they have to be taught (Smith 1998:350). Writing twenty spelling words ten times each, all in one sitting, may in fact do more harm than good for the LD learner as it overwhelms and frustrates them; repetitions need to be in small doses at distributed intervals (Graham & Voth 1990:447; Smith 1998:347).

Some learners focus so much attention on spelling or handwriting that it affects their writing fluency: the ultimate goal is to teach learners to put spelling and handwriting into perspective. Some learners believe that if they cannot spell, they cannot write and they spend a lot of writing time looking for easy to spell-alternative words (synonyms) for the hard to spell word they really want to use; learners should be taught that spelling is only important in final drafts (Rhodes & Dudley-Marling 1989:120-123). Learners first need to get their ideas on paper (Rhodes & Dudley-Marling 1989:245).
Spelling is visual – learners need to have knowledge about how a word looks – this needs to be developed through reading and instruction; learners need to understand that reading is important and that they can teach themselves to spell by reading by paying attention to the visual information contained in the spelling of the words (Rhodes & Dudley-Marling 1989:245).

7.2.2 Learning strategies to improve spelling

The learning strategies in this section will be discussed under two headings for the sake of clarity only, namely: self-correction strategies for learners and, other learning strategies.

7.2.2.1 Self-Correction strategies for learners

Six self-correction strategies that learners can use will now be explained. They are: write it several ways and see what way looks best, learn five new words at a time, conventional and unconventional spelling list, word bank or personal dictionary, word games and using a proofreader.

• Write it several ways and see what way looks best

Learners can use this strategy if they decide that a word does not look right. Learners are encouraged to write down several spelling versions of the word and then choosing the one that looks right or best (Rhodes & Dudley-Marling 1989:247).

• Learn five new words at a time

Another method is to have learners learn five new words at a time. Tape a small index card to the right hand upper corner of the desk and select words from the learners writing on basis of potential frequency and learner interest; learners help decide which words to put on the index card. Each time they use that word in their writing they can check the spelling thereof on their index card. In this way the learner is always learning five new words. A list of all the words the learner has learnt for the year
provides a record for both educator and learner (Rhodes & Dudley-Marling 1989:247).

- **List of unconventional and conventional spelling**

List all the unconventional spellings from learners' writing and place the conventional spelling next to it. Get learners to study the list and infer the rule from there (Rhodes & Dudley-Marling 1989:247). This list could also be taped on the desk or inside a language or learning area notebook.

- **Word bank or personal dictionary**

Educators can help learners develop a word bank or a personal dictionary that will be an invaluable resource tool for spelling. Learners should be encouraged to add word to their lists when they edit their writing. This list could be pasted inside the front cover of a notebook; or the last few pages of the notebook could be used for this purpose. Educators could constantly remind learners to use the personal dictionary till usage becomes fairly automatic (Isaacson & Gleason 1997:190; Lewis & Doorlag 1995:289; Rhodes & Dudley-Marling 1989:248).

- **Word games**

Playing word games might help some learners as these games create a greater awareness of possible letter sequences and the relationship between words. Scrabble, Hangman, Boggle, Spill and Spell, Word and Mastermind are examples of commercially available word games learners can play (Rhodes & Dudley-Marling 1989:248-249). A computer version of Hangman is also available locally.

- **Using a proof reader**

Learners can get a peer or an adult, who is a good speller, to proofread their work. This strategy could be useful for projects or homework as well and requires minimum educator input (Isaacson & Gleason 1997:191; Rhodes & Dudley-Marling 1989:249).
7.2.2.2 Other spelling learning strategies

Five learning strategies that will also facilitate correct spelling will now be given. They are: word clusters, flashcards, 4-step Look-Cover-Write-Check approach, skywriting and the teaching of spelling rules.

- **Word clusters**

Learners should not be expected to correctly spell every word they encounter while reading. Words with visual and auditory similarities can be grouped into clusters. To further emphasise the common sequence of letters for the weak spellers the common letter clusters can be underlined e.g., light, fight, sight, right, and so on (Westwood 1989:99).

- **Flashcards**

Flashcards are some of the easiest aids to make and can be used to improve the visual imagery for letters. The words are introduced to learners on cards about 30cm x 10cm; the word is pronounced clearly; and, particular visual aspects or difficult parts are pointed out. Learners are encouraged to make a mental picture of the word while examining it; after a few seconds the learner writes the word from memory articulating it clearly. The word is checked against the flashcard. Writing the whole word avoids inefficient letter-by-letter copying. (Westwood 1989: 99-100.)

- **The 4-step Look-Cover-Write-Check- approach**

Step 1 involves the learner looking at the word very carefully and making a visual study of the word. Learners try to remember every detail of the word; finger tracing over the word during this step helps some learners with assimilation and retention of letter sequence. Some writers recommend closing the eyes and imagining the word.

Step 2 comprises covering the word completely so that it cannot be seen. The learner is encouraged to visualise the word.
In **Step 3** the learners write the word from memory and say it quietly as they write it.

In **Step 4** the learners have to check their version of the word against the original version. Learners are encouraged to repeat steps 1 to 3 if the word is incorrect.

Educators should encourage learners to repeat the 4 steps to encourage over-learning of spelling words: spelling should become automatic (Graham & Voth 1990:450; Gulliford 1986:123; Westwood 1989:100).

- **Skywriting**

Skywriting can be practised at home if the secondary learner is shy to perform the actions in the classroom. In skywriting the learner copies a word he wants to learn on to paper and looks at the word carefully and then:

- Finger traces it; using the index finger of the dominant hand.
- Closes his/her eyes to limit distractions and sharpen the focus on the word.
- Writes the word in the air from memory (skywriting assists the visual memory).
- Sees if he can then write the word on paper (Savage and Young 1989:147).

Some educators might find the following strategy useful. Teaching spelling rules is perhaps best left to language educators. Several books containing spelling rules are available.

- **Teach spelling rules**

Teach spelling rules if it helps the learner (Gulliford 1986:125; Westwood 1989: 101). For example:

- If a word ends in e it usually drops the e before adding a suffix beginning with a vowel, **use – usage; hope- hoping**
- Do not drop the e if the ending begins with a consonant: **nine-nineteen; safety** (Savage & Young 1989:148).
7.2.3 Compensatory teaching strategies and modification ideas to improve spelling

Educators can use any of the compensatory methods and modification ideas listed below to support the poor spellers in their regular mainstream classes:

- Weekly revision and testing aids retention and recall.
- Compile a list of words frequently needed by learners and use this list for review and assessment.
- Use a range of word games and puzzles; they are invaluable to reduce the boredom of over-learning and repetition as spelling needs daily attention (Fulk & Stormont-Spurgin 1995:19).
- Use a visual record of improvement. Simple progress charts or graphs work well (Fulk & Stormont-Spurgin 1995:19; Gulliford 1986:124).
- Use any gimmick that reinforces the learners’ awareness of real progress being made (Westwood 1989:103).
- Teach common prefixes, suffixes and roots (Gulliford 1986:124)
- Use computers (Fulk & Stormont-Spurgin 1995:19).

Learners will have to practice any new procedure several times before meeting with success (Young & Savage 1989:146).

