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2008-05-26T13:09:07Z
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AN ASSESSMENT OF READING IN FIRST LANGUAGE (L1) AND SECOND LANGUAGE (L2) LEARNERS WHO EXPERIENCE BARRIERS TO LEARNING.

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A research report submitted to the Faculty of Humanities, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Education (Educational Psychology)

Johannesburg, South Africa **2006**

DECLARATION

I hereby declare that this research report is my own unaided work. It is being submitted for the degree of Master of Education (Educational Psychology) at the University of the Witwatersrand, Johannesburg. It has not been submitted for any degree or examination at any other university.

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Heidi Lisa Ireland Lathy

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ACKNOWLEDGEMENTS

Firstly I would like to thank my supervisor , Dr Yvonne Broome. Dr B, your persistent, patient encouragement as well as your considerable expertise were an invaluable part of this process.

Thank you also to the Division of Specialised Education who allowed me to use their archival material to conduct my research.

My thanks go to my statisticians Vicki and John Tolmay for their thorough analyses and helpful insights.

This research would not have been possible without the unfailing support of my friends and family. Special thanks to Geoff, Pam and Gus who never doubted that this journey would one day be complete. Much appreciation goes to Karen Andor and Heather Barclay for their encouragement and willingness to take time to walk a little way with me, despite having their own demanding journey to complete, and to Karline Farbach for her kindness, patient support and for giving so willingly of her time.

ABSTRACT

Not many studies exist in the literature on reading in South Africa which examine the differences between the reading performance of first (L1) and second (L2) language English speaking learners, particularly those who experience barriers to learning. Using archival material from the Education Clinic of the University of the Witwatersrand, this study compared the results on the Stanford Diagnostic Reading Test (Brown Level) for a group of 43 high school L1 (20) and L2 (23) learners identified as experiencing barriers to learning. In line with international research on reading difficulties skills (Ben-Zeev, 1984; Baker, 1988; Drucker, 2003; Cummins, 1989,1991; Miller, 1984; Droop and Verhoeven, 1998), it was found that the L2 students performed significantly below the level of their L1 counterparts in Auditory Vocabulary and Reading Comprehension. The results on the Phonetic Analysis were found to be similar for both groups.

KEY WORDS: first language (L1), second language (L2), reading, vocabulary, reading comprehension, Stanford Diagnostic Reading Test, barriers to learning

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1. LITERATURE REVIEW

The need to change the existing model of education, after the radical changes in the South African political climate in the 1990's, was seen as being both "urgent and complex", (Donald, 1996). Under the old model, where learners were segregated on the basis of race, the needs of the vast majority of learners had been neglected. The language policies that the new dispensation inherited were underpinned by both racial and linguistic discrimination. Not only did these policies use language in education for political means, they also prevented certain learners from gaining access to the education system or minimised their chance of succeeding within the system (Department of Education, 1997).

The move towards an inclusive education system in South Africa and the restructuring of education can be seen to be the contextualisation of a broader notion of the inclusion of all parties in a participatory democracy. Schools are to be seen as a "reflection of society" (Engelbrecht, 1999, p.133). There is a move away from exclusion and segregation, where there was an unequal distribution of resources, to inclusion where all parties are able to participate and share equally in resources (Department of Education, 2001). The Department of Education and Training expresses this as "the promotion of the equal participation of and non-discrimination against all learners in the learning processes, irrespective of their disabilities, within a single, seamless system, and a continuum of learning contexts and resources according to need" (Department of Education, 1999, p. 207). This is described by Wedell (1995) as the reorganisation of schools so that each learner is recognised as different and that these differences, including language, are celebrated and catered for.

Less than ten percent of the population of South Africa speak English as their mother tongue (Lemmer, 1996). Despite this, and due to the unique nature of the history of this country, many South African learners are educated in English which is often their second, third or even fourth language (King and Jordaan, 2005). Learning in a language other than the home language poses a range of challenges and many of these learners experience difficulty at school, with some even being referred for specialist intervention.

This research examines the differences in reading performance of first (L1) and second (L2) language English learners who have been referred for specialist intervention due to their difficulties in the classroom. This paper will review the literature in various areas to provide the theoretical and practical context for the study. An overview of bilingualism and second language

learning will be presented to contextualise the situation of the L2 learners who form part of the sample group. Reading comprehension, deriving meaning from print, is seen as the defining purpose of reading (Byrnes, 2001; Ashcraft, 2006). Theory and research in this important area will be presented to elucidate the challenges experienced by the sample group in terms of their reading performance. As the sample used in the study was drawn from a population of learners who have been identified as experiencing significant barriers to learning, the area of learning difficulties and its relationship to second language difficulties will also be examined. Finally, the suitability of the Stanford Diagnostic Reading Test will be reviewed as a diagnostic tool for the investigation of the reading skills of this group of learners.

Bilingualism and Second Language Learning

Under the Nationalist regime, English and Afrikaans were promoted as the official languages at all levels of government. Government schools were separate medium, racially segregated and administered by separate education departments. White, Coloured and Indian children attended either an English or Afrikaans medium school and, contingent on the language of instruction, the other official language was offered as a compulsory second language throughout the school career. The Bantu education policy implemented under the apartheid government made it compulsory for Black children to be taught in their mother tongue in junior primary school, with both English and Afrikaans as compulsory subjects, forcing many learners to become trilingual (Lemmer, 1996).

In senior primary and secondary school, instruction was divided equally between the two official languages. Black learners were thus studying half their subjects in English and half in Afrikaans, a process further complicated by the fact that they were also dealing with increasingly complex subject content. Language in education policies became more inflexible in the 1970's, with black learners being required to study certain subjects in Afrikaans only (Kingwill, 1998). Afrikaans came to be seen as the language of oppression, with the discontent among learners leading to the school riots in Soweto in 1976.

While government had decided that black learners were to begin their schooling in their mother tongue and then transfer to learning in English in the ninth year of schooling, no specific plan had been developed by the education department as to how this transition was to be successfully achieved. Many black learners were experiencing severe difficulties in the classroom and teachers who were themselves not always fluent in English, were often at a loss to provide appropriate

assistance. Despite the lack of support from the education department, several independent academics and researchers began investigating the challenges faced by black learners.

The Molteno Project, a research project begun at Rhodes University in Grahamstown in 1974, called for research in two main areas regarding 'African English': "an analysis of problems connected with the use of English as a medium in African schools for Blacks and the recommendation of methods for preparing lower primary children for the use of English from the 5th year of schooling onwards" (Kingwill, 1998, p 12). The project under the directorship of Professor Len Lanham, a respected academic and African language specialist, found that black children were failing to master English reading as they had not acquired basic reading skills in their first language.

After enforcing mother-tongue instruction through the primary school for a period of 30 years, the Nationalist government passed legislation in 1979 which allowed English medium instruction to begin as early as the fifth year of schooling (Standard 3). However, the then Department of Education and Training (DET), the education department responsible for African education, was not "geared attitudinally to mounting an all-out attack on the declining standards of English in African schooling" and this resulted in a marked decrease in the pass rate in English in the Senior Certificate examination from 78.2% in 1978 to 38% in 1984 (Hartshorne, 1992, cited in Kingwill, 1998, p 48). An official enquiry known as The Threshold Project which was launched by the Human Sciences Research Council, aimed to investigate the critical problems associated with the Standard 3 year (Macdonald, 1990). In an interview in 1996, Prof Lanham described the Threshold Report as "the most significant exposé of a disaster in African Education" (Kingwill, 1998, p. 49).

The findings of the Threshold Project, together with the research of the Molteno Project, formed the basis from which materials were developed in the following years. The Breakthrough to Literacy programmes which were already in use by the Molteno Project, were proving very successful. The programmes used a language-experience approach which emphasised the child's existing life-experience and language knowledge as the starting point for new learning. Once children had begun successfully reading and writing in their home language, the Bridge to English programme began teaching them English, using the same learner-centred approach in their second year of schooling. Breakthrough was developed in several African languages and a series of Bridge to English programmes, Bridge Plus One, Two, Three and Four, were later developed for use in the following primary school years. While the government recognised the success of the

Molteno project and approved it for use in many DET schools in 1983 the project was not heavily funded by the government and was dependent on non-governmental and international agencies for financial support.

Despite the initiatives of outside parties such as the Molteno Project and the Threshold Project, no attempt was made by the government to upgrade the teaching of English in Black schools through teacher training or curriculum development. The Nationalist government had created a situation where "excellence in the education of black children had to be sought outside the formal structures provided by Bantu Education" (Kingwill, 1998, p 116). While these initiatives were admirable, they could reach only a portion of the L2 learner population.

When the transfer from mother tongue instruction to English occurred after the fourth year of schooling, the majority of black learners were thus still at risk for subtractive bilingualism (a situation where a learner's L1 skills are subsumed by the L2) or semilingualism, where there is poor mastery of both L1 and L2. This mode of instruction, which continues today, has several drawbacks. According to a report by the HSRC the situation is often complicated by the fact that children speak dialects of African languages, while instruction is given in the official dialect (HSRC and EPC, 2005). They may also come from families where each parent speaks a different African language, and or from urban areas where "Fanagolo", a "township" language that is a mixture of English, Afrikaans and African languages, is the language of communication. This makes English their third or fourth language. Many teachers in these schools are themselves L2 English speakers who experienced Bantu Education, and thus when the transition is made to English instruction, learners are taught by teachers who are themselves not proficient in English. These schools also lack L1 English learners with whom L2 learners can interact, and thus provide learners with few opportunities to develop their English skills in informal situations.

When the decision to leave the choice of instruction in the hands of the governing bodies of schools was made in 1991, many parents of black learners increasingly expressed a preference for English as the medium instruction (Lemmer, 1996). First language or mother tongue instruction was seen as being associated with an apartheid ideology, which had sought to use the indigenous languages to prevent black advancement in society. English, considered the lingua franca in a society historically divided along racial and ethnic lines, also came to be seen as the language of commerce that would afford speakers socio-economic mobility (Lemmer, 1996).

Many parents felt that they would prefer their children to begin with English medium instruction as they commenced formal schooling (Lemmer, 1996). As the country began to make the transition to true democracy, the rights of the individual to choose their language of education as well as their right to freedom of movement were formalised in 1997. State schools for white children were desegregated and many black families began placing their children in these English medium environments. Parents were happier to have their children in an English medium school, despite the fact that the educators were often monolingual English speakers who had no previous experience in multilingual classrooms. These educators were unable to provide input in any of the African languages thus denying children opportunities to respond in their mother tongue, and making the use of translation as a tool in the classroom impossible (Lemmer, 1996). A further complicating factor raised by Cummins (1979, 1981), is that parents who began to use the L2 at home, believing that use of the L1 would reduce their children's chance of academic success, risked doing their child a disservice. If the parents were not proficient in L2, they risked exposing their children to inadequate L2 models and causing undue stress in the home as the quality of interaction between parent and child might suffer. If they were proficient in L2, they then risked depriving their child of the opportunity to become fully bilingual.

Despite the fact that the country has undergone over ten years of democratic rule and that there have been major changes brought about by the current government in the education system, some parents still prefer English as medium of instruction, perpetuating the above scenarios. Large numbers of learners who are immersed in school programmes where they face the challenge not only of learning English, but also of learning in English, may not yet have fully developed competence in their first language.

Research by Cummins (1999) elucidates why this is of significance. He identifies two facets of language required for successful functioning at school: Basic Interpersonal Communication Skills (BICS), mastery of the language on an oral level sufficient to cope in day to day interactions with others, and Cognitive Academic Language Proficiency (CALP), the ability to engage with language on a more challenging academic level (Cummins, 1999). According to Cummins, a child who has not yet developed CALP through reading and writing in the L1, who is placed in a language immersion situation where he/she is expected to use the second language exclusively, will suffer deficits both in L1 and L2 (Cummins, 1999). Development in L1 will lag, as the child is no longer receiving input in the school situation. L2 will suffer, as it cannot develop adequately due to the fact that L1 has not yet reached the stage of decontextualisation. The child's progress is further hampered by the fact that he/she is not competent enough in L2 for it to be an effective

vehicle for his/her learning. This results in semilingualism, poor mastery of both L1 and L2, which is characterised by poor vocabulary, poor knowledge of synonyms and weak understanding of abstract ideas or concepts (Ben-Zeev, 1984; Skutnabb-Kangas and Toukomaa, 1976, 1980; Cummins 1979; Brent-Palmer 1979, cited in Miller, 1984). Miller (1984) stresses that intensive exposure to L2 when L1 is still underdeveloped can actually impede further L1 development, which in turn limits the scope of L2 acquisition.

