

**A COMPARATIVE STUDY OF LISTENING AND
READING COMPREHENSION IN CHILDREN OF
DIFFERENT AGE-GROUPS**

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In partial fulfilment of the requirements for the
M (COMMUNICATION PATHOLOGY) DEGREE
in the Department of Communication Pathology
FACULTY OF ARTS
UNIVERSITY OF PRETORIA

Pretoria
May 1997

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ACKNOWLEDGEMENTS

Although I cannot name all those who contributed to this study, I would like to express my sincere appreciation to particularly:

- Professor Erna Alant for her exceptional advice, guidance, knowledge and support during my study.
- The principals, staff and subjects involved in the pilot and main study for their encouragement, support and time.
- My colleagues Denise Anderson, Dianne Irons and Pam Raats for all their valuable time and effort.
- Dr Mike van der Linde, Department of Computer Science, University of Pretoria, for his valuable input and assistance with computing my results.
- Solly Millard, Department of Statistics, University of Pretoria, for his statistical analysis of the data.
- Rheeta van Rensberg for her willing help in finding so many references.
- Mary Hazelton and Hazel Bennett for their meticulous help in editing and technical management of the script.
- Mark for encouraging me to start this project and for helping to finance my studies.
- My parents who have always encouraged and supported me and asked nothing in return.
- My special children for their continued love, even in times of trial.

ABSTRACT

Listening and reading comprehension form an important part of the educational needs of the child. Learning and development are dynamic processes and educators must take cognisance of the continually changing needs of the environment. The relationship between and development of listening and reading comprehension is complex and interlinked. Theoretical and developmental strategies need to be explored to help us understand assessment and teaching procedures.

This study aimed to compare listening and reading comprehension using two assessment tools - the Sentence Verification Technique and the Performance Test: Listening and Reading Comprehension English First Language (HSRC). Three groups, standard 2, 3, and 4 students, were tested on both tests and reading and listening scores were compared in each test. Then the two tests were compared. Some qualitative analyses were carried out. The HSRC test showed listening and reading to be similar in all three groups, while listening was significantly better than reading on the SVT test. These differences may be related to the fact that the subjects were able to reread in the SVT reading test. A developmental trend was clear in both tests in that the scores in both reading and listening showed increases with each group. The results between the two tests were similar in the listening mode but showed differences in the reading mode. This implies that they cannot be directly compared but that both still play valuable, but different diagnostic roles. The results led to a discussion of the clinical and future research implications.

Key words: listening comprehension, reading comprehension, comparison, primary school children, Performance Test: Listening and Reading Comprehension English First Language (HSRC), Sentence Verification Technique.

SINOPSIS

Luister en leesbegrip vorm 'n belangrike deel van die opvoedkundige behoeftes van die kind. Leer en ontwikkeling is 'n dinamiese proses en opvoedkundiges moet deurlopend kennis neem van die veranderlike behoeftes van die omgewing. Die verwantskap tussen luister- en leesbegrip, asook die ontwikkeling daarvan, is kompleks en onderling verbind met mekaar. Ten einde onderrigmetodiek en evalueringsmetodes te begryp, moet ondersoek ingestel word na die daarstel van teoretiese- en ontwikkelingsstrategiee.

Die doelwit van hierdie werkstuk is om 'n vergelykende studie te maak tussen luister- en leesbegrip. Daar is gebruik gemaak van twee evalueringsmetodes naamlik die Sentence Verification Technique (SVT) en die Raad vir Geesteswetenskaplike Navorsing (RGN) se Performance Test: Listening and Reading Comprehension English First Language. Drie groepe leerlinge, afkomstig uit standerds 2, 3 en 4 is met behulp van beide metodes geevalueer. Die luister- en leestellings is tydens elke evaluering met mekaar vergelyk waarna die bevindinge van beide evalueringe met mekaar vergelyk is. Aan die hand van ook kwalitatiewe analise is bevind dat die drie groepe se luister- en leesvaardighede min of meer dieselfde is wanneer hulle met die RGN se evalueringsmetode gevalueer word. Die resultate van die SVT evaluering metode dui daarop dat die leerlinge se luistervaardighede beduidend beter is as die leesvaardighede. Laasgenoemde kan toegeskryf word aan die feit dat leerlinge tydens die SVT evaluering die geleentheid gehad het om die inhoud meer as eenkeer te lees. 'n Tendens is waarneembaar in beide evalueringe deurdat die bevindinge ten opsigte van beide lees- en luistervaardighede, vanaf standerd 2 tot en met standerd 4 progressief verbeter het.

Die resultate van die twee evalueringe toon ooreenkomste in luistervaardighede maar verskil ten opsigte van leesvaardighede. Alhoewel hierdie twee evalueringe as gevolg van die bogenoemde verskille nie met mekaar vergelyk kan word nie, kan beide wel 'n belangrike diagnostiese rol vertolk. Die bevindinge van die evalueringe kan, vanuit 'n kliniese oogpunt, 'n beduidende rol speel in toekomstige navorsing.