The next section of the programme contains strategies to develop reading proficiency. A few facts about reading precede the strategies to develop reading proficiency.
7.3 STRATEGIES TO DEVELOP READING PROFICIENCY

7.3.1 Some facts about reading

Reading consists of three integrated skills: vocabulary skills, comprehension skills, and study reading skills (Hugo 1993:57). Vocabulary skills enable the reader to pronounce the written words and to attach meaning to them; comprehension skills ensures that the reader understands the written text and is able to apply what has been read; and, with study reading skills a reader can utilise his vocabulary and comprehension skills effectively and efficiently (Hugo 1993:57). The two most important subskills of reading are word recognition and comprehension (Lewis & Doorlag 1995:274).

Most secondary school learning area content requires a relatively large amount of reading, as textbooks and supplementary materials are the major sources of information. Mercer (1992:352) says: ‘In expository materials, the vocabulary is often more difficult to decode and pronounce than found in narrative material, and the general content is frequently beyond the learners experience’. He adds that older learners need to develop study skills and reading rate in addition to increasing decoding and comprehension skills.

Many LD secondary learners are unable to make sense of the many empty words they encounter (Foss 1991:136) and some have developed pseudo-concepts. Wiig, Freedman and Secord (1992:279) site the example of a learner who had developed a pseudo-concept and thought that punctual meant how many good manners you have: the student was always late, but very polite.

There is a distinct difference between good and poor readers. Poor readers are mainly passive throughout the reading process and do not use metacognitive strategies (Williams 1998:213). Good readers make use of several strategies while reading.

See Figure 6 that summarises the main differences between good and poor readers as gleaned from the sources cited.
<table>
<thead>
<tr>
<th>GOOD READERS</th>
<th>POOR READERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Uses metacognitive strategies like self-questioning and skimming</td>
<td>• Becomes bored, restless and frustrated</td>
</tr>
<tr>
<td>• Makes a brief summary after every paragraph</td>
<td>• Displays inattentiveness</td>
</tr>
<tr>
<td>• Underlines main ideas and key phrases</td>
<td>• Loses place quickly</td>
</tr>
<tr>
<td>• Integrates ideas from other parts of the text in order to create</td>
<td>• Seems uncertain in recalling visually presented material</td>
</tr>
<tr>
<td>accurate representations.</td>
<td>• Poor recall of information</td>
</tr>
<tr>
<td>• Uses ‘lookback’ technique – re-reads certain sections to locate</td>
<td>• Excessive lip movement or vocalising in silent reading</td>
</tr>
<tr>
<td>information</td>
<td>• Slow reading pace</td>
</tr>
<tr>
<td>• Lips don’t move during silent reading</td>
<td>• Mistaking similar looking words</td>
</tr>
<tr>
<td>• Monitor their comprehension: pause at end of each sentence or paragraph</td>
<td>• Poor comprehension; don’t monitor comprehension while reading</td>
</tr>
<tr>
<td>to summarise or paraphrase information</td>
<td></td>
</tr>
<tr>
<td>• Fluent readers</td>
<td>• Using finger to keep pace</td>
</tr>
<tr>
<td>• Recognise many words on sight</td>
<td>• Failure to recognise word when it appears again although cued previously</td>
</tr>
<tr>
<td>• Good vocabulary (skills)</td>
<td></td>
</tr>
<tr>
<td>• Good visual tracking skills</td>
<td></td>
</tr>
<tr>
<td>• Relate what is being read to their existing knowledge</td>
<td></td>
</tr>
</tbody>
</table>


Details of learning strategies to develop reading proficiency will be described next.
7.3.2 Learning strategies to develop reading proficiency

Purely to facilitate the organisation of information the learning strategies have been divided into three sections for this discussion; namely: strategies to develop reading fluency, strategies to develop reading comprehension, and other learning strategies.

7.3.3 Strategies to develop reading fluency

The following strategies to develop reading fluency will be discussed: two methods of assisted reading, repeated reading strategies and sustained silent reading strategies.

- Assisted reading (first method)

Assisted reading is done orally as both learner and educator need direct observation of fluent reading till silent reading fluency is established. Assisted reading is sometimes called the lap method or neurological impress method as the educator and learner are in close proximity. The method is as follows:

- The educator fluently reads the appropriately chosen text to the learner.
- The learner is invited to read along when the educator reads the text for the second time.
- The educator raises her voice slightly when the learner falters and lowers her voice when the learner has control of the text.
- Learners who are unable to track words with their eyes are encouraged to use their index fingers to track the words (Rhodes & Dudley-Marling (1988:91,100-111).

Another method of assisted reading where the learner reads along with a pre-recorded taped text will now be explained. Tape recorded work alongside the visual display reinforces reading fluency without one-on-one assistance from the educator (Vahid, Harwood & Brown 1998:38). The role of the educator is not as comprehensive as the first method of assisted reading described.
• **Another method of assisted reading**

The educator mainly plays a role in providing suitable tapes. The method is simply and a small portable tape recorder with headphones may be used to reduce distractions. The learner reads along with the pre-recorded tape till fluency is acquired.

Rhodes and Dudley-Marling (1988:103) have the following to say about teacher-made tapes: ‘teacher made tapes are often more valuable because the text selection, reading rate, cues provided, and length of reading can be better adjusted to meet the learner’s needs and interests’. Other suggestions that could be useful for assisted reading include the following:

- Get males to record reading texts as children benefit from fluent male role models.
- Have children read in pairs with a fluent learner playing the role of a teacher.
- Record the first chapter of a lengthy text for LD secondary learners to motivate them to start reading the book. Learners could be encouraged to record their own tapes or a fluent peer can also be taped (Rhodes & Dudley-Marling 1988:91,100-111; Vahid, Harwood & Brown 1998:38).

• **Repeated reading**

Repeated reading of a text is done, as a single assisted reading is insufficient to promote reading fluency. Repeated reading will now be described.

Repeated reading improves reading speed and decreases the incidence of miscues. Ten to fifteen minute long listening/reading teacher-prepared tapes are often used. The following methods for repeated reading have been identified:

- **Radio reading**: each learner in a small group assumes the role of a radio reader and reads a section of a text, for example, a HSS chapter, until all the learners have had a turn. The other readers do not have a copy of the text and
have to listen as if they are listening to the radio. A short discussion follows with the reader questioning the group on what was read.

- **Reader's theatre**: learner-prepared scripts from favourite stories, fables, and folktales are used to assign script parts to learners. Learners reread their parts in preparation for the performance. This method also encourages repeated reading of the original source as well as stimulating writing skills.

- **Choral reading**: choral reading is an interpretive reading of text (often poetry or songs) by a group of voices. Get learners to work on a text to prepare for choral reading.

- **Recording books**: older learners can easily be convinced to read very easy material repeatedly if they are asked to make tapes to be used for assisted reading by younger children. Tapes could be for children at a neighbouring primary school or a children's ward in a hospital. If inexpensive paperback books are recorded from, it may be possible to send the book along with the tape to the intended audience.

- **A different format**: reading several different illustrated versions of the same text or the filmstrip version of a book often stimulates another reading of a text.

- **Expected repeated readings**: encourage learners to read good literature at least twice. Also, ask learners to read a text they've enjoyed again instead of reading something new each period.

Repeated reading should ultimately facilitate the acquisition of sustained silent reading (SSR). Although SSR with comprehension is the ultimate aim of reading instruction, the learner first needs to be a proficient verbal reader.
• Sustained silent reading (SSR)

SSR should ideally take place during regularly scheduled reading sessions where educators and learners independently read materials of their own choice.