Learners may be very competent orally in settings such as the playground or speaking to a friend or teacher in the corridor, but this competence does not necessarily reflect their ability to use language to read, write and acquire knowledge in the classroom (Drucker, 2003). Two studies suggest that second language English speaking learners acquire peer-appropriate conversational skills in about two years, however, it may take as long as five to seven years for their academic skills to be on a par with those of their first language English speaking counterparts (Collier and Thomas, 1999; Cummins 1989). It would appear that this lag persists as the first language speakers continue to develop. Second language speakers need to gain slightly more proficiency each year to overcome the deficit. Cummins (1991) points out that first language learners whose language skills are proficient, are able to develop general cognitive academic skills at a pace related to their general cognitive development. For learners who are second language speakers, it may take longer to develop these skills, as they are simultaneously learning the language and using the language to learn.

Cummins (1991a) argues for the interdependence of L1 and L2 skills and he postulates a common underlying proficiency theory which indicates that skills and knowledge acquired in L1 can transfer across to L2 once the learner has achieved a certain level of competence in L1. Miller (1984) reiterates Cummins' point that the acquisition of L2 is influenced by the level of L1 at the time of initial L2 exposure. Successful L2 learning is considered to be aided by a high level of formal and conceptual knowledge development in L1.

Cummins (1976, 1979), cited in Ben-Zeev (1984), argues that bilingualism can have positive, neutral or negative effects on learners' cognitive development. The extent to which acquisition of L2 is positive or negative is largely determined by the level to which the learner has achieved an understanding of language as a system. This level of understanding is affected by many factors such as the child's innate intelligence and language abilities, and socio-economic and cultural factors as well as the learner's attitude towards learning the second language.

Balanced bilingualism or additive bilingualism, where a child acquires L2 with no detriment to L1, may have advantages for overall cognitive functioning (Baker, 1988; Ben-Zeev, 1984; Landry and Allard, 1991). The ability to speak more than one language allows the learner access to an array of cultural meanings and experiences and allows them an increased richness of meaning and cultural connotations (Baker, 1988). Landry and Allard (1991) outline the features which they feel additive bilingualism should encompass: high levels of proficiency in both communicative and cognitive aspects of L1 and L2; maintenance of a strong ethno linguistic identity and positive attitudes towards the language and culture of both L1 and L2; the opportunity to use L1 without diglossia. While the school is seen as being an essential contributor to additive bilingualism, linguistic vitality at the social level, in the family and community is essential.

Ashcraft (2006) citing Miller (1977), highlights the importance of beliefs which children hold about the world in terms of the impact that these beliefs have on reading comprehension. Children will interpret text according to their frame of reference. If L2 is valued and promises rewards for the learner, then the outcome of L2 learning will be more positive (Bialystok, 1988). While the attitude of L2 parents and learners towards English is largely positive in South Africa, this is not enough to ensure a smooth and trouble-free learning experience for L2 learners. L2 learners often lack access to the Anglo-centred childhood heritage of legends, nursery rhymes, songs and games which are a part of a native English speaker's cultural world (Williams and Snipper, 1990). Particularly in schools where L2 learners are taught by L1 educators who do not speak any of the African languages, the curriculum presented is often Eurocentric and the literature is Anglo-centred. The L1 learner is able to draw on his/her cultural background to augment his/her learning, whereas the L2 learner, who also has a rich heritage of indigenous culture and folklore is disadvantaged as he/she does not have access to the L1 cultural heritage and his/her own cultural heritage is largely ignored (Lemmer, 1996)

Bilingual learners have the added disadvantage that their cognitive processing resources are often allocated to the translation of text to enable them to access conceptual knowledge which is stored in memory in their home language. Instead of being able to devote their time and effort to deriving the deeper meaning of what they are reading, L2 learners spend much of their time decoding the text and translating it to understand it on its most basic literal level (Broom, 2001).

Baker (1988) identifies four major characteristics of schools that either empower or hinder L2 learners. The first characteristic is the extent to which the second language and culture are incorporated into the school curriculum. Children, whose home language and culture are not

valued are likely to be academically disadvantaged. When their home language and culture are included, this may have both cognitive and emotional benefits which impact positively on academic performance. The second characteristic is the extent to which the L1 communities are encouraged to participate in their children's education, with a collaborative process impacting positively where an exclusionary process does the opposite. The third characteristic is the extent to which education promotes the inner desire for children actively to seek out knowledge as opposed to being passive empty vessels which simply receive it.

The fourth and final characteristic involves the mode of assessment of the L2 learners. Traditionally, assessment has focussed on the individual and has emphasised pathology and intrapersonal deficits (Kriegler and Skuy, 1996). Research by Donald (1991) emphasises the importance of focussing on a systemic analysis of the context in which the child lives. This includes analysis of the family, school, and socio-economic and wider social and political contexts. Thus an ecosystemic model of assessment is favoured over a deficit or medical model. Sibaya (1989) highlights the fact that, in South Africa particularly for black L2 learners, the previous school system served to precipitate and maintain factors for learning and behavioural difficulties which became more apparent as the child progressed through formal schooling. While the advent of inclusion is bringing about a paradigm shift, where those involved in education are now employing a more ecosystemic view of learners and the difficulties which they face, many of the referrals to the Education Clinic from which the sample for this study was drawn, had their origins in a more paramedical, deficit framework. The goal of the systemic assessments provided at the clinic was to examine the child's entire ecosystem to identify areas where barriers to learning were being experienced with a view to providing the most appropriate intervention and support.

Ben-Zeev (1984) confirms these characteristics of successful schools by pointing out that successful immersion programmes, those where L2 learners are placed in L1 environments should contain several elements: the child's L1 should be used to teach content material; there should be an initial period during which the students use L1 with the teacher and with each other, and the teacher uses the L2 exclusively; emphasis should be placed on communicative use of the L2, not on correct grammatical use; students, parents and teachers must desire to maintain the development of the L1; parents and learners should have a positive attitude towards the L2. Cummins (1991b) emphasises that in learning language, either L1 or L2, both input and output must be meaningful. There must be sufficient communicative interaction at school that allows the child to develop language in authentic and meaningful contexts.

While the South African constitution may outline a progressive approach to language in education, the practices in schools do not often match the scenarios described above. The situation of bilingual learners in the South African context is often far from ideal. The L2 learners who form part of the sample used for this study have been educated during a period where language policies have been in transition and they have inherited a complex legacy of deficits and disadvantage. This makes my study imperative to further understanding of the complex challenges faced by L2 learners, as semilingualism or subtractive bilingualism has significant consequences for academic performance. If L1 is either stunted or lost, only the basics of L2 are acquired. If learners are required to use this poorly developed L2 in an academic context both the quality and quantity of what they take in and produce in the L2 will be impoverished (Miller, 1984; Baker, 1988). This condition is cumulative. The L2 learners fall further and further behind in academic and cognitive skills because their lack of proficiency in the L2 limits their ability to interact with the concepts presented in the school environment (Baker 1988).

The language deficits experienced by L2 learners are inextricably linked to their reading abilities as it is often through reading, particularly for secondary school learners, that interaction with concepts in the academic environment takes place. As learners progress through their formal education it is assumed that their reading skills will develop and that by the time they have reached secondary school, they will not only have fluent decoding skills, but will also have acquired the literal and inferential comprehension skills which will enable them to tackle increasingly complex texts. While they may be able to decode text phonetically, L2 learners' understanding of what they are reading may be severely limited. An understanding of the key area of reading comprehension will help to provide a framework in which the reading difficulties of L2 learners can be understood more clearly.

Reading Comprehension

Much reading research has focussed on the importance of phonological awareness and decoding skills and the link between these and reading ability (Liberman, et al., 1974; Sweeney and Rourke, 1978; Baron et al., 1980; Stanovich, Cunningham and Cramer, 1984 cited in Kibel and Miles 1994). While there is no doubt that there is indeed a link between decoding and reading ability, it should be remembered that decoding proficiency does not define reading ability. According to Jager-Adams (1994), reading is neither a bottom-up nor top-down process but must be understood

as an interaction between the two. This interaction can be seen to have one purpose and that is to allow the reader to derive meaning from print (Byrnes, 2001; Ashcraft, 2006).

Spivey (1997) argues that the creation of meaning is something which is essentially a human trait and this meaning is shared either in written or oral form. Meaning can therefore, be seen as being constructed (Stothard, 1994). The reader brings his/her own knowledge and experience to the text and this impacts on his/her understanding. This is in line with the claim by Williams and Snipper (1990) that meaning does not exist independently of either the text or reader, but is a function of the interaction between the two.

According to Byrnes (2001), reading comprehension is enhanced by two distinct clusters of factors: structural aspects and functional aspects. The structural aspects include the readers' prior knowledge of topics as well as their schemata for narrative and expository texts. The functional aspects include setting goals for reading, the construction of coherent representations and the use of a variety of reading strategies. A brief description of each aspect will be provided, and the developmental trend expected for senior primary and early secondary school learners will be highlighted.

First, it is important to examine the structural aspects. When readers picks up a text, they bring with them prior or background knowledge which influences how they will derive meaning from that particular text. This topic knowledge is generally in the form of schemata, or "mental representations of what multiple instances of some type of thing have in common", (Byrnes, 2001 p 161). For example, a schema for cats would be made up of the things that most cats have in common. If a reader were to read a text about cats he/she would use this schema to aid in his/her understanding of the passage. This would enable him/her to make inferences when things have not been explicitly stated. Once he/she has read the passage he/she would then add any new information gleaned from it to his/her existing schema of cats. Developmentally children's schemata for various topics increase as they grow and gain more experience and knowledge. This increased topic knowledge plays a prominent role in aiding reading comprehension.

Readers also bring with them schemata about specific types of texts. Expository texts, those that contain factual knowledge such as textbooks, are written essentially to provide opportunities for the reader to learn something new (Weaver and Kintsch, 1991). The reader thus approaches the text expecting to find a particular format. For example, headings, well-defined sections, and summaries, as well as unfamiliar concepts and vocabulary. Research suggests that identifying the

structure of these texts is difficult for children of all ages (Meyer, Brandt and Bluth, 1980). Teaching the common form that such texts take, using moderately familiar content, can help improve comprehension.

Narrative texts or stories invoke a different set of expectations in the reader. Graesser, Golding and Long (1991), define several key elements in narrative texts: characters who have goals and motives; temporal and spatial placements in which the story occurs: complications and major goals of the main characters; plots and resolutions of the complications; emotional and other responses by characters to events in the story; points, morals and themes; and points of view and perspectives. As authors write, they build their story around these elements and the readers' knowledge of these elements in turn allow them to make sense of what they are reading and to predict what will be coming next. Occasionally authors may subvert parts of this pattern to create surprise or suspense in a story. Readers are also able to use their schemata of narrative texts to make judgements about the quality of the story. Children develop story schemata in response to listening to and reading stories. These schemata contain personalised, implicit knowledge about what most stories have in common. As children get older their story schemata become more complex. These schemata minimise the processing that takes place when the child is reading and also set up expectations of what is to occur next in the story. While children usually acquire a story schema on their own, research supports the expectation that teaching a formal story schema to younger children and those with learning difficulties allows them to develop a story schema sooner than they would if they were not taught, and thus supports their comprehension.

The functional aspects of reading comprehension refer to the processes in which a reader engages while he/she is reading the text. Reading is seen as a purposeful activity (Paris et al., 1991). Readers begin by directing their cognitive processes to the text. Interest in the particular text motivates them to focus on the text and they must then continue to concentrate on it as they read. Pressley et al., (1994) state that the next important step is to set a goal for the reading process. The reader may just want an overview of what a text is about and may simply skim through it. Novels are read for entertainment, whereas instructions on a package insert for medication are read very carefully to glean important safety information. Byrnes (2001) cautions that the goals a reader sets either enhance or limit what the reader gains from the text. This is particularly relevant in terms of the way that reading is taught in South African schools. The goal that teachers often set, particularly for beginning and younger readers, is to decode and pronounce all words correctly, while the goal of gaining meaning from the text is seen as being of secondary importance. This may have profound effects on reading comprehension as the reader is focussed

on sounding out words and does not engage in the strategies that are essential to promote an enhanced understanding of the text. Teachers need to guide children in the setting of appropriate goals for reading (Byrnes, 2001). This should happen particularly in the early years but can be of use for any reader who is experiencing difficulty with reading comprehension.