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND: MOTIVATION FOR STUDY

'The approach to assessment... must support the approach to teaching and learning contained within it. Decisions about what to assess and how to assess it must endorse the value of the essential generic outcomes. This is crucial if both the processes and the results of education are to be valued and quality education provided and maintained.' (Gauteng Department of Education 1996: p 28).

Two of the most important skills that children develop in the early school years are listening and reading skills. These skills however are complicated as they are integrated yet demand different underlying abilities to ensure successful learning. Therefore specific attention needs to be paid to listening and reading comprehension and diagnostic methods to describe these, to facilitate new in-depth understanding of these complex processes. Comprehension skills form an important base for learning and the interaction of the early listening skills and later reading skills is essential in our quest for educational efficiency.

'Language comprehension is the ability to connect to and interpret both *oral* and *written* language. It is the ability to recall facts, get the main idea, make an inference, draw a conclusion, predict/extend, and evaluate. It is the ability to *reason* from language that is heard and language that is read. It

is cognition.' (Bell 1991: p 246).

With this in mind, the importance of establishing the features of comprehension is clear, since it plays such an important part in cognitive factors. This description implies the interrelatedness of the two skills of reading and listening comprehension. 'Learning a language' includes the ability to read and listen with understanding (Gauteng Department of Education 1996). When problems arise with comprehension, we are automatically led to listening as a possible underlying cause of reading comprehension disorders. We cannot deny the importance of listening in primary school, since the greater part of the school day is spent listening (Choate & Rakes 1987).

Listening comprehension is defined by Dole, Harvey and Feldman (1985) as the ability to store and retrieve language information (literal comprehension) and to think beyond the here and now (inferential comprehension). On the other hand, reading comprehension can be defined as the method used to derive meaning from printed material. Definitions of reading include a way of thinking, a means of getting on in the world and a mastery of oral language. Reading embodies social practices and conceptions, as well as a complex of perceptual and cognitive processes (Harris-Schmidt & McNamee 1986; Garten & Pratt 1989; Miller 1990; Sawyer 1991; Stanovich 1992). So both listening and reading comprehension are complex processes involving many parameters.

The comparison of performance in reading and listening is not new (Mulholland & Neville 1989). There is a recognised correlation between the two skills, listening and reading (Craddock & Halpern 1988). Therefore, increasing listening comprehension should

improve reading comprehension. According to Miller and Smith (1990), it is generally assumed that listening comprehension ability is higher than reading comprehension. However they discuss research showing that for low-achieving students, listening comprehension is equal to reading comprehension, and for high-achieving readers, listening comprehension is poorer than reading comprehension. Although the research findings are not always consistent about the relationship of listening to reading comprehension, there appear to be many factors affecting the outcome of comparisons.

Listening and reading are both receptive language skills. Receptive language forms the basis of development of expressive language, social perceptions and understanding of the world (Carlisle 1989a). As Carlisle points out, children who have trouble listening and reading will have difficulties learning. This ties in with the opening quote, which highlights the interaction of written and oral language in language comprehension. Evaluating reading and listening may promote understanding of both the development of reading comprehension and the cognitive and social needs that facilitate success in school learning. Comparisons between the two skills may help to determine the type of reading deficit facing a child.

There seems to have been considerable research in the field of listening and reading comprehension, but little information on the development of these skills in the child who is establishing competence in reading that is standard 1 to 3 (Grade 3 to 6). Therefore it is important to describe the developmental trend of these skills. The use of effective tools for measuring such trends is however controversial as it is difficult to establish

an appropriate test battery which allows for effective comparison. This issue is complex because of the possible differences in processes involved and the differences between the modes of input and response.

This study was felt to be important because of the theoretical and practical issues of reading and listening comprehension. The major purpose was to determine the relationship between reading and listening comprehension skills. Reading and listening comprehension strategies need to be explored to help us understand their relationship and their relevance to the development, diagnosis and treatment of reading disorders. Although there are numerous considerations regarding testing procedures, evaluating these two areas is diagnostically valuable in establishing sound teaching methods as well as helping to separate groups of reading-disordered students effectively and providing valuable treatment cues. We cannot consider reading assessments complete without comparing the scores with listening comprehension skills since language comprehension is such a complex domain.

Effective assessment procedures are important in forming an understanding of the processes. Selection of tests needs to be carefully considered in order to conform to the educational needs of the community. Assessments should be based on norms standardised on the relevant population. They should also be practical classroom tools appropriate for use by the educator in the planning of teaching methods. Diagnosis and intervention should be linked in order to allow for effective educational outcomes.

Because of the immense challenge facing us with the diverse learners in South Africa, we must take care not to ignore the language impaired population and its special needs in reading comprehension. The literature abounds with evidence for the need for good language skills in reading competence. There is much support for the fact that language impaired children, which incorporates children with listening comprehension disorders, are more likely to encounter reading problems (Catts & Kamhi 1987; Wallach 1990; Van Kleeck 1990; Stanovich 1992; and Tunmer & Hoover 1992). Therefore a comprehensive understanding of the complexity of language comprehension is necessary to provide a meaningful educational basis for all our children.