• A wide variety of reading materials must be available to the learners during SSR sessions. Non-book materials are especially attractive to some learners and include: bus, air and rail schedules; store, travel and mail-order catalogues; newspapers and magazines; telephone directories; driver’s licence manuals; cookbooks; real estate catalogues; compact disc (CD) jackets, lyrics and song charts; and labels from cans and empty food boxes.

• For SSR to be successful all adults in the room should be engrossed in reading and not distracted by minor disturbances to convince learners of the value of reading.

• Each learner may have only one piece of reading material.

• Learners should not have to write reports for articles read during SSR.

• Educators share with learners what they have read and encourage learners to share what they have read.

• Educators should use a timer instead of watching the clock during SSR (Rhodes & Dudley-Marling 1988:91,100-111).

Some strategies to develop reading comprehension will now follow. According to Mercer (1992:352) successful reading in content areas requires three types of reading: skimming, scanning and studying reading.

7.3.4 Strategies to develop skills for reading comprehension

Brief descriptions of skimming, scanning, study reading, and the seven main skills of comprehension will now be supplied.

Mercer (1992:352) maintains that educators should explain these three types of reading to the learners: learners should be allowed to practice them under teacher
supervision and opportunities should be created for independent practice of these three types of reading. This could also be taught and practised during SSR sessions.

- **Skimming**

Skimming involves covering a selected text to grasp some of the main ideas and to obtain a general overview of the material without attending to detail; the learners read the first paragraph line by line, the bold face print headings as they come up, the first sentence of every paragraph, examine pictures, charts, maps, headings and subheadings, keywords; read the last paragraph and write down main ideas (Mercer 1992:352; Vaughn & Klinger 1999:286).

- **Scanning**

Scanning is about reading a specific book to find specific information like numbers, names and dates, vocabulary items or telephone numbers, by using headings to locate the pages to scan for the specific information and rapidly moving the eye down the page in a zigzag or windings S pattern (Mercer 1992:352).

- **Study reading**

Study reading involves deliberate and purposeful reading in order to comprehend, recall and reproduce learning matter; during the study reading process the learner should maintain an awareness of the established aim of the reading act; regulate and monitor the reading act as it progresses; and, practising conscious control over the reading act (Hugo 1993:57; Mercer 1992:352).

- **7 main comprehension skills**

Lerner (1993:403-404) identifies the following seven skills as the main skills for reading comprehension: noting facts and important details, grasping the main idea, following a sequence of events or steps, drawing inferences and reaching conclusions, organising ideas, applying what is read to solve problems and verify statements, and
evaluating materials for bias, relevance and consistency. A brief discussion of these skills now follows. Unless otherwise stated all information in this section is from Lerner ((1993:403-404).

Noting clearly stated facts and important details of a selected text is a reading skill that requires memory; when the details are added to the main idea it is easier to remember. Seidenberg (1988:66) provides the following strategies:

- Find and underline main idea(s).
- Develop a question about the main idea(s).
- Learn the answer to the questions.
- Review the questions and answers to ensure that the information is understood.

Grasping the main idea is where the learner looks past the details to find the core idea or central thought. Some ways to do this are:

- Get learners to make up a title for the piece.
- Learners could choose the best title from a selection.
- Learners could write one short sentence about the text.

Following a sequence of events or steps requires the skill of organising information and a few good exercises to develop this skill include:

- Get learners to put scrambled events in order.
- Allow learners to follow directions to build a model.
- Get learners to follow the steps in a recipe.

Drawing inferences and reaching conclusions is a skill that requires thoughtful reading and interpretation. One way to develop this skill and encourage thinking is to ask learners specific questions (Curran 1997:314) like:

- What does the author mean?
- What is going to happen next?

Organising ideas is a skill that refers to the ability to see relationships among the ideas in a text. Some ways to develop this skill of identifying how ideas are organised include:
• Get learners to identify the cause and effect pattern if present in a text.
• Allow learners to compare and contrast relationships in the text or passage.
• Let learners examine the author's general plan for structuring material by studying the table of contents, looking at topic headings and outlining techniques.

Seidenberg (1988:66) proposes the following technique for organising text material in content area classes:

• Survey the text chapter for the purpose of understanding the chapter organisation and the main ideas.
• Read the questions at the end of the chapter to figure out which facts are important.
• Reread the passage or chapter to determine important content and generate key questions.

**Applying what is read to solve problems and verify statements** involves adapting the reading material to new situations and integrating it with previous experience. Some ways to develop this difficult skill include the following:

• Educators can formulate problems and have learners find the answer by reading a selection.
• Learners can be taught to apply what they have read to other learning areas; for example, a story about a girl in Egypt can be linked to a Human and Social Sciences (HSS) content class.

**Evaluating materials for bias, relevance, and consistency** is also called critical reading and it includes making judgements, comparing several sources, detecting propaganda techniques and determining the logic of an approach or argument. Three ways to develop this skill in learners are as follows:

• Get learners to critically study advertisements.
• Encourage learners to compare editorials on the same subject.
• Provide opportunities for learners to read two news reports on the same topic.
If the seven skills described above seem overwhelming, they can be reduced to four key elements. See Figure 7 that summarises the four key elements of a comprehension lesson.

**Figure 7: The 4 CORE elements of a comprehension lesson**

| C | Connect new knowledge to existing learner knowledge |
| O | Organise the information from learner and text |
| R | Reflect on content, structures, and strategies |
| E | Extend the learning to new conditions and contexts |

Source: adapted from Lerner (1993:403).

**Other reading learning strategies**

Six learning strategies, that would probably take educators considerably longer to teach and provide practice in than the previously discussed strategies, will now be discussed. These strategies are included for those educators who are confident about teaching learning strategies. The six learning strategies are: collaborative strategic reading, visual imagery strategy, recognising four types of comprehension questions, self-questioning strategy, textbook reading strategy and the IQ-WHO technique to evaluate content in a chapter.

- **Collaborative reading strategy (CSR)**

  Vaughn and Klinger (1999: 284-292) provide a CSR technique to teach comprehension. The technique has four distinct steps, namely: preview, click and clunk, get the gist and wrap-up.

  Brainstorming what the learners already know about the topic takes place during the **preview step**. Predicting what the text is about follows. Learners then skim the text to look for clues.

  The **click and clunk step** involves learners monitoring their comprehension while they read. When the learners understand something it clicks and a clunk is when
learners run into a brick wall and do not understand. Readers are taught to use specific strategies when they do not understand a word, or parts of the passage they are reading. Teach learners the following fix-up strategies to figure out what the clunk means:

- Look for clues by rereading the sentence with the clunk and the sentences before or after the clunk.
- Reread the sentence without the word and think about what would make sense.
- Look for a prefix or suffix in the word.
- Use a picture for clues.
- Ask for help only if you cannot figure it out on your own.

Learners summarise or restate the most important idea in the paragraph or section of the text to get the gist of what they have read. They do this by:

- Deciding who or what the paragraph is mainly about.
- Leaving out supporting detail.
- Naming the most important idea about the topic.

Wrap-up occurs at the end of the day’s reading assignment and involves:

- Asking teacher-like questions about the passage.
- Reviewing what was important about the passage.
- Stating what you learnt from that day’s reading assignment.