One of the central goals of reading is to create a coherent mental representation of the ideas that the text contains (Byrnes, 2001). The chief way that readers create these mental representations is through inference making. Readers do this in order to develop the meaning of individual ideas and also to assimilate individual ideas into a coherent structure (Alba and Hasher, 1983). The main source of these inferences is the reader's background knowledge of the topic. The more extensive and varied this topic knowledge is, the greater the likelihood that the reader will make appropriate inferences and gain increased understanding of the passage. Knowledge of the structure and genre of the text also contribute to this inference making process. Readers also increase the coherence of text by suppressing or deactivating inappropriate meanings, for example, if the text says, "The traveller enjoyed his trip", the reader is able to infer that "trip" refers to a journey, as opposed to stumbling and falling. Developmentally, as children grow, they are increasingly able to make more complex inferences in text. Implicit instruction in inference making can speed up this process (Paris et al., 1991). One of the ways this can be achieved is through stopping the story and posing questions to the reader when an inference is required. Repeated questions that require inferencing will lead to children becoming more adept at inferencing independently (Byrnes, 2001).

The conclusions that readers come to through inferencing are actually merely probabilistic. The skilled reader is able to keep track of the meaning he/she is deriving from the text and adjust his/her inferences accordingly. This process will be examined further in the final functional aspect of reading comprehension, the application of reading strategies.

A strategy is defined as "a deliberate, goal-directed operation that is directed at solving a problem" (Bjorklund 1999, cited in Byrnes, 2001, p 166). Reading strategies are thus applied intentionally by the reader and do not happen automatically or unintentionally as does the suppression of inappropriate meanings. Inference making, although discussed separately, may also be seen as a reading strategy as it is partially under the reader's control. The strategies over which readers can exercise a greater degree of conscious control to enhance their comprehension are identifying the main idea, summarising, predicting, monitoring and backtracking.

Younger learners often struggle to identify the main idea in passages and summarise what they have read (Paris et. al., 1991). These skills do develop as they grow but, as with goal setting and inferencing, they can be taught to younger readers and those who are experiencing difficulties with comprehension. Helping children to make predictions about the texts they are reading encourages them to predict when reading on their own. A reader's ability to monitor his or her own comprehension while reading is an essential skill in attaining the main goal of reading, gaining an understanding of the text. Younger children often struggle to identify their own lack of comprehension because, as has been mentioned previously, educators often set inappropriate goals for reading encouraging children to focus on "sounding out" the words. These children may then be oblivious to their failure to comprehend. If appropriate goals are set for reading and learners are encouraged to monitor their understanding of the text consciously, this reading strategy has the ability to benefit reading comprehension, particularly in older students (Paris et al., 1991). The strategy of backtracking is closely related to that of monitoring. Older readers develop the ability to backtrack, returning to previously read sections to figure out a glitch in their comprehension. Younger readers often do not use this strategy as they may be unaware that they do not understand, unable to use the text structure to guide their search for helpful information or they may think that it is not permitted to go back and read a portion of text again (Byrnes, 2001).

The development of comprehension is directly related to the amount of reading that a child does. If learners regularly read many different types of texts, words which were originally unfamiliar become familiar. The importance of developing an adequate vocabulary cannot be overemphasised (Karlsen et al., 1984). As more and more words become familiar and processing speed increases, the reader is able to access the knowledge in the text and increase his/her knowledge base. As his/her knowledge base increases he/she is able to make more inferences, which in turn enhance his/her comprehension. Frequent reading leads to higher achievement in reading which in turn leads to more frequent reading (Byrnes, 2001).

Educators need to teach the structural and functional aspects discussed above explicitly to allow learners to make gains in reading comprehension and benefit from the positive "snowball" effect that follows. Unfortunately, the converse of this positive "snowball" effect is also true (Stanovich et al., 1996). Learners, who struggle with reading and thus avoid it, deprive themselves of the opportunities to gain new experience and knowledge. This means that reading continues to be difficult as comprehension is compromised, and this in turn leads to further avoidance.

It is apparent that learners whose comprehension is poor can be seen to have less knowledge of the structure of stories and expository texts. They are also less likely to have and use appropriate reading strategies. However, research has shown that by teaching children to make inferences, identify the main idea in texts, summarise, predict, monitor and backtrack, reading comprehension can be improved (Wagoner 1983; Baker and Brown, 1984; Garner, 1987; in Stothard 1994). An important point to note is that, while poor comprehenders have deficits in terms of their schemata and strategies, these are most likely consequences of earlier reading problems rather than the primary cause of later reading problems. When children are learning to read, they need to be proficient at phonemic decoding as well as recognising familiar whole words quickly and efficiently. This ability to recognise and decode words quickly frees up time and cognitive resources enabling the reader to focus on comprehending what he/she is reading (Oakhill and Yuill, 1996). Readers who can decode effectively are then given more complex texts to read and thus gain the knowledge and strategies necessary for improved comprehension. The poor readers remain behind trapped in a negative cycle that results in ever increasing reading difficulties and ultimately poor academic achievement.

The language abilities related to reading comprehension play an important role in language proficiency related to academic tasks. L2 learners, whose language skills may be lagging behind their L1 counterparts, are at risk for reading comprehension difficulties and thus also academic difficulties (King and Jordaan, 2005). This is particularly relevant as they progress into secondary schooling, as the increase in complexity of material presented to learners in this phase is substantial (Cornoldi et al., 1996) and it is thus particularly at this point that L2 learners are likely to experience learning difficulties. Increased understanding of the reading difficulties experienced by secondary school learners can help to elucidate the nature of the learning difficulties they experience.

Learning Difficulties and the Second Language Learner

The discussion in the previous section has examined bilingualism and second language learning in South Africa, with a particular examination of the area of reading comprehension. This section focuses on the area of learning disabilities as related to second language learners. Donald (1993) defines a special educational need as existing when any factor affects learning to the extent that any or all of the following conditions are necessary if the pupil is to be appropriately or effectively educated: special access to the curriculum; a special or modified curriculum; and specially adapted conditions of learning.

The area of learning disabilities in South Africa has followed the broad trends experienced internationally (du Toit, 1996). Originally mainly religious organisations took the initiative to provide resources for learners who experienced special educational needs. The involvement of the state increased and, as more forms of special needs were diagnosed in line with the medical model, new types of schools were incorporated into the education system. More recently there has been a shift away from the exclusionary deficit model that labelled children as "learning disabled", to a more inclusive model which reflects the principles of participatory democracy in education.

The area of learning disabilities and second language learning has long been problematic. Limbos and Geva (2001) make the point that special education placement has too often reflected socioeconomic, linguistic and cultural factors rather than psychoeducational factors, and that learning difficulties, in fact, often reflect linguistic and acculturation processes. Thus, in a population of learners identified as having learning difficulties or "true learning disabilities", second language learners are far more likely to have been "misdiagnosed". Du Toit, (1996) reiterates the point that, in societies where a large percentage of the population have suffered economic exploitation and social deprivation, it is likely that many more learners will be labelled as having intrinsic difficulties. This happens because conditions are created where learners experience difficulties that closely resemble true learning disabilities. This is particularly apparent with fluent but incomplete bilingualism, which can easily be mistaken for a learning disability (Ben-Zeev, 1984)).

In South Africa, as has been mentioned, there has been a move away from the labelling and "diagnosis" of learners as "disabled". While labelling and categorisation are not intrinsically negative, it is important to consider the usefulness of categories as well as the interests that these categories serve (Adelman and Taylor, 1992). Labelling has been rejected as it is seen as having been fettered to apartheid, which was based on racial classification (Archer and Green, 1996). Specialised education was particularly criticised for labelling learners using a deficit model, which had its roots in the medical model of diagnosis and treatment. Donald (1996) points out that a disproportionately high number of Black learners were labelled as having learning disabilities. He identifies these difficulties as stemming from both intrinsic and extrinsic forces as well as an interaction of the two. Intrinsic factors such as physical, cognitive, or emotional disabilities are seen to be caused by factors related to poverty, health and health-care. Externally generated learning difficulties are caused by the heritage of social and educational disadvantage.

Work by researchers such as Donald led to a more ecosystemic understanding of barriers to learning. This is well illustrated by the transactional model proposed by Adelman and Taylor (1992) to facilitate understanding of learning difficulties. They postulate a continuum along which the factors implicated in the aetiology of these barriers can be located. The continuum runs from individual dysfunction (internal factors) on one side to environmental disadvantage (external factors) on the other, the middle point comprising a reciprocal interplay between the two. They argue that both the causes and solutions of learning difficulties need to be seen as the "intrinsic dimension in reciprocal interaction with the socio-educational dimension" (Adelman and Taylor, 1992, p 17).

The process of teasing out the aetiology of a learning difficulty in a second language learner is thus highly complex (Lundberg, 2002). Barriers to learning caused by extrinsic forces are much more prevalent in situations of widespread social and educational disadvantage. Due to the political history of South Africa it is usually L2 learners who experience these type of disadvantages. Previously these learners were often incorrectly identified in a medical framework which located reasons for learning disabilities within the individual, as having an intrinsic learning disability. While there is a move towards a more inclusive education system in South Africa where the ecosystems in which a child exists are being considered as factors in learning difficulties, care must still be taken that it is not automatically assumed that students who are second language speakers are in need of remedial intervention (Donald, 1993). This current study will help to address the paucity of research in the area of learning difficulties in South Africa, particularly as related to second language difficulties. This is a key area of investigation if these difficulties are to be understood more clearly, providing appropriate support for these learners within the inclusive classroom.

As previously mentioned, the wide blanket definitions of barriers to learning or learning difficulties may cover a variety of difficulties (Cornoldi and Oakhill, 1996). Reading comprehension difficulties, which are often part and parcel of a more general learning difficulty are, however, rarely identified in isolation. They are often masked by a learner's superficial ability with written text or their ability to use oral language appropriately. For a learner to receive support with reading comprehension, it is essential to understand the nature of the comprehension difficulties which they face. An example of an instrument used for the purpose of investigating these difficulties is the Stanford Diagnostic Reading Test (SDRT), widely administered in the Education Clinic in the Division of Specialised Education at the University of the Witwatersrand to assess specific reading skills, including reading comprehension.

The clinic was developed in the 1960's to serve the learner population of local schools. It has continued to provide psychoeducational assessment and services, chiefly to government school learners who are socio-economically disadvantaged and whose parents' cannot afford private assessment and therapy. The learners served by the clinic are both first and second language English speakers and they present with a wide variety of learning difficulties. Careful consideration has been given to the ecosystemic methods of testing used in the clinic. An ecosystemic approach, which looks at both intrinsic and extrinsic factors as well as children's strengths and interests, is utilised (Engelbrecht, 1999). Assessment tools are carefully evaluated to ensure that they will provide useful information on a learner's level of functioning. Assessment is ecosystemic and dynamic and includes both quantitative and qualitative evaluations of learners' academic performance. Reading, in particular, is tested through both informal and formal means with the most widely used formal assessment being the Stanford Diagnostic Reading Test (SDRT).

As a whole, the four levels of the SDRT mirror the emphases on the reading skills that are required throughout a learner's formal schooling. Each level is made up of a number of sub-tests. The Brown Level, which will be used as the test instrument for this study, is used to assess learners from Grades 5 to 8. The sub-tests of this level include: Auditory Vocabulary where the learner is expected to recognise the common meanings of words found in the areas of reading and literature, mathematics and sciences and social studies and the arts; Reading Comprehension which measures the ability of learners to comprehend explicitly stated meanings and details, as well as their ability to draw conclusions from implicitly stated meanings; Phonetic analysis which requires the learner to recognise the speech sounds in language; Structural Analysis which investigates the learners' ability to analyse and synthesise word parts; Reading Rate which measures reading speed and comprehension.

According to Karlsen et al., (1986), the test was designed particularly to provide accurate assessment for learners who experience difficulty in reading. Although it was standardised on an American population and has not been normed on South African learners, it has several advantages as a reading assessment in a South African context. It focuses in depth on the skills that are essential for reading, thus informing appropriate remediation strategies. It is user-friendly and contains easier items that allow low achievers to have some success. It assesses many of the areas with which L2 learners struggle such as vocabulary and comprehension skills. It is used to assess both L1 and L2 learners in the Special Education Clinic, and hence it is preferred for this study, which seeks to compare the performance of L1 and L2 students in this specific population.