Specifically, the aims of the study include: how reading and listening scores correlate with each other; whether the Sentence Verification Technique scores (SVT - Royer, Greene & Sinatra 1987) correlate with scores on the standardised Listening and Reading Comprehension English First Language Test (HSRC - Callis & Chamberlain 1992); whether the tests differentiate between different age groups; how different question types affect errors and whether listening and reading scores correlate with school performance scores.

The importance of such information is highlighted by Stanovich (1991) and Bedford-Feuell et al (1995) who indicate the potential relevance of comparing listening and reading comprehension in the identification of children with specific learning difficulties. Stanovich (1991) argues that large discrepancies between these two skills will identify the children with specific decoding problems. This can only occur once we have an understanding of the processes in an average population.

1.2 DEFINITIONS

Listening comprehension: Listening comprehension is described by Dole et al (1985) as the ability to store and retrieve language information (literal comprehension) and to think beyond the here and now (inferential comprehension).

Reading comprehension: Reading can be defined as the method used to derive meaning from printed material (Tunmer & Hoover 1992). Catts and Kamhi (1987) take this definition further by including the perceptual, linguistic and cognitive involvement which divides reading into two components: word recognition; and comprehension involving the higher order processes necessary to understand sentences and text.

1.3 ABBREVIATIONS USED IN THE STUDY

- SVT: Sentence Verification Technique - developed by Royer, Greene and Sinatra (1987)
- SVT-L (SL): SVT listening test
- SVT-R (SR): SVT reading test
- HSRC: Human Sciences Research Council
- HSRC test: Listening and Reading Comprehension English First Language test developed by Callis and Chamberlain (1992)
- HSRC-L (HL): HSRC listening test
- HSRC-R (HR): HSRC reading test
- Std: standard
- 2/3/4: std 2/3/4 (or grade 4/5/6)
- IQ: Intelligence Quotient

1.4 DESCRIPTION OF CHAPTERS

Chapter one presents the background of the study. Chapter two provides the theoretical perspective to reading and listening comprehension and their importance in development and assessment. In the third chapter attention is given to the assessment of reading and listening comprehension. The fourth chapter outlines the methodological procedures and techniques of the study. Chapter five comprises the results of the study and discussion of the data. The last chapter contains integration of the results and a conclusion with implications for diagnostic and therapeutic practice as well as future research.

1.5 SUMMARY OF CHAPTER ONE

Chapter one presented the motivation for the present study. Reading and listening comprehension were discussed. The issue of difficulties with assessment procedures was introduced as well as the need for assessment and comparisons.

CHAPTER TWO: READING AND LISTENING COMPREHENSION IN PRIMARY SCHOOL CHILDREN

2.1 INTRODUCTION

The purpose of this chapter is to review and adapt models of listening and reading comprehension presented in the literature in order to present a comprehensive view of these processes and the factors related to them. The aim is also to describe the nature of the relationship between reading comprehension and listening comprehension. Differences and similarities are discussed to highlight the complexity of this relationship. The importance of auditory and visual processing factors are discussed as well as the predicting factors of comprehension problems which lead to patterns of poor reading and listening skills. In particular the controversies in the literature add to the view that the relationship needs to be researched in more depth.

Maughn describes how 'One day a good fortune befell him...when he was captured first by the illustrations and then he began to read...and those he liked he read again and again. He could think of nothing else... he formed the most delightful habit in the world, the habit of reading.' (quoted by Juel 1991: p 759).

This love of reading is probably the greatest gift a child can receive, yet it is only of value if the child is able to

comprehend effectively. It is because of comprehension that a love of reading develops. Reading comprehension has as its base and forerunner, listening comprehension. Therefore a love of listening must be established prior to the development of reading. If listening comprehension is a precursor to reading comprehension, as commonly accepted (Carlisle & Felbinger 1991), then it can also be inferred that it may be a strong predictor of reading ability and early detection of listening disorders may be useful in preventing early reading difficulties (Royer, Sinatra & Schumer 1990).

The nature of the relationship between reading comprehension and listening comprehension has been of interest to teachers and researchers for many years. This relationship is important both theoretically and practically. A theoretical framework interlinking these two skills would contribute to more effective diagnosis and remediation, and establish whether working within one mode could improve or reach the other mode. Many educators have theorised that the linguistic needs for listening comprehension are similar to those for reading comprehension (Dole et al 1985), yet they fail to specify where this overlap occurs. In both listening and reading, the primary objective is to develop meaning. Listening comprehension develops prior to reading comprehension but the relationship between listening and reading becomes more complex as development progresses. This relationship is influenced by the overall linguistic functioning and at some point there is probably an overlap of ability and perhaps even a point at which reading comprehension supersedes listening comprehension (Spring & French 1990). However the time of this convergence is controversial (Carlisle 1991).

2.2 MODELS OF LISTENING AND READING COMPREHENSION

Many models have been devised to show the development and the process of reading or listening, but none seems to cover all aspects adequately. A comprehensive model is needed which incorporates environmental, hereditary and learning factors in order to determine the underlying cognitive processes.

Sawyer and Lipa (1981) provide a model of reading comprehension which includes sociocultural features. However it does not include listening comprehension. Adapted to incorporate listening, as in Figure 2.1, the model becomes more comprehensive.