Vaughn and Klinger (1999:291) provide the following example of a collaborative record work sheet, as detailed in Figure 8, that they call a CSR Learning Log. The collaborative record work sheet might be a good way for learners and educators to monitor reading progress and could be used as part of the educator’s assessment.
Figure 8: A collaborative reading record sheet

<table>
<thead>
<tr>
<th>Today’s topic:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preview activities before reading</td>
<td>Dealing with clunks during reading</td>
</tr>
<tr>
<td>What I already know about the topic</td>
<td>Clunks:</td>
</tr>
<tr>
<td>What I would like to learn about the topic/what I predict I will learn about the topic</td>
<td></td>
</tr>
</tbody>
</table>


- **Visual imagery strategy**

Teach learners to use visual imagery strategy. The learner reads a passage and creates a visual image of what was read. Encourage learners to include as such sentence content as possible in their images (Bender 1993:188; Mercer 1992:533). See Figure 9 for an example of a visual imagery strategy procedure.
**Figure 9: The RIDER visual imagery strategy**

<table>
<thead>
<tr>
<th>Read</th>
<th>Read the first sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image</td>
<td>Try to form an image or picture of what you’ve read in your mind</td>
</tr>
<tr>
<td>Describe</td>
<td>Describe the image.</td>
</tr>
<tr>
<td></td>
<td>If you cannot make an image, read the next sentence and try to form an image. Decide if the new image is the same as the previous image.</td>
</tr>
<tr>
<td></td>
<td>Describe your image if you have one.</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Evaluate your image for completeness.</td>
</tr>
<tr>
<td></td>
<td>Check to see that your image contains as much of the sentence content as possible.</td>
</tr>
<tr>
<td></td>
<td>Add missing content if necessary, and adjust your image.</td>
</tr>
<tr>
<td>Repeat</td>
<td>Read the next sentence. Repeat steps 1 to 4.</td>
</tr>
</tbody>
</table>

Source: adapted from Bender (1993: 188).

- **Four types of comprehension questions**

Teach learners to **recognise the four types of questions** asked in comprehension exercises (Bender 1993:194):

- **Right-there questions** are the questions that can be answered using information directly from the passage read. They are mainly literal questions and can be answered in about two sentences.
- The answers to **think and search questions** can be found in the passage but needs to be drawn together from more than one place in the passage.
- For the **writer and you questions** the reader needs to use prior knowledge to make inferences. The reader needs to draw conclusions from information given in the passage to develop answers to these questions.
- **On your own questions** are questions that cannot be answered from the passage. The readers will have to answer using their own experiences.
• **Self-questioning strategy**

Learners could be taught a self-questioning strategy thus:

- Get learners to form questions about the content of the passage as they read to maintain interest and improve recall.
- Questions can be asked before learners start reading, while learners are reading and, after learners have read the passage or text (Bender 1993:193; Mercer 1992:533).

Figure 10 provides a number of questions that learners can use as part of the self-questioning strategy to monitor comprehension before, during and after reading a passage.

**Figure 10: Questions to ask during self-questioning**

<table>
<thead>
<tr>
<th>Questions to ask prior to reading</th>
<th>How does the writer convey the information?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>What concepts are introduced?</td>
</tr>
<tr>
<td></td>
<td>How are the concepts related to each other?</td>
</tr>
<tr>
<td></td>
<td>How is the material organised?</td>
</tr>
<tr>
<td></td>
<td>Can I follow the organisation of the text?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Questions to ask while reading</th>
<th>Did I understand the main ideas in the passage?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How are the ideas in this section related to the</td>
</tr>
<tr>
<td></td>
<td>previous section/passage?</td>
</tr>
<tr>
<td></td>
<td>Did the writer introduce a new concept in this</td>
</tr>
<tr>
<td></td>
<td>section of the passage/chapter?</td>
</tr>
<tr>
<td></td>
<td>Can I connect all the concepts in the</td>
</tr>
<tr>
<td></td>
<td>passage/chapter?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Questions to ask after reading</th>
<th>Do I understand everything I have read?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Can I summarise what I have read?</td>
</tr>
<tr>
<td></td>
<td>Can I make an outline of the chapter?</td>
</tr>
<tr>
<td></td>
<td>Can I list the main points of the chapter?</td>
</tr>
<tr>
<td></td>
<td>How much of the given information is new?</td>
</tr>
<tr>
<td></td>
<td>How much did I already know about the topic?</td>
</tr>
</tbody>
</table>

Source: adapted from Bender (1993:193).
A textbook reading strategy

Bender (1993:185) outlines the following points, that are similar to skimming, and will help the learner to get the most from a textbook: read the title and paraphrase, read the introduction word for word and paraphrase, read the summary word for word and paraphrase, examine the pictures, and examine the table of contents. Bender (1993:185) then provides the IQ-WHO technique for learners to evaluate the content in a chapter. The learners are provided with step by step cues for what to do to extract the most important information from the text (see Figure 11). Learners are cued to extract information from illustrations, end of chapter questions, paraphrase, and use headings and subheadings.

Figure 11: The IQ-WHO technique to size up information in a chapter

<table>
<thead>
<tr>
<th>I = Illustrations</th>
<th>Interpret the illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q = Questions</td>
<td>Read and paraphrase the questions at the end of the chapter</td>
</tr>
<tr>
<td>W = Words</td>
<td>Define the words in italics</td>
</tr>
<tr>
<td>H = headings</td>
<td>Read a heading</td>
</tr>
<tr>
<td></td>
<td>Ask yourself a question based on the heading topic</td>
</tr>
<tr>
<td></td>
<td>Scan the paragraph or text for an answer</td>
</tr>
<tr>
<td></td>
<td>Note important information</td>
</tr>
<tr>
<td>O = Other cues</td>
<td>Identify and use other cues used in the textbook</td>
</tr>
</tbody>
</table>

Source: compiled using information from Bender (1993:185).

Another set of cues is provided to assist learners to sort out what needs to be learned (see Figure 12) and it includes instructions on how to search for information in the chapter. Learners are cued to read and answer questions and mark important facts.

Figure 12: How to sort out what needs to be learned using RAMS

<table>
<thead>
<tr>
<th>R = Read</th>
<th>Read the question</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = Answer</td>
<td>Answer the question if you can</td>
</tr>
<tr>
<td>M = Mark</td>
<td>Mark the question to indicate it’s importance</td>
</tr>
<tr>
<td>S = Search</td>
<td>Search for an answer in the text by:</td>
</tr>
<tr>
<td></td>
<td>Select a single heading</td>
</tr>
</tbody>
</table>
Examine the content carefully
Answer the question if possible
Repeat the process under another heading if necessary
Check with someone if you still have not found the answer
Hassle and troublesome questions clarified with teacher

Source: compiled using information from Bender (1993:185).

• Reading patterns

Teach learners to **recognise the reading patterns**. Once learners can identify reading patterns and cue words, reading becomes easier (Young & Savage 1989:172). Figure 13 contains four reading pattern types and their cue words, namely time order, comparison and contrast, cause and effect and arbitrary listing.