1.1 Aims and Rationale

Both L1 and L2 learners are referred for reading assessment and support for a variety of complex reasons. International research indicates, however, that L2 learners perform consistently lower than L1 learners in reading skills (Ben-Zeev, 1984; Baker, 1988; Cummins, 1989; Drucker, 2003). Furthermore it would seem that L2 learners are not only achieving below their L1 counterparts in the area of reading skills, but also in their general academic performance. Cummins (1997), studying certain groups of culturally diverse pupils who speak English as a second language in both Canada and the USA, found that these L2 pupils are over-represented in school failure rates. A population of L2 learners who are experiencing difficulties at school is thus likely to be comprised of learners with underlying language difficulties or 'learning disabilities' which are exacerbated by their second language status, as well as those who are experiencing challenges related mainly to their second language status. L2 learners are often 'mislabelled' as having intrinsic learning disabilities or barriers to learning when, in fact, they experience second language difficulties. The correct identification of the nature of the language barriers that L2 learners experience is important and frequently 'missed' during assessment.

Thus far in South Africa, there has been very little investigation into the differences between L1 and L2 learners, or the area of L2 and learning difficulties. International research, which has found differences between the reading performance of L1 and L2 learners, has often been conducted in situations where the L2 learners were in the minority and not, as in South Africa, where the majority language group has been educated in the language of the minority (Oakhill, Cain and Yuill, 1998; Droop and Verhoeven, 1998; Drucker, 2003). An examination and comparison of the reading skills of L1 and L2 learners in a population of South African learners who are experiencing barriers to learning, will add to researchers' knowledge and make an important, unique contribution to the literature through an elucidation of the patterns of difference between the L1 and L2 groupings. The study is focussed on learners in the senior primary school and early secondary school as the differences between the reading performance of L1 and L2 learners in this phase can be expected to be particularly marked. The transition from primary to secondary school brings an increased workload which places additional demands on learners' language abilities (Cornoldi and Oakhill, 1996).

A study done in the Netherlands with native Dutch and ethnic minority Moroccan and Turkish children looking at the relationship between linguistic knowledge and reading comprehension development, found that the minority L2 children were equally, and sometimes even more,

efficient in word decoding but less efficient in reading comprehension than their L1 Dutch peers (Droop and Verhoeven, 1998). Cummins' (1999) research indicates that conversational language (BICS) is developed first, before the more cognitive academic language required at school (CALP), and thus it would make sense that the L2 learners first develop proficiency with the sounds of the L2. While their basic communicative language ability may outstrip their academic language ability (Collier and Thomas, 1999; Cummins 1989), the Dutch study suggests that it is still often behind that of their L1 counterparts.

This study is exploratory in nature and its aims are to investigate the performance of learning disabled first (L1) and second language English speaking (L2) senior primary and secondary school learners on the Stanford Diagnostic Reading Test. The study also aims to investigate whether L2 learners are as proficient at hearing and sounding out the phonemes in words i.e. whether their decoding skills are on a par with those of the L1 learners.

It must be noted that only three of the five sub-tests of the SDRT Brown Level (Auditory Vocabulary, Phonetic Analysis and Reading Comprehension) are routinely administered in the Education clinic from whose archives the test material was drawn. Structural Analysis and Reading Rate are not included in the clinic's battery of tests, as they have been found to be less useful in terms of their diagnostic significance.

1.2 Research Hypotheses

- It is expected that there will be differences in the achievement of L1 and L2 learners on the vocabulary and comprehension sub-tests of the SDRT with the L2 learners performing below the level of the L1 learners.

- It is expected that the phonetic decoding abilities of the two groups will be similar.

2. METHODOLOGY

2.1 Design

This study is archival in nature in that it has examined the records of assessments conducted on senior primary and secondary school learners experiencing learning difficulties who were referred to the Education Clinic of the University of the Witwatersrand. The sample includes both L1 and L2 learners as the impact of language as a variable is the focus of this study. The study used quantitative research methods such as descriptive statistics to analyse and summarise the raw scores for each question on the various sub-tests of the SDRT. These scores have been compared across the two language groups and analysed to determine whether or not speaking English as a first or second language makes a difference to the vocabulary and comprehension measured by the SDRT.

2.2 Subjects

The sample was drawn from the archives of the Special Education Clinic in the Division of Specialised Education at the University of the Witwatersrand. This clinic caters for a diverse population of learners who experience emotional difficulties and educational difficulties in the areas of reading, writing and mathematics. As previously mentioned, the clinic provides psychoeducational assessment and services for government school learners who are socio-economically disadvantaged, that is, those whose parents cannot afford private assessments and therapy. The learners are both first (L1) and second (L2) language English speakers. L1 learners are defined as those whose home language is English. L2 learners are those whose home language is not English. The study consisted of 43 subjects (Grades 5-10) who have been assessed using the Brown level of the SDRT. All the learners in the sample had attended English medium schools for at least the past two years. (Although 61 subjects were originally identified, ultimately only 43 subjects of the original 61 were used due to irregularities with raw test data in 18 of the files). The group (Grade 5-10) was chosen as increased demands on both their reading and cognitive skills occur as they move from senior primary to secondary school. For comparison purposes the sample included approximately equal numbers of L1 and L2 learners. Age, gender, grade, years in school, and years in an English medium school were noted to ascertain comparability of the groups (see Table 1).

Table 1. Descriptive Statistics for the variables of age, gender, grade, years in school, years in an English medium school

		Frequency		Percent	
		L1	L2	L1	L2
Age	**10**	2	2	8.69	10
	11	5	2	21.73	10
	12	7	1	30.43	5
	13	4	3	17.39	15
	14	4	3	17.39	15
	15		4		20
	16	1	2	4.34	10
	17		3		15
Gender	**Male**	14	14	60.86	70
	Female	9	6	39.13	30
Grade	**5**	3	1	13.04	5
	6	9	3	39.13	15
	7	6	4	26.08	20
	8	2	7	8.69	35
	9	2	4	8.69	20
	10		1		5
	College	1		4.34	
Years in an English medium school	**2**		1		5
	3		1		5
	4		2		10
	5	3	2	13.04	10
	6	7	4	30.43	20
	7	7	2	30.43	10
	8	3	4	13.04	20
	9	1	1	4.34	5
	10	2		8.69	
	11		3		15
Years in school	**5**	3	1	13.04	5
	6	6	3	26.08	15
	7	8	2	34.78	10
	8	2	6	8.69	30
	9	1	2	4.34	10
	10	3	1	13.04	5
	11		4		20
	12		1		5

2.3 Materials

The Stanford Diagnostic Reading Test (SDRT) is a diagnostic instrument designed to measure the major components of the reading process (Karlsen et. al., 1984). As its name implies it is used chiefly to diagnose reading abilities in children to provide a clear picture of their strengths and weaknesses, as opposed to giving a direct comparison with standardised norms. Four main developmental components of reading are identified: decoding, vocabulary, comprehension, and rate. The test measures these major components of reading allowing educators to determine in which areas reading remediation or reading extension needs to take place. The SDRT is based on the premise that reading is the process of gaining meaning from print, and that consequently,

comprehension is the most important aspect of reading. All other skills, for example, phonics and word recognition are necessary for comprehension to occur (Bjorn, 1986).

The test was standardised on an American population and has not been normed in South Africa. According to Salvia and Ysseldyke (1999), the SDRT is not an effective instrument for pinpointing the specific domains of reading in which pupils demonstrate strengths and weaknesses. Anastasi (1988), points out that factors such as guessing, as well as the child's intellectual abilities or IQ, can affect the results of the SDRT. No validity scores are given for the test as its validity must be measured relative to the content of the local curriculum (Salvia and Yssledyke, 1999). Karlsen et al, (1996), highlight the fact that as the SDRT has been criterion-referenced, it is possible to evaluate the learners' performance in terms of mastery as opposed to comparing actual levels of achievement.

The test was designed particularly to provide assessment for learners who experience difficulty in reading (Karlsen, et. al., 1986). This makes it specially suited to the learners who are assessed in the Special Education Clinic. The SDRT provides for four levels of diagnostic evaluation: Red Level – designed for use at the end of grade 1, for grade 2 and for low achieving grade 3 learners; Green level – intended for grades 3 and 4 and for low achieving grade 5 learners; Brown Level – used for grades 5 to 8 and for low achievers in secondary school; Blue level – intended for use in grades 9 to 12 and in community colleges. The levels are graded so that they reflect the developmental changes which take place in the development of reading, including both skills and the nature of the reading material presented (Karlsen, et. al.1986).

As a whole, the four levels of the SDRT mirror the emphases on the reading skills that are required throughout a learner's formal schooling (Karlsen, et. al.1986). The skills examined in the earlier levels reflect the emphasis of the early grades in which the child learns and consolidates basic reading skills. As they progress through primary and then secondary school education, more complex skills and aspects such as reading rate become prominent. Some skills are measured across all four levels of the SDRT, with the manner in which this is achieved becoming more complex for each different level.

As the subjects of the study are secondary school learners, the data collected is made up of results on the Brown Level (Karlsen et. al., 1986). When administering the SDRT Brown Level the learner is required to mark all his/her responses to the questions on a standardised answer sheet. Each sub-test is introduced with clear instructions and relevant examples. For purposes of

standardisation the tester is expected to read these instructions exactly as they appear in the manual. This level of the SDRT is comprised of 5 sub-tests of which only three are considered of diagnostic significance for use in the Special Education Clinic.

1. The first is Auditory Vocabulary (40 items). The learner is expected to recognise the common meanings of words found in three main content areas:
    - Reading and Literature (16 items);
    - Mathematics and Sciences (12 items); and
    - Social Studies and the Arts (12 items).

    The Auditory Vocabulary sub-test is dictated and provides information about the learners' language competence without requiring them to read. The tester reads an incomplete sentence to the learner, for example, "When you have a job you are…" and the learner then chooses the correct answer from a list of three words (idle, employed, free) which have been read by the tester.

2. The second is Reading Comprehension (60 items). The learner works unassisted in this sub-test reading the short passages silently and answering the questions that follow. The learner is expected to complete this sub-test within 40 minutes. The following areas of comprehension are assessed:
    - Literal Comprehension (30 items) – comprehension of explicitly stated meanings and details; and
    - Inferential Comprehension (30 items) – ability to draw conclusions from explicitly and implicitly stated meanings.

    These 60 items are further clustered into items that would reflect learners' exposure to various forms of reading:
    - Textual Reading (20 items) – typically found in grade appropriate textbooks;
    - Functional Reading (20 items) – typically found in everyday life; and
    - Recreational Reading (20 items) – typically found in material read for pleasure.

3. The third is Phonetic analysis (30 items). This sub-test is concerned with the relationship between sounds and letters (phoneme-grapheme relationships). In this sub-test the learner is given a word in which a particular grapheme has been underlined. He/she is required to find the corresponding phoneme from a choice of three words, for example, "f<u>a</u>ce" is given and the

learner must choose the word which contains the corresponding phoneme from “track, please and rain”. This sub-test focuses on the learners’ ability to distinguish between consonants and vowels according to the following:

- Consonants (15 items) recognition of the same consonant sounds represented by the same spelling or two different spellings;
- Single Consonants (5 items);
- Consonant Clusters (5 items); and
- Consonant Digraphs (5 items).

- Vowels (15 items) – recognition of the same vowel sounds represented by the same spelling or two different spellings;
- Short Vowels (5 items);
- Long Vowels (5 items); and
- Other Vowels (5 items).

2.4 Procedure

Permission was obtained from the Head of the Division of Specialised Education at the University of the Witwatersrand to conduct research using the assessment records contained in the division’s archives.

All available SDRT Brown Level assessment records from the past five years were drawn from the division’s archives. There was a total of 61 records 31 L1 and 30 L2. These were examined to determine their suitability for use in the study. Several records were eliminated due to the fact that the raw assessment data in the files was incomplete making it impossible to use these in the study. This left a sample of 29 L1 learners and 22 L2 learners.