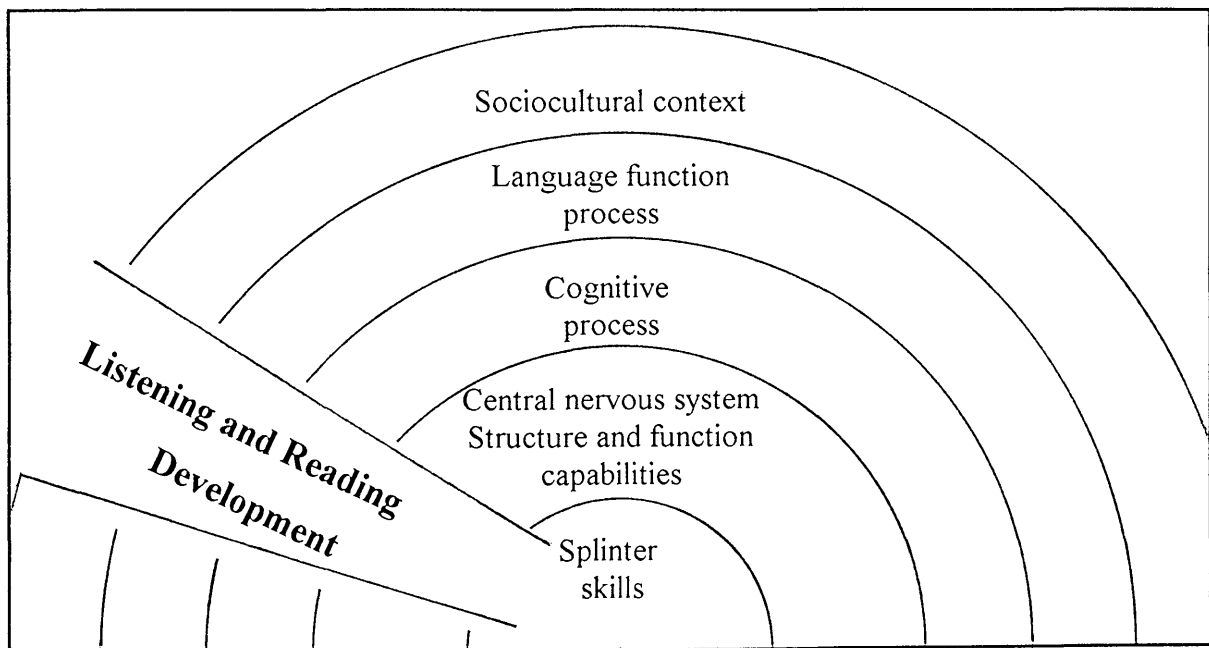


Figure 2.1: Model of support system for listening and reading behaviour (adapted from model of support system for reading behaviour in Sawyer and Lipa 1981)

This adapted model takes into account the social and environmental factors related to listening or reading development as well as the genetic and physical factors and learned skills. It also considers individual differences at every stage.

This model will be discussed from the innermost concentric circle, to the outermost circle. However the circles should not be seen as representing discreet stages, but rather as an interactive continuum of development. The central, smallest and most embedded section highlights the splinter skills used in reading and listening, including taught aspects, which affect the efficacy of the skills. These are the auditory and visual processing areas of discrimination, closure, sequencing, memory, analysis and synthesis of visual and auditory information. These skills are important in early reading and in poorer readers, but are no longer used by proficient readers. They are closely related to the linguistic, cognitive and central nervous system levels.

Working outwards, the second circle, comprises the central nervous system and hemispheric functioning which must be included as a vital part of language ability, analysis of which could assist in diagnosing difficulties and determining auditory and visual processing abilities. The brain must organise information into the correct hemispheres where lateralisation must be established. The central nervous system will have an effect on the development of linguistic and cognitive functions determined by biological and environmental influences. The central nervous system is important in comprehension. Coltheart (1978) describes how the physical processes of reading and listening must necessarily be carried through onto a further cerebral level to extend to comprehension, which involves hemispheric functioning.

An interactive and supportive context with a rich and varied linguistic environment is important for success in learning to read and essential for children with difficulties. We need to

give attention to the educational environment and world of the child. This claim is supported by Zutell (1985: p 30) who suggests a useful concept of a 'whole brain' perspective on reading. 'The dynamic and flexible nature of neural organization and the brain's remarkable potential for recovery argue against specific biological explanations.' Perhaps this allows for individual differences. This view supports the concept of interaction between the various factors represented by the concentric circles.

On a cognitive level, it would seem that listening skills and reading skills need to blend together as a whole. This concept seems in line with the popular concept of whole language - individual and separated skills are unrealistic to the child's environment and all skills are seen as interactive with one another. The cognitive process includes the important issue of memory. The brain must organise the information entering it in terms of information already in storage in order to draw on it for meaning.