**Figure 13: Reading patterns and cue words**

<table>
<thead>
<tr>
<th>Reading pattern</th>
<th>Cue words used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Time order</td>
<td>First, second, then, not long after, at last, later, next, after a short interval</td>
</tr>
<tr>
<td>2. Comparison and contrast</td>
<td>On the one hand, on the other hand, but, however, on the contrary, yet</td>
</tr>
<tr>
<td>3. Cause and effect</td>
<td>As a result, for this reason, because, consequently, on that account, since, although</td>
</tr>
<tr>
<td>4. Arbitrary listing</td>
<td>In addition to, also, another, some, others, furthermore, besides, moreover</td>
</tr>
</tbody>
</table>


7.3.5 Compensatory teaching strategies and modification ideas

LD secondary learners typically shut down when they are faced with academic pressures and performance demands that require more than they feel capable of (Foss 1991:135). Educators need to recognise that these learners have weaker comprehension skills than their classmates or their grade placement and should adjust their expectations accordingly (Foss 1991:135). Some compensatory teaching strategies and modification ideas will now be discussed.
• Reading guide

Provide a reading guide or study organiser containing questions and statements on the content of the text material. The learner should receive it beforehand and complete it while reading. A study organiser summarises the main ideas and important concepts of the material in a factual style or in a schematic form such as a flow chart, diagram, or table. (Mercer 1992:533). Give learners a list with questions and page numbers of the text on which the questions can be found (Lewis & Doorlag 1995: 278).

• Advance organisers

Use advance organisers that provide an overview of the passage to prepare learners for what they will be reading. This overview of the work to be done helps to clarify the subject matter and is thus an effective strategy for increasing comprehension. Advance organisers help learners to organise subject matter and strengthens learners’ thinking around a particular topic (Engelbrecht, Kriegler & Booysen 1996:256; Lewis & Doorlag 1995:278).

Macon [S.a.]: 27-28 provides the following compensatory teaching tips that teachers can use to develop reading proficiency:

• Write legibly, use large type: do not clutter blackboard, exam paper, or work sheet.
• Have a consistent format for examination papers and assignments.
• Ask sound comprehension questions. Start with literal questions and move to inferential type questions. Evaluate responses and end with appreciative type questions.
• Find materials paralleling the textbook but written at a lower grade/reading level.
• Reinforce all visual directions with verbal cues.
• Encourage the use of a tape recorder for examination and lecture notes.
• Tape lecture materials and assignments for learner use.
• Have learners use a ruler or blank white index card to hold reading place.
Lewis and Doorlag (1995:276) provide the following reading modification ideas:

- Learners can also move their finger along underneath the line of print; cards with windows can be used to expose only a few words at a time (Lewis & Doorlag 1995:276)

- Add cues to help learners decode troublesome words by crossing out the silent letters (take), dividing words into syllables (po-lit-i-cal) and marking long vowels (deed) (Lewis & Doorlag 1995:276).

- Help learners analyse story problems by teaching them to recognise key words like altogether, sum, and, plus, finds for addition; clue words like left, lost, spent, and remains for subtraction; words like rows, groups, altogether for multiplication; and key words like share, each, cost per month for division (Lewis and Doorlag 1995: 288).

- Learners should be made aware of poor reading habits that might reduce reading rate, like forming each word as it is read, sounding out all words, rereading material, and pointing to each word with the index finger. (Mercer 1992:352).

- Educators can have learners practice timed reading with a stopwatch or egg timer; chart progress and give comprehension checks; encourage reading rate if comprehension does not suffer (Mercer 1992:352).

Strategies to help learners remain on-task will be dealt with in the next section of the programme.
7.4 STRATEGIES TO HELP LEARNERS REMAIN ON-TASK

7.4.1 Some facts about on-task behaviour

Many LD and non-LD learners have problems with time on task. Time on-task can be defined as the amount of time learners spend on a school related activity (Whedon & Bakken 1999:6) and engaged learning time is the amount of time learners spend attending to relevant instructional activities (Prater 1992:22). Research indicates that only 50% of the typical school day in regular education classrooms is spent on instruction; it has been estimated that learners spend about 32% - 42% of the total school day on-task, and about 17% of the time actually engaged in relevant learning tasks (Prater 1992:22).

Learner inattentiveness accounted for the greatest loss of learning time (Lewis & Doorlag 1995:103). LD learners often have short attention spans or display erratic on-task behaviours; research shows that if learners are assisted to increase their on-task behaviours, their learning improves (Blick & Test 1987:203).

Note taking is a skill that requires instruction as well as practice, yet it is often assumed to be an easy task. Many mainstreamed learners with LD have difficulties taking notes and transferring information from the blackboard or lecture to paper (Wood, White & Miederhoff 1988:107). Research indicates that very little attention is paid to instruction in note taking skills (Beirne-Smith 1989:425; Saksi, Swicegood & Carter 1983:265, 270).

Difficulties during note taking include: paying attention; hearing clearly because the lecture is too fast or lacks organisation; understanding content of lecture; deciding what to record in their notes; not writing fast enough because of slow writing speed or poor spelling skills: the result is that the learner can not make sense of the notes afterwards (Hughes & Suritsky 1993:8).

In this section we will look at strategies in some areas where learners struggle to remain on-task namely: remaining on-task in the classroom during seatwork; taking
notes from lectures or the blackboard; following directions; and, completing assignments and projects.

7.4.2 Learning strategies to help learners remain on task

Two strategies to increase on-task behaviour in the classroom and three strategies to improve note taking skills will be discussed.

Strategies to increase on-task behaviour in the classroom

The two strategies to increase on-task behaviour in the classroom that will be described are the clock, radio, light technique and the use of cue cards.

• Clock, radio, light technique

Recent research done indicated that when the clock, radio, light technique for increasing time on-task was used learners improved from 6 – 80% to follow rules and remain on-task in less than 4 weeks (Wheddon & Bakken 1999:6-10).

The components of clock, radio and light are used to give learners auditory and visual awareness. The electric clock is used as a visual reminder for learners to remain on-task and also for learners to see how much time they actually spend on-task. A small lamp with a green light bulb is also as visual reinforcement. The radio with a cassette and CD player is for playing music that provides auditory reinforcement for learners remaining on-task. Music is played at a level that would not disturb any other classroom. The learners control the music, thus learners take an active role in governing their attitudes and actions within the classroom. The educator uses a concealed stopwatch to record the actual time learners spend on-task.

Educators explain the process to learners. Learners are allowed to choose the radio station or music by majority vote. The educator stops the concealed stopwatch any time a learner is out of his seat, speaking out, or breaking a rule. The stopwatch is recommenced as soon as all the learners are on-task. At the end of the 30 minute period the total time on the stopwatch is divided by 30 (for the 30 minute period) and
then multiplied by 100 to get the percentage of time on-task. Learners record the percentage time on-task on self-management sheets. The procedure should be followed for about 4 weeks till learners have learnt to monitor their on-task behaviour.

- **Cue cards**

Use cue cards to get learners to remain on task. See Figure 14 that contains an example of a cue card. Cue cards can be taped onto a corner of a learner’s desk or pasted inside the front cover of the relevant notebook. Learners are able to use the cue cards to remind them of the steps to follow for a particular learning strategy. Cue cards can be used for any learning area or content subject.

**Figure 14: An example of a cue card**

<table>
<thead>
<tr>
<th>ANSWERING QUESTIONS AND SOLVING PROBLEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Read the questions or problems and check the easy ones.</td>
</tr>
<tr>
<td>• Answer the easy questions or problems.</td>
</tr>
<tr>
<td>• Read the text to answer the difficult questions or problems.</td>
</tr>
<tr>
<td>• Reread the material and look elsewhere for answers to the rest of the questions or problems.</td>
</tr>
<tr>
<td>• If there are still some questions or problems you cannot answer, ask for help.</td>
</tr>
</tbody>
</table>


Educators often remark that LD learners are unable to keep up with note taking for various reasons. The following strategies might be of benefit to the learner and educator.