Further examination revealed that, in line with the division’s policy of placing the interests of the child first, testers would discontinue administering sub-tests when it was obvious that the learner was not coping and was consequently experiencing emotional distress. It was decided that, in order for the learner to be included in the study, he/she had to have been presented with a sub-minimum of 80% of the questions on each sub-test. The sample comprising 29 L1 learners and 22 L2 learners was further reduced to 23 L1 learners and 21 L2 learners. The data from this final sample was entered into a spreadsheet and analysed statistically.

2.5 Ethical Considerations

The study made use of archival data. Permission was obtained from the Head of the Division of Specialised Education (see Appendix A) to gain access to the archived assessments in order to collect and utilise data from the files for the study.

The subjects used in the research will remain anonymous and the study was governed by the professional rules for confidentiality. Information gathered has been used for the purpose of this study only. Data collection from the archives was supervised by a registered psychologist who is bound by the ethical code of practice according to the Health Professions Act, 1974 (Act No. 56 of 1974). At no time were files removed from clinic premises.

Prior to assessment, parents/guardians of students are required to read through and complete a biographical parent questionnaire (see Appendix B). The introduction to the questionnaire outlines the nature of the work conducted in the clinic, which is a teaching clinic used for clinical work that is conducted under the supervision of registered psychologists. Parents are informed that the results of the assessment may be used for teaching and/or training purposes, and are assured of confidentiality and professional conduct. The confidentiality and anonymity of subjects in this study have been ensured as neither names nor identifying information were collected from the archives, and subjects were identified only by arbitrary numbers.

3. RESULTS

3.1 Data Analysis

The data gathered was described statistically and analysed quantitatively. The data gathered from the SDRT Brown Level was analysed in terms of the categories of L1 and L2. A two sample t-test was carried out to ascertain if there was a significant difference between the means of the L1 and L2 students' scores on the sub-tests of the SDRT. This was done to investigate the hypotheses that there would be a differences and similarities between the results for these two groups. The biographical data was used to strengthen the qualitative interpretation of the results.

3.2 Differences between L1 and L2 learners on the SDRT

Data analysis reveals that the L2 students performed below the level of the L1 students on all sub-tests of the SDRT. A t-test was performed for each of the sub-tests of the SDRT. This t-test also included an examination of the sub-components of each of the sub-tests. The results are presented in Table 3.

Table 2. Results of the two sample t-test for L1 and L2 learners for the SDRT

Sub-test	Language Group	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	t	Sig.
Auditory Vocabulary	**L1** **L2**	**23** **20**	**27.610** **17.550**	**6.727** **4.199**	**1.403** **0.939**	**10.059**	**5.96**	**<0.001*****
Reading Comprehension	**L1** **L2**	**23** **20**	**34.570** **22.050**	**12.710** **9.860**	**2.650** **2.205**	**12.515**	**3.57**	**<0.001*****
Phonetic Analysis	L1 L2	23 20	13.610 11.000	6.028 5.572	1.257 1.246	2.609	1.47	0.150
Total test score	**L1** **L2**	**23** **20**	**75.780** **50.600**	**21.360** **16.010**	**4.454** **3.579**	**25.183**	**4.32**	**<0.001*****

*p≤ 0.05 **p≤ 0.01 ***p≤ 0.001

It can be seen that the mean scores for the L2 group are lower than those for the L1 group for all sub-tests, with a more marked difference for Auditory Vocabulary and Reading Comprehension. Although the mean scores for the L1 group were higher than those for the L2 group, the standard deviation for L1 group was also higher in each case. This indicates that the L1 group had a greater spread of scores than the L2 group.

Table 3. Results of the two sample t-test for L1 and L2 learners for the sub-components of the sub-tests of the SDRT

Parent test	Sub-test	Language Group	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	t	Sig.
Auditory Vocabulary	**Reading and Literature**	**L1** **L2**	**23** **20**	**10.696** **7.050**	**3.052** **2.523**	**0.6363** **0.5642**	**3.646**	**4.23**	**<0.001*****
	Maths and Science	**L1** **L2**	**23** **20**	**8.304** **5.200**	**2.619** **1.609**	**0.5460** **0.3598**	**3.104**	**4.75**	**<0.001*****
	Social Sciences and Arts	**L1** **L2**	**23** **20**	**8.609** **5.300**	**2.190** **1.750**	**0.4566** **0.3914**	**3.309**	**5.42**	**<0.001*****
Reading Comprehension	**Literal**	**L1** **L2**	**23** **20**	**17.350** **11.200**	**6.610** **5.406**	**1.3780** **1.2090**	**6.148**	**3.31**	**0.002****
	Inferential	**L1** **L2**	**23** **20**	**17.220** **10.850**	**6.605** **4.891**	**1.3770** **1.0940**	**6.367**	**3.55**	**<0.001*****
	Textual	L1 L2	23 20	11.700 10.000	4.781 4.888	0.9970 1.0930	1.696	1.15	0.258
	Functional	**L1** **L2**	**23** **20**	**11.391** **6.000**	**4.469** **3.095**	**0.9320** **0.6921**	**5.391**	**4.53**	**<0.001*****
	Recreational	**L1** **L2**	**23** **20**	**13.610** **11.000**	**6.028** **5.572**	**1.2570** **1.2460**	**2.609**	**1.47**	**<0.001*****
Phonetic Analysis	Consonants	L1 L2	23 20	6.826 5.950	3.774 3.137	0.7869 0.7014	0.876	0.82	0.417
	Single Consonants	L1 L2	23 20	2.435 2.250	1.441 1.446	0.3004 0.3234	0.185	0.42	0.678
	Consonant Clusters	L1 L2	23 20	2.739 2.400	1.738 1.536	0.3623 0.3434	0.339	0.67	0.504
	Consonant Digraphs	L1 L2	23 20	1.652 1.300	1.526 0.979	0.3182 0.2188	0.352	0.89	0.381
	Vowels	L1 L2	23 20	6.783 5.050	2.969 3.441	0.6191 0.7694	1.733	1.77	0.084
	Short Vowels	L1 L2	23 20	2.174 1.950	1.193 1.432	0.2487 0.3202	0.224	0.56	0.579
	Long Vowels	**L1** **L2**	**23** **20**	**2.174** **1.250**	**1.497** **1.293**	**0.3122** **0.2891**	**0.924**	**2.15**	**0.038***
	Other Vowels	L1 L2	23 20	2.435 1.850	1.343 1.565	0.2799 0.3500	0.585	1.32	0.194

*p≤ 0.05 **p≤ 0.01 ***p≤ 0.001

Sub-tests indicated in bold are those for which there was a statistically significant difference

Analysis revealed a significant difference between the L1 and L2 groups on their overall score on the SDRT. This is in line with international research, which has also found that L2 learners perform below the level of L1 learners on measures of reading skills (Ben-Zeev, 1984; Baker, 1988; Cummins, 1989; Drucker, 2003). Significant differences were also found on the individual scores for the Auditory Vocabulary (p≤ 0.001) and Comprehension (p≤ 0.001) sub-tests (Table 2). This indicates that, relative to L1 learners, the L2 learners experienced difficulty with both vocabulary and comprehension. There was no significant difference between the scores for the Phonetic Analysis sub-test.

A further more fine-grained analysis of the sub-components of the sub-tests of the SDRT, is summarised in Table 3. The mean scores demonstrate that the L2 learners scored below the level of the L1 learners on the all the sub-components of the SDRT. The standard deviations in the L1 group means were above the level of the L2 group for all sub-components. Significant differences were found on the sub-components of Auditory vocabulary: Reading and Literature ($t = 4.23$ on 41 d.f. $p \leq 0.001$), Maths and Science ($t = 4.75$ on approximately 37.14 d.f. $p \leq 0.001$) and Social Sciences and Arts ($t = 5.42$ on 41 d.f. $p \leq 0.001$). There were also significant differences in the sub-components of Reading Comprehension: Literal ($t = 3.31$ on 41 d.f. $p \leq 0.001$), Inferential ($t = 3.55$ on 41 d.f. $p \leq 0.001$). Functional ($t = 4.53$ on 41 d.f. $p \leq 0.001$) and Recreational ($t = 4.25$ on 41 d.f. $p \leq 0.001$). The only significant difference in the Phonetic Analysis sub-test was for the sub-component Long Vowels ($t = 2.15$ on 41 d.f. $p \leq 0.05$).

There were no significant differences for the Textual component of Reading Comprehension. There was also no significant difference on five of the six sub-components of Phonetic Analysis: Consonants, Single Consonants, Consonant Clusters, Consonant Digraphs, Vowels, Short Vowels and Other Vowels.

These results suggest that L2 learners experience difficulty with both English vocabulary and comprehension relative to their L1 counterparts. They are, however, learning from the classroom environment as evidenced by the fact that there is no significant difference on their score for Textual comprehension. It would appear that, in terms of their phonetic analysis ability, the only sounds which the L2 learners experience as significantly difficult are the Long Vowels.

4. DISCUSSION

This research took the form of an archival study of records from the Division of Specialised Education, University of the Witwatersrand, where the reading assessment results of senior primary and secondary school L1 and L2 learners on the Brown Level of the Stanford Diagnostic Reading Test (SDRT) were collected and analysed statistically. The aim of the study was to investigate hypotheses regarding the performance of L1 and L2 learners: that there would be a difference on the scores of the SDRT for the L1 and L2 groupings, with L2 learners scoring below the level of the L1 learners, and that the results on the phonetic decoding would be similar for both groups .

The sample used in the study was drawn from the general clinic population, which is made up chiefly of government school learners who experience varying degrees of socio-economic disadvantage, and whose parents cannot afford private assessments and therapy. The learners are both first (L1) and second (L2) language English speakers and they present with a wide variety of learning difficulties.

Consistent with the research examined previously (Donald 1996; Lemmer, 1996; King and Jordaan, 2005) the descriptive statistics summarised in Table 1 (pg 19), indicate that the L2 learners experience a far more atypical pattern of academic progression than do L1 learners. Most L1 learners were 14 years old or younger, but the ages of L2 learners ranged from 10 years to 17 years, with 60% of them falling between 14 and 17. In terms of grade, approximately 80% of L1 learners were between Grades 5 and 7, the appropriate grades for the use of the SDRT Brown Level, whereas 80% of L2 learners were between Grades 7 and 10. (The Brown Level is also indicated for use with low achieving secondary school students and this explains its use with older learners in higher grades). Despite being older and in higher grades, the L2 learners performed below the level of their L1 counterparts. When one examines the figures for the number of years in school, particularly in an English medium environment, there is once again a disparity between the groups. While 70% of L2 learners had been in school for eight years or more, only about 25 % of the L1 learners had been in school for that length of time. The range for the number of years in an English medium school for L2 learners stretched from one year to eleven years. All L1 learners had been in school for between five and ten years. This indicates that the L1 learners are more likely to be in the appropriate age group for their grade. The characteristic of gender was the only category in which L1 and L2 learners showed similar patterns. For L1 learners, males made up 61% and females 39% of the total group, and for L2 learners, males made up 70% and females

30%. These figures seem to indicate that many L2 learners are old for their grade. They have spent more years in school, but fewer years in English medium environments than their L1 counterparts. The results of this study can be interpreted in the light of these trends.

According to the overall scores on the SDRT, L2 learners scored significantly below the level of the L1 learners ($p \leq 0.001$). This confirms the central hypothesis of the research which postulated that the L2 learners would be found to score below the level of their L1 counterparts in the area of reading skills. The results are also in line with international research trends which indicate that L2 learners, who often experience either semilingualism or subtractive bilingualism characterised by poor understanding, knowledge of concepts, synonyms and poor vocabulary, perform below the level of their L1 peers (Ben-Zeev, 1984; Baker, 1988; Drucker, 2003; Cummins, 1989,1991; Miller, 1984; Droop and Verhoeven, 1998). The two groups were also found to score at a similar level for phonetic decoding skills. Each of the three areas examined will be discussed below.

Auditory Vocabulary

There were significant differences between the two groupings for Auditory Vocabulary ($p \leq 0.001$) and its sub-components Reading and Literature ($p \leq 0.001$), Maths and Science ($p \leq 0.001$) and Social Sciences and Arts ($p \leq 0.001$), with the L2 learners scoring below the level of the L1 learners.

There were several individual vocabulary items where there was a marked difference in the performance of L1 and L2 learners (refer to Appendix D: Graph of Auditory Vocabulary). Table 4 presents examples of words where there was at least a 40% difference in the scores of the L1 and L2 learners.