Individual differences play a vital role in the relationship between reading and listening. Perhaps no children have exactly the same combination of attributes. As Dunn (1985) states, some readers are analytic while some are more holistic in their processing. Perhaps this is why there are so many varied theoretical perspectives. Coltheart (1978) concludes that reading is sometimes visual and sometimes phonological, and that this varies from person to person and from occasion to occasion. It is perhaps for this reason that there is little consensus on the process of reading or on the best methods of teaching reading. Cognitive processes include higher language functioning and

metalinguistic factors. So the cognitive circle has close links with both language functioning and central nervous system factors. Language functions are essential for both listening and reading comprehension. Without language skills and without development of increasing complexity, comprehension will be limited.

The final circle encases the entire process. Comprehension has interactive value, either on a face-to-face basis or through interaction on paper. The sociocultural context is a very broad term which can incorporate many elements, for example, expectations of social context, social values and culture, motivations of all involved, needs of the community. It will create variations in language use, abilities and expectations determined by different cultures and classes, environment and schooling. There seems to be a chain of events. Home literacy influences language understanding, which in turn affects decoding and later reading comprehension. If a child has decoding problems, he is likely to read less, and hence, reading skill, comprehension and vocabulary do not develop appropriately. It appears therefore, that the child's language decoding and reading abilities are significantly correlated with home literacy experiences.

These factors need to be considered at each stage of reading and listening development. Figure 2.2 shows the prerequisite skills which occur before reading or listening comprehension begins. Following on from this, Figure 2.3 shows the logical process of reading and listening comprehension.

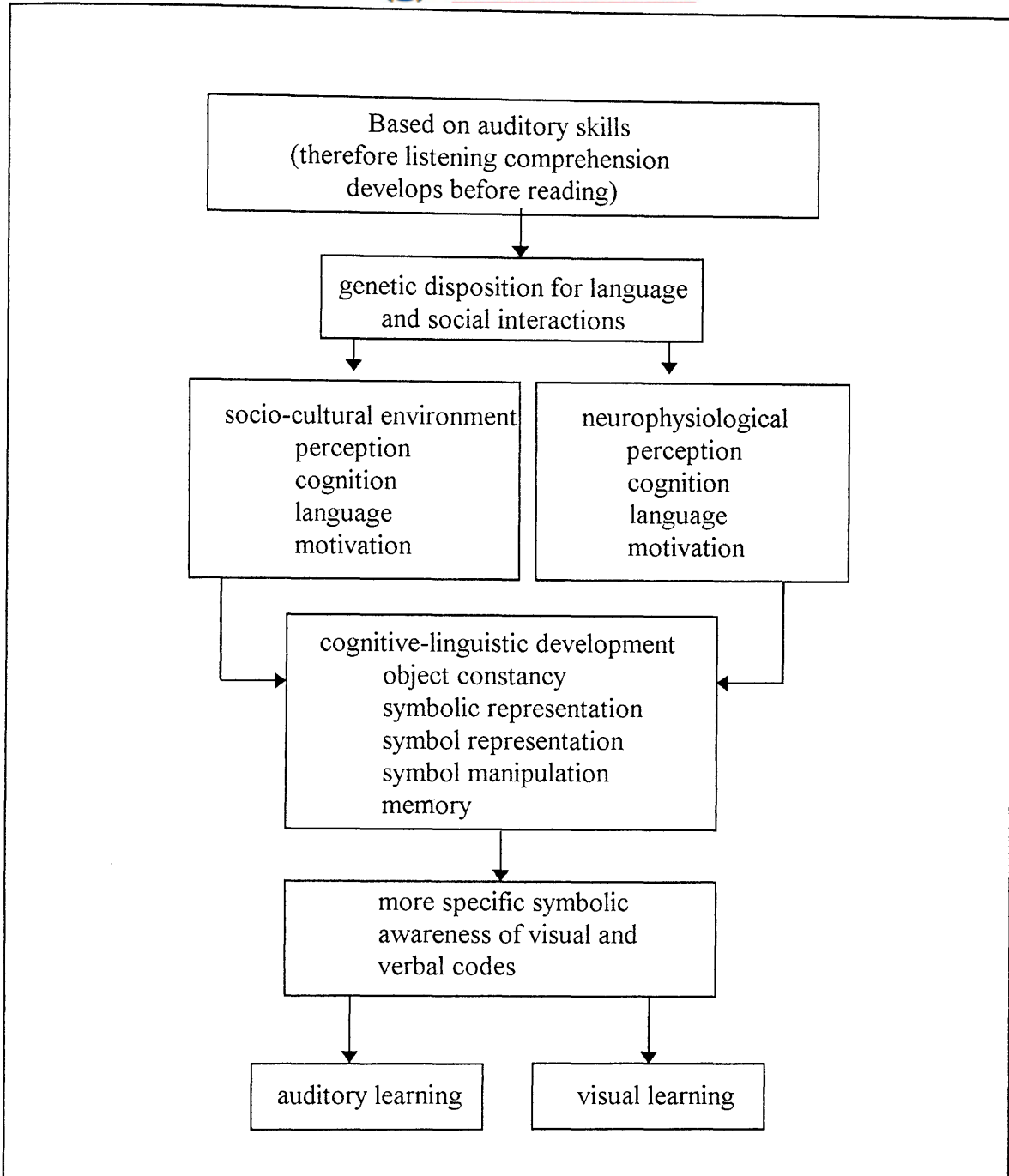


Figure 2.2: Model of prerequisite skills for listening and reading comprehension (adapted from Sawyer & Lipa 1981; Ellis & Young 1988)

Figure 2.2 highlights the skills necessary for comprehension of listening and reading in a meaningful way. It emphasises both socio-cultural and neurophysical needs in cognitive-linguistic development prior to the development of auditory and visual processing skills necessary for listening and reading comprehension.