**Strategies to improve note taking**

Various strategies to improve note taking exist, however only the following three will be described: use of abbreviations and symbols, AWARE note taking strategy and understanding educator’s cues.
• **Teach learners to use abbreviations and symbols**

If LD learners use the following abbreviations it should speed up the note taking procedure. Learners should be reminded to write the word out fully in the examinations.

- **w/** = with
- **i.e.** = that is
- **::** = therefore
- **& or +** = and
- **e.g.,** = for example
- **=** = equal
- **≠** = not equal to
- **imp** = important (Macon [S.a.]:18).

An index card bearing the abbreviations could be taped to the learner’s desk. Educators can abbreviate words that are commonly used in their subjects or learning areas and teach these to the learners.

• **AWARE note taking strategy**

Learners should be encouraged to manage their own learning. The summarised tabulated five-step AWARE note-taking strategy can be found in Figure 15.

**Figure 15: AWARE note taking strategy**

<table>
<thead>
<tr>
<th>A</th>
<th>Arrange to take notes, sit where you can see the blackboard and, write the date on the paper.</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Write quickly and use shorthand.</td>
</tr>
<tr>
<td>A</td>
<td>Attend to cues; use a star or check mark against important facts.</td>
</tr>
<tr>
<td>R</td>
<td>Review notes, read over notes as soon as possible after taking them to identify any gaps.</td>
</tr>
<tr>
<td>E</td>
<td>Edit notes by supplying missing information, adding personal details and clarifying or elaborating on noted information.</td>
</tr>
</tbody>
</table>

Source: adapted from Hughes and Suritsky (1993: 10).
The strategy explained in Figure 15 could be copied onto an index card and pasted onto a desk or inside the front cover of a notebook till the skill is fairly automatic. The strategy reminds learners to: be prepared for note taking, write the date on the page, use a shorthand system as described above, mark important facts with a star, read through the notes soon after note taking to identify any gaps in understanding or the notes themselves, and then to fill in any missing information.

- **Understanding the educator's cues:**

If learners are taught to be mindful of educators' cues, it will help them to direct their attention to important facts and the organisational structure of the lecture. When learners note these clues it will assist them in processing the information. Educators should deliberately use cues to facilitate recall of lesson information (Suritsky & Hughes 1991:9,13-14). LD learners have to be explicitly taught to note these cues.

Teach learners to understand lecturer clues by noting the following:

- Numbered points
- Headings
- Subheadings
- Repeated points
- Facts written on the blackboard.

Some compensatory teaching strategies and modification ideas will now be described.

### 7.4.3 Compensatory teaching strategies and modification ideas to help learners remain on-task

Five compensatory teaching strategies will be explained in this section, namely: strategies to help learners remain on-task, strategies to improve note taking, strategies to improve lectures, modification ideas to improve directions and instructions, and accommodations to improve the quality of classroom assignments.
7.4.3.1 Compensatory teaching strategies to help learners remain on-task

Compensatory teaching strategies to help learners remain on-task can occur before, during or after the lesson or learning activity as described below.

Compensatory strategies before the lesson or learning activity:

- Detail and clarify the content of the lesson as well as all the activities during the period. Educators could use an overhead transparency with the list of activities.
- Identify topics, tasks and vocabulary.
- Clarify concepts to be learnt and state the expected outcomes.
- Detail all the materials, routines and behavioural expectations that will be required during the lesson; this information is very beneficial for LD learners.
- Routines should be set up for what learners are to do next. List the worksheet number; this gives learners somewhere to look if they forget what they have to do.
- When possible, educators should prepare written material on the chalkboard, overhead, or poster before instruction; a lot of time is wasted when the educator is busy writing material on the chalkboard.

Compensatory strategies during the lesson or learning activity:

- Give learners time cues by walking around the class while learners are doing seatwork and in a quiet manner tell them how much time is left for an activity—this provides predictability and stability in the learning environment.
- Play music of a soothing nature during the seatwork period in order to reduce learner noise and activity.
- Use an advance organiser.
- Use eye contact as a cue to get a learner back on task.
- All the time learners spend waiting for the educator to help them is off task behaviour if they are simply waiting and doing nothing; assistance to learners during seatwork should be brief, not more than 30-40 seconds.
Compensatory strategies after the lesson or learning activity:

- A range of prepared activities should be available for learners to engage in if they complete their work before their peers: free reading, completing other subject related work like incomplete assignments, and other challenges (Allen & Burns 1998:28; Buck 1999:226-227; Prater 1992:24-25).

7.4.3.2 Compensatory strategies and modification ideas for note taking

Learners need to take notes from the chalkboard or from lectures. Several strategies that educators can use to assist learners with note taking will be explained. If learners are proficient at note taking they will spend more time on-task.

- Guided notes is an educator prepared outline that guides a learner through a lecture and has space to record key facts, concepts and the relationship – learners are active during the lesson (Lazarus 1993:273); it helps learners figure out what the important ideas and facts are in your lecture or what they are reading.
- Conduct a class period on the essentials of good note taking; emphasise that writing down the important ideas will help them to learn Macon [S.a.]: 11).
- Lessons on note-taking should include teaching learners to: use abbreviations or symbols, paraphrase content, review notes as soon as possible after lesson/learning experience; noting lecturer cues; fill gaps in notes (Suritsky & Hughes 1991:14-15); and how to deal with factual yet abstract information in textbooks; summarising pertinent information, underlining key points in textbooks (Saski, Swicegood & Carter 1983:265).
- Provide handouts of notes relating to the lecture – learners can use it as a study guide; learners emphasis main points by underlining or using a colour code: red could indicate vocabulary to be learnt, blue could signal facts to be remembered, brown indicates that a learner needs to learn a particular concept (Wood, White & Miederhoff 1988:108)
• Note taking: Set up peer note taking system: a procedure whereby a carbon copy or photocopy of another learner’s notes is shared, rather than expecting the LD learner to copy it off the blackboard (Kolstad, McCabe & Wilkinson 1997:225; Macon [S.a.]:17; Suritsky & Hughes 1991:8; Wood, White & Miederhoff 1988:108).

• Supply learners with a graphic organiser that represents the material to be learnt in a visual format and enables the learner to see the relationship of concepts at a glance (Wood, White & Miederhoff 1988:1008).

Taking notes from the blackboard

Taking notes from the blackboard requires good visual tracking skills, adequate handwriting speed and skill and organisation. Wood, White and Miederhoff (1988:112) provide the following tips for modifying note taking from the blackboard:

• Assign a buddy to the LD learner who will supply the learner with a carbon copy of the notes
• The learner could highlight specific sections to be studied
• The educator could duplicate her notes and give the learner a copy
• Sharing a learner’s notes from the previous year or another period
• List the different topics on the board, and allow learners to fill in key concepts under the headings on the blackboard as the lesson progresses
• Seat the learner at a desk from which he can easily see the blackboard and from which he can avoid distractions
• Halt the note taking from time to time to ensure that the learners understand what is being written

7.4.3.3 Compensatory teaching strategies to improve lectures

Educators often assume that learners are active listeners. This is often not the case and learners struggle to follow lectures. Beirne-Smith (1989:435) and Engelbrecht, Kriegler and Booysen (1996:257) offer educators the following compensatory teaching strategies on lectures:
• Use key words and phrases such as first or the most important idea to help learners to focus on the main ideas.