Table 4: Examples of individual vocabulary items

Vocabulary Item	**Percentage of L1 learners correct**	**Percentage of L2 learners correct**
Item 4: disease	82%	40%
Item 20: straw	96%	40%
Item 24: tired	66%	25%
Item 25: worn away	87%	35%
Item 28: breathing	66%	25%

The results on the Auditory Vocabulary subtest were not unexpected as L2 learners face a variety of challenges in the course of developing English vocabulary. Unlike their L1 counterparts, who are exposed to English in the home which is spoken by first language speakers, L2 learners come from homes where English is often not spoken at all and/or their models are L2 speakers. When L2 learners begin school, they face further challenges (Sibaya, 1989). The teachers from whom they are learning English may be first or second language English speakers. Teachers who are second language English speakers may themselves not possess a sufficiently wide English vocabulary to enable them to develop the learners' vocabulary further. If the school environment is predominantly a first language English environment, learners are expected to use English for informed communications and academic purposes from the beginning. English is not often formally taught to these learners before the curriculum begins. Moreover the level of English used to teach the curriculum is not adapted to accommodate the competency level of L2 learners. It is taken for granted that L2 learners will acquire English incidentally through the learning process. They are not, however, given a "grace period" in which to develop their skills before they are expected to meet the demands of the curriculum. They thus have to learn English and learn in English at the same time. As the focus of the learning process is on the curriculum and not on developing language per se, vocabulary that is new to the L2 learners is not necessarily properly explained. L2 learners are thus left uncomprehending or else with the little understanding they have been able to glean from the context of the situation.

Vocabulary words learned in a second language must be practised in order that they can become consolidated. As English is not their home language, L2 children have limited opportunities to acquire and practice new vocabulary in the home. The L2 learners also do not often have the benefit of having developed CALP in their mother tongue (Cummins, 1999), before they are exposed to English at school. While they may become proficient in BICS relatively quickly, the vocabulary to which they are exposed to is probably more colloquial and context-embedded than the more academic vocabulary tested in the three vocabulary subtests of the SDRT. Conversely, even if at school the child speaks English to friends, the new vocabulary learned in the classroom may not transfer readily to the more colloquial informal language situations prevailing between peers.

The lack of understanding and opportunity to practise new words can have a cumulative negative effect on the learners' knowledge of vocabulary and their academic performance (Karlsen et al., 1984). This results in poor vocabulary scores in the secondary school years, despite the fact that the learner may have been speaking English for some years. Bearing in mind that these children

experience both difficulties related to their L2 as well as learning difficulties, they are unlikely to engage in much reading outside the classroom. This limits their exposure to new vocabulary by cutting them off from invaluable opportunities to learn and consolidate new words.

L2 learners also face many challenges in terms of the number of vocabulary words they have to learn, as English is often not just their second but sometimes their third or even fourth language (King and Jordaan, 2005). This may contribute to their difficulties with English vocabulary, as their long-term memory capacity for words is divided between all the different languages for which they need to remember vocabulary.

Research by Professor Len Lanham in the late 1950's and early 1960's at the University of Witwatersrand, focussing on investigating the causes of widespread difficulty for black learners in mastering English as a second language, postulated that difficulties in learning new vocabulary, spelling and particularly comprehension were often caused by the fact that, while English has five vowels, there are in fact 20 vowel sounds. An example given is that of black learners' pronunciation of the word "bird" which may sound to a first language English speaker like "bed". Conversely, if an L2 learner were to hear the sentence "The blanket was folded at the end of the bed", the ensuing confusion would be understandable. Lanham postulated that interference of one language into another often made it difficult for the L2 learners to identify words correctly (Kingwill, 1998). It stands to reason that L2 learner's vocabulary development will be negatively affected if they are struggling to identify and make sense of both spoken and written words.

Reading Comprehension

The overall score on Reading Comprehension ($p \leq 0.001$) was also significantly lower for the L2 students in both Literal ($p \leq 0.001$) and Inferential ($p \leq 0.001$) comprehension. Vocabulary and comprehension are inextricably linked (Karlsen, et al., 1984), and it is thus not unexpected that the L2 learners' scores were lower on both Vocabulary and Comprehension. The learners' comprehension of either a conversation or of a reading passage will be severely hindered if the majority of words are unfamiliar to them (Stanovich et al, 1996). This is particularly the case for reading comprehension because the context in this situation is often significantly reduced, as compared to a conversation where a learner has a variety of context embedded cues such as facial expressions and tone of voice to aid his/her understanding of the spoken words.

The results of the SDRT indicate that the L2 learners' comprehension of functional material, as evidenced by the scores on the Functional ($p \leq 0.001$) sub-component was significantly lowered as compared to their L1 peers. Functional comprehension measures the learners' ability to understand everyday written language such as advertisements or general information pamphlets. The L2 learners' scores were similarly lowered on the Reading and Literature ($p \leq 0.001$) sub-component which measures comprehension of more recreational literature such as novels and poems. The difference between the scores for the L1 and L2 learners was, however, not significant for the Textual sub-component of Reading Comprehension. Textual comprehension measures the learners' ability to understand material typically found in textbooks. This indicates that most of the reading that the L2 learners are doing is in the classroom or in connection with their classwork. This increased familiarity with these type of texts means that the learners are familiar with the conventions and format used in textbooks, for example, headings, well-defined sections and summaries. Research suggests that this knowledge of the common form that texts take does indeed help learners to glean information and improves their reading comprehension (Meyer, Brandt and Bluth, 1980). This may help to explain their elevated scores in this particular area, despite their diminished knowledge of vocabulary.

It was postulated in the literature review that as learners move from primary to secondary school and the volume and complexity of texts increases, the L2 learners would have more difficulty with inferential as opposed to literal comprehension tasks (Cornoldi et al., 1996). Literal comprehension questions often require less understanding of the topic and text in question and can be answered using contextual clues in the passage. For example, a question starting with the interrogative "Who" must be answered with a name or at least a reference to a person. It is possible to narrow down the search for an answer by examining the words in the question and scanning the passage for them to help pinpoint the part of the text where the answer is probably contained. It is not even necessary to understand all of the question or passage to be able to answer a literal question. For example, "James did not like the green magoblidites". The question, "Which of the magoblidites did James not like?" is answered by " He did not like the green ones". The answer is correct and the fact that the reader does not necessarily know what "magoblidites" are is irrelevant in terms of his/her ability to answer this literal question correctly.

As learners progress through school, they are expected to engage with their work on a more abstract level, using their general knowledge and schemata to make sense of things that have not been stated explicitly in the text. This ability to use their higher order cognitive processing and language skills presupposes a certain level of familiarity with, and mastery of, the relevant

language. A leaner will struggle to infer from a text which he/she is struggling to understand on a more fundamental literal level (Oakhill and Yuill, 1996). As has been mentioned, the learners in the present study come from a population who experience a variety of barriers to learning: both emotional and educational difficulties as a result of both intrinsic and extrinsic ecosystemic factors. Their difficulties with both literal and inferential reading comprehension may be due to processing and language difficulties, as well as difficulties with English as a second language.

Phonetic Analysis

The results on the Phonetic Analysis sub-test indicated that the L2 learners differed significantly from their L1 counterparts for Long Vowels only ($p \leq 0.05$), whereas there was no significant difference in the case of Consonants, Single Consonants, Consonant Clusters, Consonant Digraphs, Vowels, Short Vowels, Other Vowels.

The results in this study are in line with research done overseas by Droop and Verhoeven (1998), where L2 speakers scored on a par with, and sometimes above, the L1 speakers in the area of phonics, but below their L1 counterparts in comprehension. The research was conducted in the Netherlands with Dutch first language speakers and ethnic minority children, and aimed to explore the relative influence of different aspects of language proficiency such as lexical knowledge, morpho-syntactic knowledge, oral text comprehension and decoding skills on reading comprehension. The study indicated that the ethnic minority children, speaking and learning to read Dutch as their second language, were equally and sometimes more efficient in word decoding than their L1 counterparts. However, the L2 learners lagged behind the L1 learners in their acquisition of oral language and showed slower development of lexical knowledge (Droop and Verhoeven, 1998). The study concluded that it would seem that oral language proficiency plays a role in reading comprehension in second language learners i.e., top-down processes such as vocabulary development have a greater degree of influence on the development of reading comprehension than bottom-up processes such as word decoding.

The increased knowledge of phonics in the L2 group in both studies would seem to indicate that L2 learners are fairly proficient at hearing and sounding out the phonemes in words. Cummins' (1999) research indicates that conversational language (BICS) is developed first, before the more cognitive academic language required at school (CALP), and thus it would make sense that the L2 learners first develop proficiency with the sounds of the L2. While their basic communicative language ability may outstrip their academic language ability (Collier and Thomas, 1999;

Cummins 1989), the Dutch study suggests that it is still often behind that of their L1 counterparts. It is through further development of this oral language ability in terms of expanding the learners' top-down or meaning driven processes through, for example, vocabulary development, that reading comprehension can be improved.

There are both similarities and differences between the study by Droop and Verhoeven and the present study. Both studies sought to investigate differences in reading results for L1 and L2 learners in the areas of vocabulary, phonetic skills and reading comprehension. While the Dutch study was conducted with so-called "normal" learners, this study examined a population of learners who experience barriers to learning. The Dutch study also sought to examine the relative influence of the different aspects of language proficiency on reading comprehension, while the present study was simply an exploratory study to determine whether there were indeed differences between the performance of L1 and L2 learners in the area of reading skills.

While similar results were found in the area of phonetics i.e. that in both studies L2 learners performed on a par with, or even above, the L1 learners, the Dutch study aimed to investigate the relationship between these results and reading comprehension. It was found that increased phonetic knowledge did not seem to impact on reading comprehension as much as the children's proficiency with oral language. While it may be possible to infer that a similar situation may exist in the present study i.e., that the increased phonetic knowledge of the L2 learners does not necessarily impact on their reading comprehension as much as their oral proficiency might, oral skills were not specifically investigated in this study and therefore these comparisons must be made with caution.

It is interesting to note that the one area, Long Vowels, where L2 learners scored below the L1 learners, can be seen to make sense in terms of anecdotal evidence. Many mother tongue African language speakers stretch vowels when speaking English. Many misunderstandings between L2 speakers, who are mother tongue African language speakers, and L1 English speakers occur in words where there is confusion around a long vowel sound, particularly if the L2 English speaker has a heavy accent. For example "leave" as in "to go" can be misheard for "live" by a native African language speaker. Other examples are "ship" pronounced as "sheep" and the Johannesburg suburb of Orange Grove is widely known colloquially as "Orange Groove". The difference in this particular sub-component of Phonetic Analysis would thus appear to be linked to the treatment of long vowel sounds in African languages. Some of the few items where L2 learners scored above the level of L1 learners on this test were single consonants, consonant

clusters and consonant digraphs (See graph: Phonetic Analysis, Appendix D). This indicates that the L2 learners were more adept at identifying consonant rather than vowel sounds.

As was previously mentioned in the discussion on Auditory Vocabulary, research done in the early 1960's by Professor Len Lanham with African school children learning English as a second language, indicated that the 20 different vowel sounds in English create difficulties in spelling and particularly comprehension. The interference between the first and second languages, particularly in the area of vowels can cause mispronunciations, or words which are misheard or misread and this can easily lead to errors in comprehension. These difficulties further complicate the process of learning and remembering new vocabulary in the L2 and have a long-term impact on vocabulary development and thus also on reading comprehension skills.

The results of the study indicate that, even in a population who experience barriers to learning, L2 speakers still perform below the level of their L1 counterparts. Literature suggests that many of these L2 learners do not have intrinsic learning disabilities (Donald, 1996), but are, in fact, mislabelled as such due to second language difficulties. The differences between the L1 and L2 groups seem to arise from language based differences, as evidenced by the vocabulary and comprehension scores, rather than skills based differences, evidenced by the phonetic analysis results. If the learners' L2 status is not taken into account, then the overall SDRT scores might unrealistically represent the abilities of the L2 learners who may be diagnosed with 'reading' or 'learning difficulties' whereas their actual difficulties may be with acquisition of the second language. While it is a very complex task to tease out the aetiology of these language difficulties (Lundberg, 2002), it is important to consider their origin as the consequence for appropriate remedial intervention in each of these scenarios is quite different.