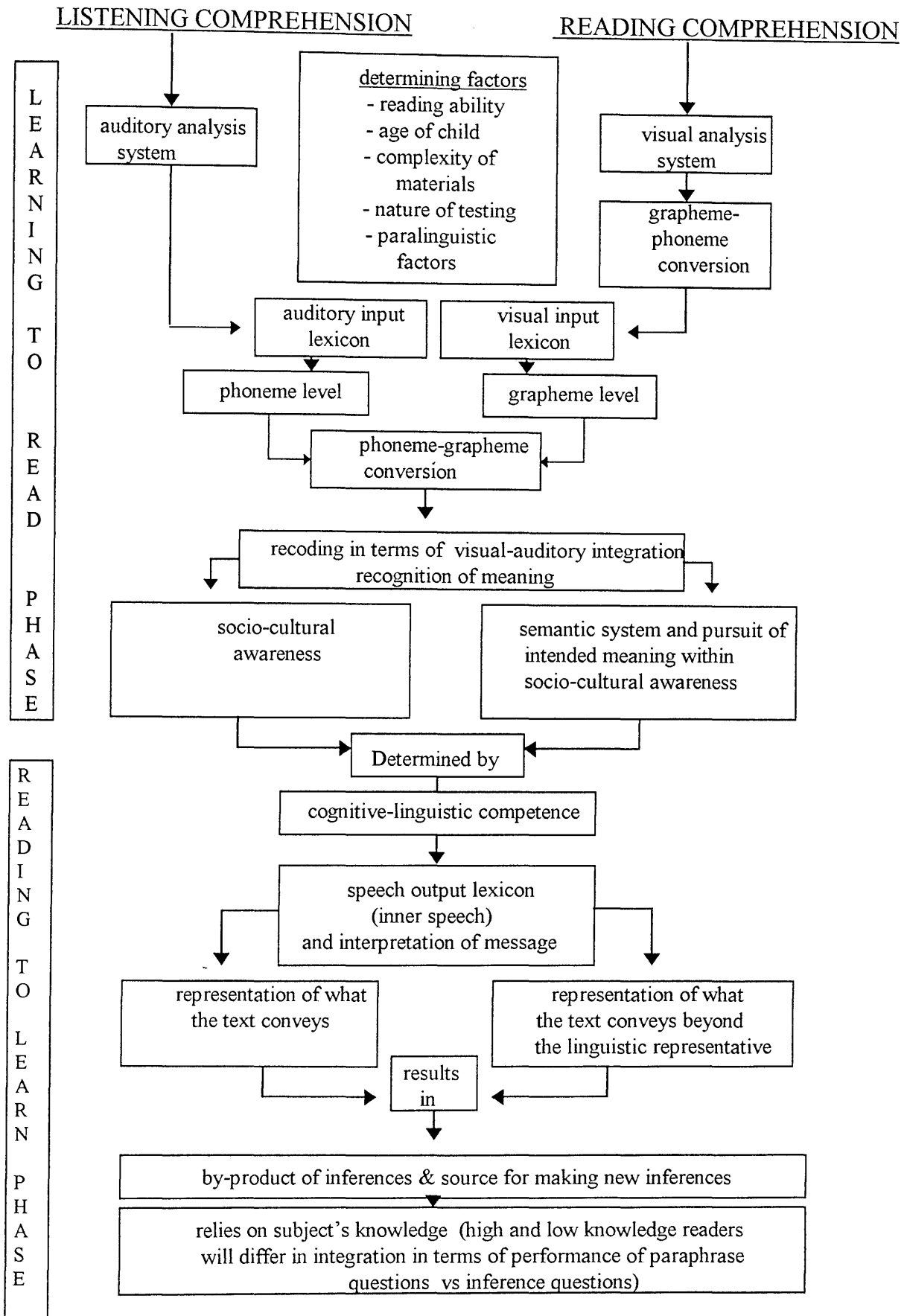


Fig. 2.3 Model of reading and listening comprehension development and factors involved (Adapted from Johnson-Laird 1980, Sawyer and Lipa 1981 and Ellis and Young 1988)

Figure 2.3 however, focuses on the development of listening and reading comprehension. The left side of the diagram shows recognition of spoken words, the right shows recognition of written words. The 'learning to read' stage involves the accommodation of spoken language to print when the meaning of concepts and labels is included in the child's range of experience.