• Summarise ideas as it serves the same purpose as using keywords and phrases.

• Repeat important statements; repetition cues the learner to important facts that need to be recorded.

• Pause occasionally so that learners have time to fill in blank spaces or catch up with a previous statement.

• Provide advance organisers, topic outlines or partially completed notes to assist the learners in organising and recording information.

• Write important points on the blackboard; information written on the blackboard is more likely to appear in the learner’s notes.

• Simplify transparencies; too much information may be confusing and therefore won’t be recorded.

• Encourage learners to record all visually material as displayed and to leave space for main questions which have to be answered later.

• Use humour or anecdotes to highlight main points as learners are more likely to remember and record illustrated points.

• Model note taking skills; use the overhead projector to model note-taking skills for learners during lectures.

• Tape portions of your lectures and use this time to teach learners to make notes.

• Have learners evaluate your presentation style and modify your presentation accordingly.

• Observe learners during note taking and adjust your pace accordingly as rapid presentation of materials makes note taking difficult for learners.

Hughes and Suritsky (1993:8) provide some interesting facts about what learners indicate that they need during lectures: educators should provide lecture handouts or outlines; educators need to decrease presentation rate of lectures; educators should identify key facts; educators should increase use of overhead transparencies; and educators should ensure a match between lecture content and text content.
7.4.3.4 Modification ideas to improve directions and instructions

Educators give instructions at a fast pace and many educators are unaware of how wordy they are. Learners thus receive many instructions or directions during a short period of time with very few opportunities to ask clarifying questions. Many LD learners experience difficulty when listening to, remembering and following a series of instruction (Brice & Roseberry-McKibben 1999:53; Smith 1980:103).


- Directions should be presented orally and in written form.
- Directions should be presented one portion at a time and limited to one or two steps at a time.
- Vary the ways to give directions: use blackboard, newsprint or the overhead projector.
- Give clear task directions; give direct and uncomplicated directions.
- Speak slowly, yet loudly enough to be heard clearly; use correct grammar and vocabulary that learners can understand.
- Repeat the instruction: use simpler language or say the same thing in a different way.
- Explain any new or unfamiliar terms.
- Ensure that learners are attentive when giving directions.
- Make eye contact with the learner(s).
- Touch the child to reinforce the sound if giving oral instructions.
- Have the learner repeat the instruction before carrying it out.
- Clarify directions before starting the activity and encourage questions.
- Tasks should be broken down into subsets; break down the directions into smaller parts.
- Display a completed project.
- Tell class what materials will be used for the task and where to find them.
- Encourage learners to write down, copy, or record the instructions.
7.4.3.5 Teaching accommodations to improve the quality of classroom assignments

Inclusion of as many of the factors listed below increases the likelihood of successful completion of assignments; it would then meet the diverse needs of the learner population. Each assignment should include:

- An understood purpose so that learners will know how completing the work will benefit them.
- Personal relevance that considers the physical, intellectual, social, emotional and cultural aspects of learners’ lives, as well as their interests.
- Variations in format and organisation in producing a final product, so that knowledge and skills can be demonstrated in different ways other than a traditional worksheet (pamphlet, chart, diagram, essay, display, poem, song, advertisement, flyer, poster, fact sheet, newspaper article – include table on assignment ideas for educators).
- Optimal challenge so that learners do not perceive the work as boring or frustrating.
- Clear and complete directions that break down the task into its component parts, listing the human and material resources, and assign a date when the work is due (also see the section on directions in 3.7.3.1).
- Opportunities for creative expression so that learners can express knowledge in unique and creative ways.
- List of pitfalls that might prevent successful completion of tasks (confusing vocabulary, lack of resources, lack of a particular academic skill).
- Choices throughout the assignment completion process; learners thus feel they have a measure of control over their own learning.
- Handouts that organise information into clear categories.
- After giving directions the educator should demonstrate task performance and then answer any questions the learners may have (Rademacher, Cowart, Sparks & Chism 1997:13).

The next section of this programme deals with strategies to improve memory.
7.5 STRATEGIES TO IMPROVE MEMORY

7.5.1 Some facts about memory

'The humble task of memorising is with us throughout our lives' (Joyce & Weil 1996:215). Memory involves the development of intelligent structuring and storage of information, intelligent search and retrieval operations as well as knowledge and monitoring of these retrieval operations. LD learners are often unaware of retrieval strategies and do not use memory cues unless prompted (Smith 1998:199, 203).

Average-ability learners need 16 to 22 presentations of a new concept before they learn and remember the definition: LD learners may require additional presentations of a concept. Effective instruction is very demanding and educators are faced with the daunting task of designing a curriculum that incorporates daily review, weekly review, monthly review and quarterly review of materials presented previously; as well as the presentation of any new skills or concepts at least 20 times each (Bender 1993:164).

Information may be forgotten because it may have faded through disuse, because it has become distorted, suppressed, or interfered with; or because the individual does not have the proper retrieval cues. One important function of an educator is to transmit information, attitudes, and skills that will not be forgotten. If learners forget because of disuse (fading), provide repetition and review to remind them of important material. If learners forget because knowledge becomes distorted, emphasise distinguishing aspects of the item to be learnt. It is not easy to remedy suppression of knowledge so educators should perhaps strive not to create learning experiences that their learners would want to suppress. Allow time to pass between lessons and then organise information to make use of similarities and differences as it may help overcome the effects of interference. Organising material and the use of similarities and differences may help towards overcoming the problem of retrieval, as positive transfer occurs when previous knowledge is linked to newly acquired knowledge (Le Francois 1994:140-141). We are unlikely to remember something if we did not pay attention to it (Joyce & Weil 1996:215).
One way to remember information is by using mnemonics. LD learners have greater memory deficits and perform poorly on verbal memory tasks like story recall that could indicate verbal processing problems. Mnemonics are devices, procedures or operations that improve memory; mnemonics offer learners a sense of security during examinations and when completing assignments. Research indicates that LD learners show marked improvement in memory when taught mnemonic techniques and learning strategies (Johnson, Altmaier & Richman 1999:213-214; Kumar & Wilson 1997:158; Masropieri & Scruggs 1998:138; Scruggs & Mastropieri 1990:271; Williams & Hounsel 1998:30).

Educators should have a broad repertoire of alternate approaches whereby they are able to provide the support for underdeveloped or defective revisualization abilities. Educators should also remember the role of attention in memory. Some learning strategies will now be discussed.

7.5.2 Learning strategies

The following learning strategies will be given: specific memory aids (mnemonics), increasing wait time, rehearsal techniques and test taking tips for learners.

• Specific memory aids (mnemonics)

Teachers can make up their own mnemonics. Mnemonics that are funny or slightly rude will be easily remembered (Vahid, Harwood & Brown 1998:84). Some examples of specific memory aids like rhymes, patterns, acronyms, and acrostics will now be given:

• Rhymes like thirty days hath September help learners to remember the number of days in each month.