4.1 Recommendations for Interventions

While some L2 learners experience second language difficulties, others must cope with learning in a second language environment in addition to their difficulties with an intrinsic learning barrier. Thorough assessment of the nature of second language learning difficulties is essential if L2 learners are to receive appropriate support. Appropriate, individualised interventions to support their second language functioning, particularly in terms of their reading performance, need to be provided in the learning environment for all L2 learners.

Learners who are experiencing intrinsic barriers to learning such as auditory or visual processing problems, difficulties with working memory, or perhaps cognitive processing difficulties such as very poor successive processing skills, need very specific input in order to address their difficulties. While instruction may be taking place in the L2, emphasis should be placed on supporting their functioning in terms of the specific barriers they experience. This may involve instruction in basic concepts in their home language, if circumstances permit, to allow them to develop and consolidate their basic skills in their mother tongue. This support should be primary to the development of their second language knowledge. If an L2 learner is inaccurately assumed to be struggling with the L2 and an intrinsic learning difficulty is missed, there may be devastating consequences for their overall learning. The converse, which has been highlighted in this study, occurs if they are assumed to be experiencing an intrinsic learning difficulty while in fact they are struggling primarily with acquisition of the L2. They may not receive the correct level of language enrichment stimulation to develop their L2 skills resulting in gaps in language development and subsequent poor academic performance. The mislabelling can also have significant negative consequences for their self-esteem and may negatively influence teacher perceptions of their abilities and potential.

The basic principles of learning support for reading difficulties remain the same for mono and bilingual learners who do not experience intrinsic learning difficulties. L2 learners need time and the correct instruction in order for their language skills to develop. It is essential that their first language be valued and that they are permitted to use it in the classroom to facilitate the development of their English language skills. It is also important to use a culturally relevant teaching approach, as well as appropriate strategies and techniques when working with second language English students (Drucker, 2003). Cummins (1991) makes the point that in learning language, both L1 and L2, both input and output must be meaningful. There must be sufficient communicative interaction, which allows the child to develop language in authentic and meaningful contexts. Educators need to have an accurate picture of the difficulties which L2 learners are experiencing as well as a sound understanding of the principles of language acquisition in order to allow them to implement correct policies with individual learners.

Cummins (1981) highlights the extreme importance of the maintenance of the child's mother tongue in the home situation. Parents must be encouraged to speak to children in the L1 to allow them to develop concepts and schemata in their home language. According to Cummins' interdependence theory, the development of L1 will lead to increased development of L2 as the concepts learned in L1 can transfer to L2, for example, if one knows how to 'subtract' in L1 then

one can do this in L2 without too much difficulty. Learning new labels for concepts one is familiar with already is easier than learning new concepts. Research has shown consistently that gains in the first language transfer to the second language, and that maintenance of the L1 does not detrimentally affect L2.

Kessler (1984) makes the point that preschool children who learn an L2 before they begin formal schooling can be seen to *acquire* the language. They learn it in a context embedded and cognitively undemanding environment. Children who encounter an L2 in formal schooling, an environment that is context reduced and cognitively demanding, are seen to be *learning* a language as opposed to *acquiring* it. While this provides them with more of a challenge, they do have knowledge of language in a general way and can benefit from overt instruction or explicit focus on the form of language.

Development of vocabulary in both L1 and L2 can be seen to have benefits for reading in L2. When children learn new vocabulary in L2 they access their knowledge of the concept the word represents and this is stored in long-term memory in L1. A large pool of words stored in L1 in long-term memory will thus stand learners in good stead as they begin learning L2. Vocabulary development in either L1 or L2 can occur in pre-reading activities in preschool before a learner enters formal schooling. It can also occur in the formal schooling situation where teachers explicitly teach vocabulary words in a meaningful context, thus directly benefiting reading comprehension, as knowing more words makes the construction of passage meaning easier (Beck, Perfetti and McKeown 1982 in Stothard 1984).

Droop and Verhoeven (1998) emphasise the use of oral language and the importance of developing vocabulary in pre-reading activities to develop L2. This highlights the importance of preschool language experiences and emphasises that reading does not begin with the introduction of phonics during formal schooling, but rather is inextricably linked to language development as a whole. If a child is able to develop vocabulary in L2 while still in preschool, he/she is at a great advantage in terms of his/her L2 learning as he/she is able to *acquire* the L2, a process facilitated by the developed receptive language abilities of the preschool child. If the child is not lucky enough to be able to learn L2 in preschool, a concerted effort to develop his/her L1 vocabulary will be of great benefit both to his/her L1 and L2 development once a second language is introduced in later years.

Once an L2 has been introduced during a learner's formal schooling, several factors will benefit his/her vocabulary development. Where possible, learners should be taught L2 by educators who are themselves good models of the L2. They must either be mother tongue speakers of L2, or at least be fluent and competent in L2 to ensure that new vocabulary is taught correctly and with the correct pronunciation. The vocabulary and structures of the L2 need to be formally taught. It must not be taken for granted that the learners are able to engage with the curriculum. Their levels of competence need to be monitored and the curriculum needs to be adapted to suit their language needs. If the teacher is a mother tongue speaker of L2 and is not able to translate for the learners into their L1 or mother tongue, arrangements should be made to gain access to a competent translator who can provide assistance.

New vocabulary that is taught at school must be consciously practised in the classroom to allow the learners to consolidate their new knowledge. Learners must be encouraged to read for pleasure. The teacher can explore resources with the learners to obtain reading material which is at their independent reading level as well as in their field of interest.

Byrnes (2001) highlights the strategies that teachers need to teach comprehension strategies explicitly in order to improve comprehension for all learners. Teachers can greatly aid comprehension by encouraging learners to link prior knowledge of topics to texts with which they are working. This can be done by evoking appropriate knowledge before reading, encouraging inference and prediction while reading, and asking inferential questions after reading (Byrnes, 2001). Explicit teaching of functional aspects such as setting goals for reading, the construction of coherent representations and the use of a variety of reading strategies, is also extremely helpful in promoting enhanced reading comprehension.

The study points particularly to the usefulness of teaching learners schemata for narrative and expository texts. The only area of reading comprehension where L2 learners scored on a par with the L1 learners was in the area of Textual Comprehension. The difference in this particular subtest is most likely not attributable to an increased knowledge of the type of vocabulary used in the classroom, as the L2 learners' vocabulary scores were uniformly depressed. It seems plausible that the learner's relative familiarity with the type of texts used in the classroom situation allowed them to gain some meaning from the passages despite their limited vocabulary. Schemata for texts can be explicitly taught through questioning, modelling and webbing techniques, allowing learners to become familiar with the conventions of different forms of text and impacting positively on their reading comprehension.

The difficulties faced by L2 learners are complex and far-reaching and there are no easy solutions. As so much of the responsibility for the interventions for L2 children lies with educators, it is essential to consider the characteristics of an education which empowers L2 learners: the incorporation of the second language and culture into the curriculum; the involvement of L2 communities in education; the promotion of the child's inner desire to seek out knowledge; ecosystemic assessment; and communicative use of L2 in authentic, meaningful situations (Baker, 1998; Ben-Zeev, 1984; Cummins, 1991).

Intrinsic to these ideals of L2 education is adequate teacher support. While the development of bilingual/bi-cultural special education resource centres to re-educate and support present teaching professionals as advocated by Eva Gavillán Torres (1984) represents an unrealistic ideal in the South African situation, the Education Department, as outlined in Education White Paper 6 (2001), directly addresses the area of second language learning as a "barrier to learning " (White Paper 6, p.12) and provides for learner and educator support. Part of the way in which this goal will be achieved will be by making provision for the conversion of special schools into resource centres. These will form part of the District Based Support Teams, groups of departmental employees whose job it is to promote inclusive education. The staff at the resource centres will provide support to the Institution Level Support Teams, teams established by institutions themselves to put in place co-ordinated learner and educator support services. Teachers, parents and the Institution Level support teams, together with the support of the resource centres in the District Based Support Teams, will be responsible for developing Individual Support Plans which will address the language barriers which many L2 learners face.

4.2 Limitations of the research

There are several limitations to the above research which affect the ability of the results to be generalised to other studies. It has been argued that the learners' diminished performance on the subtests of the SDRT is as a result of their L2 status. There are, however, other important factors which might have influenced their performance and the differences found between the L1 and L2 groupings might not have been purely due to linguistic factors. Cummins in Baker (1988) highlights the importance of social and cultural factors that may play a role in the results on reading tests. The L2 learners differed from the L1 learners in that, although most learners who attend the clinic come from a socio-economically disadvantaged background, due to the unique nature of South Africa's political history in South Africa, many L2 learners are relatively more

disadvantaged than their L1 counterparts. The quality of their schooling may not have been on a par with that experienced by the L1 learners, and the study shows that the L2 learners have also spent fewer years in school than their L1 counterparts. Their socio-economically disadvantaged background could also have meant that they were materially disadvantaged resulting in lack of exposure to learning opportunities available to the L1 learners who were relatively more advantaged. A study where learners are matched on variables such as home language, years in school, age, grade and socio-economic status will help allow for differences in test scores to be more accurately attributed to language differences.

4.3 Further research

Future research needs to be carried out on a larger sample of students to enable the results of the study to be generalised more effectively. A study where learners are matched on variables such as home language, years in school, age, grade and socio-economic status will allow for differences in test scores to be attributed more accurately to language differences.

Educators who face the challenging task of teaching in the inclusive classroom will encounter a wide and sometimes daunting array of barriers to learning (Engelbrecht, 1999). Amongst these will be learners who are struggling to learn in a second language, as well as those for whom second language difficulties are secondary to a primary intrinsic barrier to learning. Language forms the basis of all academic learning (Cummins, 1991). Educators need to understand the specific nature of the language barriers which learners experience in order to inform appropriate and useful interventions. The area of second language learning in the present learner population, and also its relation to other barriers to learning experienced by South African learners are vastly under-researched and are of specific importance if South Africa is to move successfully into a fully inclusive educational system.

4.4 Conclusion

This study adds to the body of research in South Africa on the reading performance of L1 and L2 learners, and learners who experience barriers to learning. The results of the study agree with research done internationally which states that L2 learners generally perform below their L1 peers in the area of reading skills (Ben-Zeev, 1984; Baker, 1988; Drucker, 2003; Cummins, 1989,1991; Miller, 1984; Droop and Verhoeven, 1998). The study also indicates that this holds true even in a

population of learners who have been identified as experiencing barriers to learning. This would seem to indicate that, as Donald (1996) states, learners may have been incorrectly identified as having so-called intrinsic learning difficulties, while in fact they have been struggling to learn due to second language difficulties.

The study indicates that the learners experienced particular difficulty with their vocabulary and comprehension skills. It was found, however, that their phonetic decoding abilities were adequate and that comprehension of familiar textbook type material was greater, indicating that their familiarity with the conventions of this type of text aids their understanding to some extent. The findings of the study point to specific techniques which can be employed to support specifically L2 learners in developing improved reading comprehension strategies.