It begins with the auditory and visual analysis systems which accept incoming auditory or visual information. The auditory analysis system transforms sound waves into a form to which the representations in the auditory input lexicon can respond. It represents acoustic features of language, such as phrase boundaries, word boundaries, phoneme boundaries. The visual analysis system includes the graphic features of text. Here the grapheme-phoneme conversion must take place (Ellis & Young 1988). Grapheme-phoneme conversion is generally only used by young unskilled readers when words need to be sounded out since the words need to be recognised auditorily not visually. Perhaps this grapheme-phoneme conversion occurs earlier in the process since children are probably aware of the association before making the link when reading begins. However the formal conscious link belongs here.

The visual and auditory processing subsections are also included here. It is important to consider the overlap of the auditory and visual processing factors which are all too often considered separately. The point of overlap is difficult to ascertain because many of the individual visual skills, for example, must use auditory skills to some extent and without their establishment further development is stilted. The auditory input

lexicon contains the representations of all the words that are known in their spoken form. It is activated by sound waves to the ears and its function is to transform them into a representation of the meanings of words which are contained in the semantic system where the motoric function of speech production either aloud or internally occurs, creating an auditory-visual-motor element.

During the 'reading to learn' stage readers use cognitive and linguistic competencies including specific reading skills and awarenesses about their own and other cultures to pursue the message intended by the author. The semantic system takes into account the relationship between letters and sounds prior to the interpretation of the message which is a combination of visual and auditory information. This requires the application of cognitive-linguistic competencies to printed language, shown in increased vocabulary, greater ability with complex language structures and individual interpretation. By this stage much formal learning has taken place and listening and reading comprehension abilities have been influenced by the amount of emphasis placed on each skill. It appears that the 'art of listening' may be dampened by the reading learning process since literacy may become the more common or the preferred mode for both pleasure and learning. There may also be cultural influences since members of more orally oriented cultures tend to be more eager to listen to stories whilst members of literate cultures tend to read more. Cultural aspects may therefore be important predictors of reading and listening comprehension abilities.

The process from print to meaning involves visual and auditory processing skills, cognitive abilities, language knowledge and

past experiences. All these features are encased in the socio-cultural environment and the outcome reflects the effectiveness of the combination of support systems reflected in Figure 2.1. These aspects are particularly relevant in the South African context. Second language learners must be shown how the reading process relates to listening and that reading development can follow a similar path to listening development. The model suggested demonstrates a comprehensive view of the interaction of the two processes and reflects a full overview of development throughout the phases.

So although the model suggests a flow of a number of abilities interdependent on each other to some degree, it must be remembered that the discreet skills need to blend together sufficiently to ensure overall proficiency in communicative competence and to result in pragmatic ability in a social context. We are not aiming to test language in separate functions.

2.3 FACTORS AFFECTING THE RELATIONSHIP BETWEEN LISTENING AND READING COMPREHENSION

A number of factors affect the relationship between listening and reading comprehension. Each of these is now considered in turn.

- **Reading ability:** Many studies have shown differences between listening and reading scores of both good and poor readers (Horowitz & Samuels 1985; Royer et al 1990; Dymock 1993). It may be that the better readers are able to take in more when visual cues are provided or perhaps they make good use of rereading skills. Poorer readers may need

stress and intonation cues, which are lacking in the written form. Spring and French (1990) found that although reading comprehension scores of disabled readers were (predictably) considerably lower than those of non-disabled readers, these listening comprehension scores did not necessarily follow the same pattern. However this depends on the nature of the reading disorder since if the reading disorder is language-based, listening would probably be negatively affected too. They also pointed out that one would expect larger listening-reading discrepancies in the earlier grades, because listening develops prior to reading and formal learning influences.

- **Age of the child:** Younger children have a better listening than reading comprehension, but as they progress through school, reading comprehension becomes better, especially when the material is more difficult (Sticht & James, 1984; Hoover & Gough 1990; Mulholland & Neville 1989). By standard 2, recognition of words should be no more demanding visually than auditorily (Homan, Hall & Topping 1986). This may be related to rereading opportunities in more difficult passages or to being able to control the rate of reading. Listening develops earlier than reading and therefore listening is usually superior to reading comprehension in the primary school years, as reported by Carlisle and Felbinger (1991). However, this may not always be true especially if the child becomes an early efficient reader. Therefore, listening comprehension cannot always be regarded as a good predictor for reading achievement although it certainly could serve as a guide in most cases of early primary school age.

- **The complexity of the materials listened to or read:** When readers who are still developing their reading skills read easy texts, better comprehension is achieved because of the advantages of presentation, which provide the opportunity to go at their own pace and to reread. Royer, Greene and Sinatra (1987) found that reading comprehension of easy passages was better than listening comprehension of easy passages. Perhaps this gives a false view of basic reading comprehension. Of course, if the reading passage is difficult, even rereading will not help comprehension. In contrast, they found that students understood difficult text better when it was listened to, perhaps due to intonation and stress aiding the syntactic analysis when listening. The length of the passage may also alter the competency. Listening to a longer passage may be more difficult, because a listener is not able to control the rate of presentation as in reading. Alternatively, shorter passages may be easier to read because considerable time is taken adjusting to listening to a passage, because of possible variations in stress and intonation. These variations may also be related to metalinguistic features which develop later.
- **Nature of testing:** The readability level of a test item can contaminate test results because it is not known if errors are due to not understanding the text or not understanding the question. Care must be taken to use standardised norms if there is a different mode of test questions (for example, reading and listening at the same time or teachers reading the questions) (Homan et al 1986; Lynch 1988).