• Patterns, that chunk bits of information together, facilitate learning e.g., 555 – 1212. Breaking the number into two clumps makes it easier to remember
than the whole number at a glance, i.e., it is easier to memorise 374-4107 than trying to memorise 3744107.

**Acronyms** are letter cues that help learners to recall relatively complex information e.g., HIV = Human Immunodeficiency Virus and AIDS = Acquired Immunodeficiency Syndrome. The PLEASE acronym can be taught to learners to help them organise their information when composing written work:

- **P** = Pick a topic
- **L** = List your ideas about your topic
- **E** = Evaluate your list
- **A** = Activate the paragraph with a topic sentence
- **S** = Supply supporting sentences
- **E** = End with a concluding sentence, and evaluate your work

**Acrostics** makes use of a sentence in which the first letter of each word represents an item of information to remember: the sentence, men very easily make jugs serve useful nocturnal purposes, helps one to remember the order of the planets, i.e., Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Pluto. **Big elephants are ugly** can help learners to remember the sequence of the first four letters of the word beautiful. Science learners can use the sentence **Pvt. Tim Hall** to remember the amino acids in proteins, namely:

- Phenylalanine
- Valine
- Tryptophan
- Threonine
- Isoleucine
- Methionine
- Histidine
- Arginine
- Leucine
- Lysine


- **Increasing wait time before expecting an answer**

Educators should abandon **rapid-fire questioning** in reading and writing and provide a longer **wait time** for learners to respond. Increasing the wait time from the usual
second or less to about five seconds has positive effects for those asking and answering questions:

- Response length increases.
- The number of unsolicited but appropriate responses increases.
- Learner failure to respond decreases.
- Learner confidence increases.
- Speculative thinking increases (Rhodes & Dudley-Marling 1988:139).

Rehearsal techniques

Learners’ retention of facts and sequencing problems can be improved by getting them to play the shopping list game. Each learner has to repeat the words already on the list and then add another item. The list can contain as many items as there are learners in the class. Some other suggestions that will facilitate retention and recall for learners include:

- Encourage learners to repeat compiled lists in their heads.
- Teach learners to clump items together and visualise them.
- Tell learners to repeat instructions in their heads so that information is stored effectively.
- Get learners to read a short phrase and to keep repeating it in their heads as they copy it before moving to the next phrase; this helps them to move away from focussing on one word at a time and copying words one by one (Vahid, Harwood & Brown 1998:39, 108, 118).

Prompt cards

Prompt cards can be used for any learning area or subject, even mathematics. The cards could be laminated so that they last longer. Prompt cards can be written out for specific learners. Figure 16 contains an example of a prompt card:
Figure 19: A prompt card for solving Algebra word problems

<table>
<thead>
<tr>
<th>Have I written an equation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have I expanded the terms?</td>
</tr>
<tr>
<td>Have I written the steps of my solution on the worksheet?</td>
</tr>
<tr>
<td>Have I isolated the unknowns?</td>
</tr>
<tr>
<td>Have I solved the unknowns?</td>
</tr>
<tr>
<td>Have I checked my answers?</td>
</tr>
<tr>
<td>Have I highlighted my answer?</td>
</tr>
</tbody>
</table>


Test taking tips for learners

The following test taking tips can be worked through with learners; it might help them to cope with the anxiety of examinations. LD learners should be encouraged to have the list with them when taking examinations.

- Don't panic when writing a test. Have a pen, pencil, eraser and paper ready.
- Carefully read the whole question paper before trying to answer any questions. You need to understand what you have to do, and if the teacher wants one word answers or discussion type answers. This knowledge will help you to make the correct responses.
- Now that you know how many questions you have to answer, estimate the amount of time you will spend on each answer. The number of marks per question should guide you. An essay question worth 25 marks out of a 100 deserves more time than a multiple-choice question worth only two marks.
- First answer the questions that you feel comfortable about.
- Write down the key ideas and main points of an essay type question before you start writing, this helps you to include all the important information.
- Answer all the questions in the test, unless you have been told that you will be penalised for incorrect answers. If you really cannot answer a question, go on to the next one. Working on another questions sometimes helps you to remember the information for the question you have been struggling with.
- Write clearly. You might lose marks if the teacher cannot read your script.
• Reread your paper before you hand it in. Leave enough time to do so. Look at spelling and punctuation. See if you wrote what you intended to write.

• Do not waste time on questions that are confusing to you. Once you have guessed an answer to a question you are unsure of, do not change it. First guesses are usually the best (Lewis & Doorlag 1995: 355).

As learners should not be burdened by learning too many learning strategies, some compensatory teaching strategies to improve memory that educators may find palatable will now be provided.

7.5.3 Compensatory teaching strategies and modification ideas to improve memory

• Choose meaningful and relevant learning materials: learners are more likely to be motivated to learn materials that are relevant to them (Lewis & Doorlag 1995:97).

• Organise material: material that is meaningful and well organised is learned more easily and remembered for longer periods than insignificant material. Sequence instructions accordingly; do not say, but before you do this...as it might confuse the LD learner who struggles with sequencing of information (Le Francois 1994:139; Vahid, Harwood & Brown 1998:118).

• Model a learning strategy or new behaviour for learners: learners are more likely to acquire a new behaviour if they presented with a model performance to watch and imitate (Lewis & Doorlag 1995:97).

• Use attention-getting techniques such as verbal cues like ready or lets look now at the beginning of each new learning task and pointers. Picture cues have also proved to be effective with LD learners (Gearheart 1981:254; Smith 1998:204).

• Ensure open communication: learners are more likely to learn if the medium used is structured so that the educator’s messages are open to the learner’s inspection (Lewis & Doorlag 1995:97).
• Create novel learning experiences: learners are more likely to learn if their attention is attracted by relatively novel experiences (Lewis & Doorlag 1995:97).

• Provide adequate active and appropriate practice: learners learn if they are actively involved in practice to reach the instructional goals (Lewis & Doorlag 1995:97).

• Make use of visual imagery: the image-making faculty of the mind makes higher thought processes possible; the mind never thinks without a mental picture. Mental pictures increase attention to what is learned as it involves many senses like hearing, smell, taste, sight and touch (Engelbrecht, Kriegler & Booysen 1996:256; Joyce & Weil 1996:222; Smith 1998:204). (Also see Figure 9 on the RIDER visual imagery strategy).

• Visual illustrations of mathematical facts also help retention. Drawing three rows of horses with six horses in each row to demonstrate that \(6 \times 3 = 18\) is a good strategy to use with LD learners. Learners can manipulate this visual information if it is copied onto cue cards. Learners could practice multiplication for 15 minutes each day using visual cue cards (Huang & Chao 1999:662).

• Use multisensory approaches to help learners store information more effectively. Learning activities can be presented visually, through an experiment, demonstration, video, flash cards, mental maps, interactive CD-ROM, orally, written quiz, tape recording or reading exercise, and so on. Encourage learners to actively participate in the lesson (Johnson 1998:46; Mills & Brody 1999:39; Vahid, Harwood & Brown 1998:39).

• Distribute practice sessions over time as learners learn more readily if practice is done in short periods over time (Lewis & Doorlag 1995:97).

• Allow LD learners to cover their desks with newsprint and let them doodle. Research indicates that LD learners often focus better and learn more effectively when they doodle (Kolstad, McCabe & Wilkinson 1997:226).

Learning strategies should be kept simple and practice in the use thereof should be extensive.