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APPENDIX A

A.1 Consent form from the Division of Specialised Education

APPENDIX B

B.1 Example of the biographical questionnaire from the Division of Specialised Education

APPENDIX C

C.1 Descriptive Statistics

DESCRIPTIVE STATISTICS

Table: Descriptive Statistics for the scores for the L1 and L2 groups on the sub-components of the sub-tests of the SDRT

L1= English (N=23) L2= 2nd Lang (N=20)	Mean		Std Deviation		Minimum		Maximum	
	L1	**L2**	**L1**	**L2**	**L1**	**L2**	**L1**	**L2**
Total A	27.610	17.550	6.727	4.199	12	10	36	23
Reading and Literature	10.696	7.050	3.052	2.523	5	3	15	12
Maths and Science	8.304	5.200	2.619	1.609	2	3	12	8
Social Science and the Arts	8.609	5.300	2.190	1.750	4	1	12	9
Total B	34.570	22.050	12.710	9.860	14	3	53	43
Literal	17.350	11.200	6.610	5.406	5	1	28	22
Inferential	17.220	10.850	6.605	4.891	6	2	27	21
Textual	11.700	10.000	4.781	4.888	3	2	19	17
Functional	11.391	6.000	4.469	3.095	4	1	19	12
Recreational	13.610	11.000	6.028	5.572	4	0	18	14
Total C	13.610	11.000	6.028	5.572	4	1	28	22
Consonants	6.826	5.950	3.774	3.137	1	0	15	11
Single Consonants	2.435	2.250	1.441	1.446	0	0	5	4
Consonant Clusters	2.739	2.400	1.738	1.536	0	0	5	5
Consonant Digraphs	1.652	1.300	1.526	0.979	0	0	0	4
Vowels	6.783	5.050	2.969	3.441	2	1	13	14
Short Vowels	2.174	1.950	1.193	1.432	0	0	4	5
Long Vowels	2.174	1.250	1.497	1.293	1	0	5	4
Other Vowels	2.435	1.850	1.343	1.565	0	0	5	5
Total	75.78	50.60	21.36	16.01	39	23	110	88

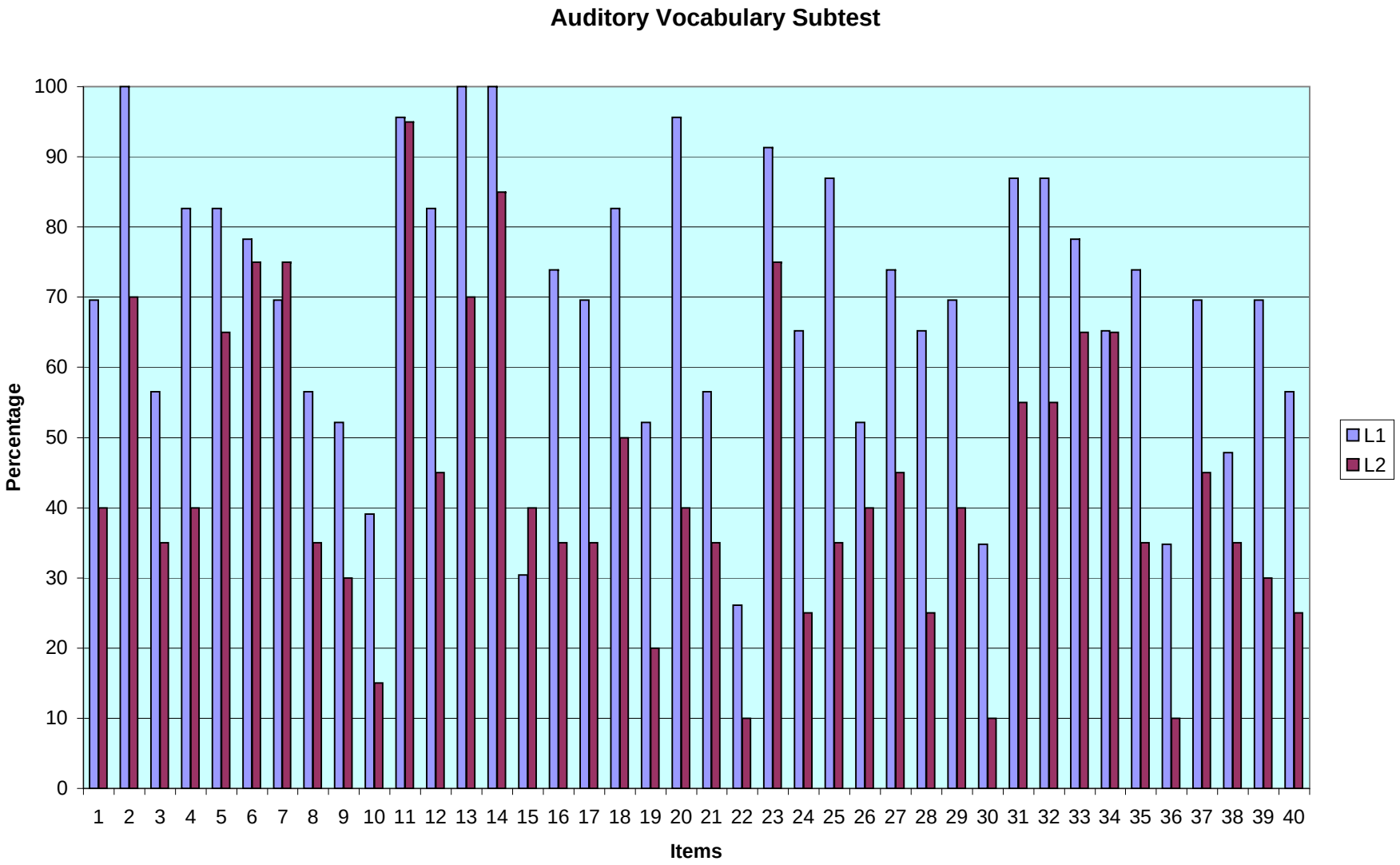
A = Auditory Vocabulary

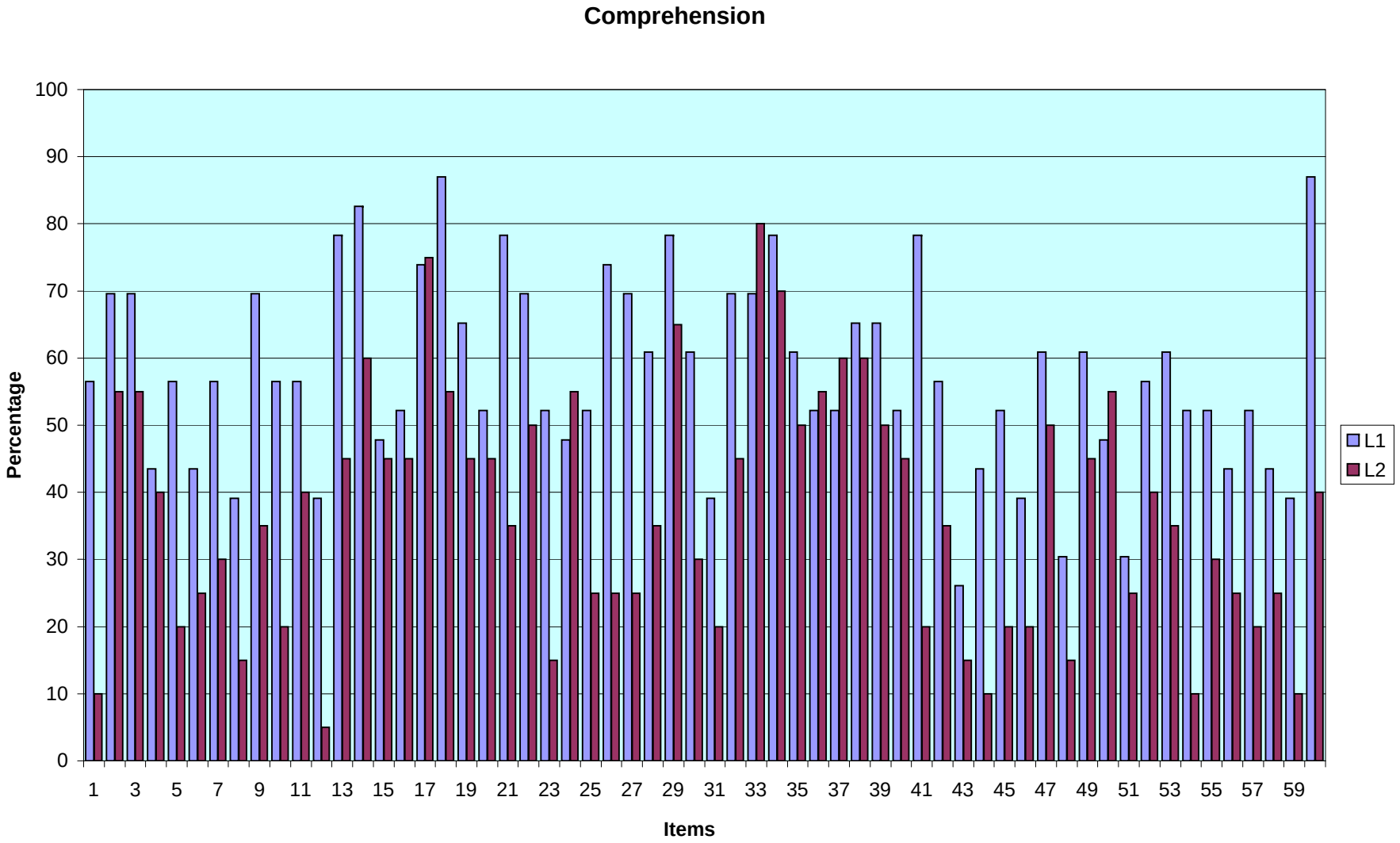
B = Reading Comprehension

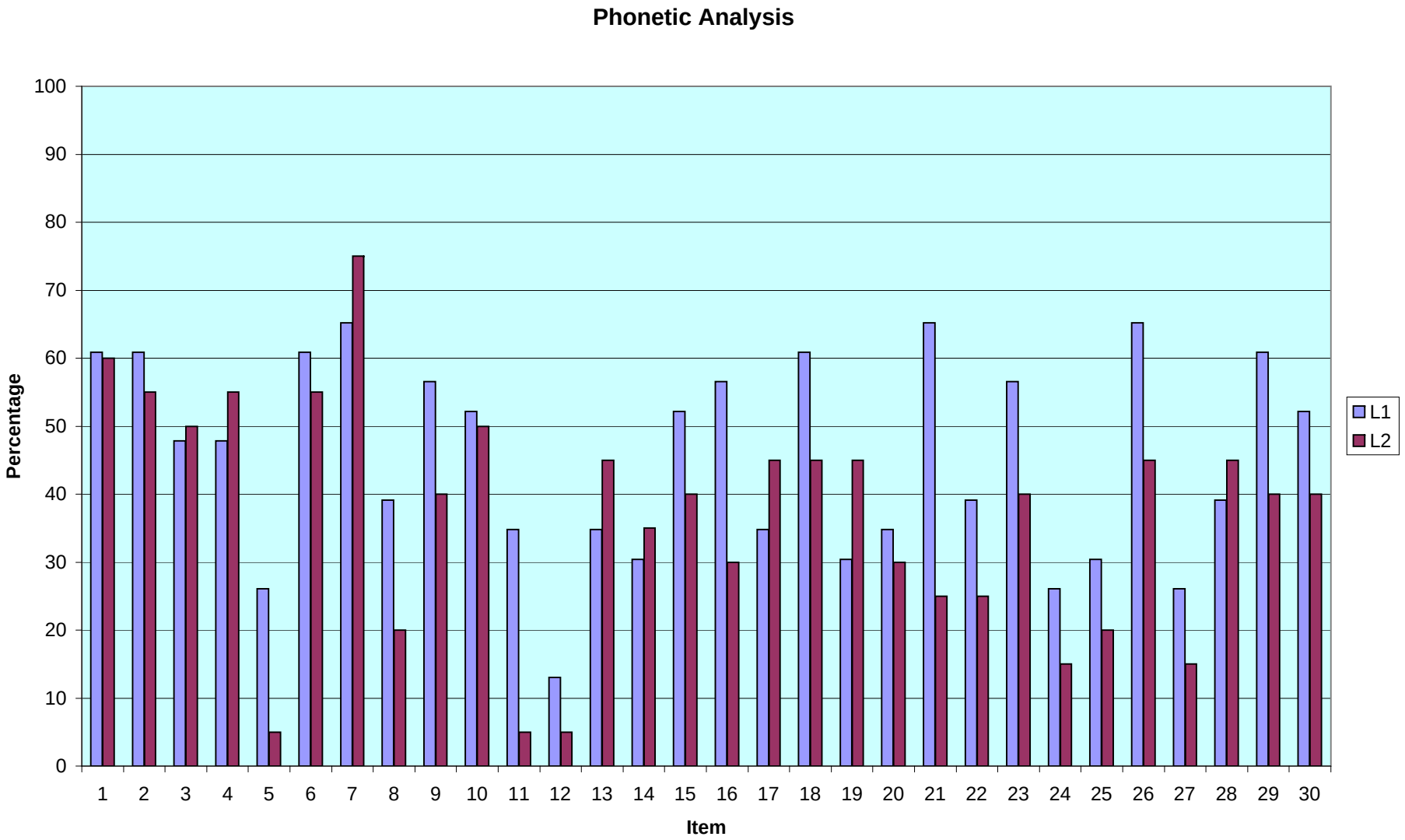
C= Phonetic Analysis

APPENDIX D

C.1 Bar Graphs of the SDRT results


Auditory Vocabulary Subtest
Percentage
100
90
80
70
60
50
40
30
20
10
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
Items
L1
L2


Comprehension
Percentage
100
90
80
70
60
50
40
30
20
10
0
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49
51
53
55
57
59
Items
L1
L2


Phonetic Analysis
Percentage
100
90
80
70
60
50
40
30
20
10
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Item
L1
L2