Perhaps there is a need for new norms under these conditions. As Mulholland and Neville (1989) point out, the topic, structure, function, concreteness and involvement of the message play an important part and may influence the comparisons and therefore must be controlled for if possible. The type, nature and response methods all need to be controlled. These factors may explain variations in results obtained, which are not always highlighted by the researchers.

- **Paralinguistic factors:** Recognising and understanding spoken words includes the use of lips, the use of context and the speaker's voice (Ellis & Young 1988). Intonation and stress are also used to increase listening comprehension. Tardieu, Ehrlich and Gyselinck (1992) feel that reading comprehension involves the building up of a mental representation of the text content. This cannot be much different to the building up of a mental representation of a spoken piece.

Morton (1980) proposed a modularity of processing which is a model of identifying, recognising and producing spoken and written words. According to the principle of modularity, any interconnection between components, or a combination of interconnections, can break down. So there may be a specific defect or a combination of deficits. Therapy can be more effective if it follows a methodical, stage-by-stage assessment. This is a practical goal-directed approach which incorporates the child into a logical model where the problem can be analysed in terms of events in the process.

2.4 DIFFERENCES AND SIMILARITIES BETWEEN LISTENING AND READING COMPREHENSION

Even writers who emphasise the differences between reading comprehension ability and listening comprehension agree that they are closely related (Royer et al 1990). Hence listening comprehension may be a good predictor of reading comprehension.

The similarities between reading and listening comprehension are as follows:

- both are receptive language processes
- both use internal conceptualisation of information
- both require short-term memory processing
- both form part of central language comprehension system
- both require adequate auditory processing skills (Dole et al 1985; Carlisle 1989a; Royer et al 1990; Carlisle & Felbinger 1991).

This highlights the considerable overlap between the two processes and the important need for an understanding of how they depend on each other in practice. However, if the strategies involved in listening and reading comprehension were the same, poor listeners would always be poor readers, which is not always true. The differences between listening and reading comprehension are shown in Table 2.1 (adapted from Cole & Jakimik 1978; Hoskins 1990; Wallach 1990; Mason 1992).

Table 2.1: Differences between reading and listening comprehension

Reading	Listening
reading is a learned skill	listening is a developmental acquisition
reading time controlled by reader	listening received at rate of speaker
can reread	cannot relisten
lack of prosody	there may be inefficient word recognition processes
need to integrate auditory and visual skills	auditory processing skills
decoding visually and auditorily	decoding auditorily only
written language segmented, formal, slow, deliberate	speech is rapid and effortless
words separated by spaces	prosody and intonation used
words always look the same	words differ according to context
used to communicate over time and distance (isolated)	occurs within social environment, face-to-face

This table facilitates critical thinking of the different processes and heightens the understanding of how they are separated. The differences are exposed in environmental factors, individual differences, physical factors, cognitive factors, visual and auditory features and learning.

A good way of expressing this dilemma of how reading and listening comprehension overlap was put forward by Carlisle and Felbinger (1991) who say that the listening and reading processes are both the same and different. They are the same in that both are language comprehension processes with the same set of strategies available. They differ in the cognitive demands imposed by text characteristics, situational factors, and the cognitive skills and sensory modality available.

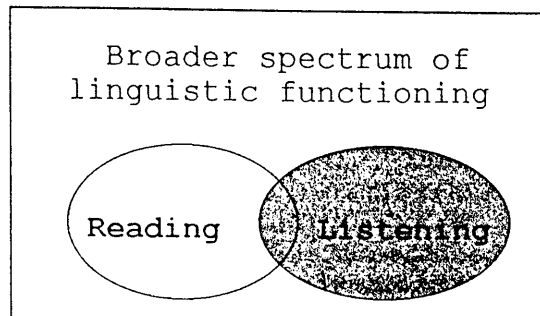


Figure 2.4: Relationship between listening and reading comprehension

Figure 2.4 shows that, although reading and listening are separate entities, there is an area of overlap. Moreover, their existence within a broader framework of linguistic functioning cannot be ignored.

Vygotsky's theory shows that reading development does not repeat the development of spoken language, since the child must make a conscious effort to learn the sound-symbol structure of each word (Fawcett 1980). Whole language advocates tend to feel that written language can be as natural as oral language development relative to the child's need to communicate over time and space (Norris & Hoffman 1994). This need gradually emerges as children encounter print in the environment. Of course more complex oral language development is necessary in order to be able to read more complex material later on. It would thus seem that reading is dependent on oral language. So although oral and written language are not the same, there is an interrelationship between them.

2.5 CONTROVERSIES IN THE LITERATURE

The controversies which emanate from different theoretical views of how language and reading acquisition develop and overlap, result in diverse methods of teaching. The focus on individual technical skills and metalinguistic awareness skills is clearly important, but the global awareness must be acknowledged. Without attending to the schematic meaning of the text, we can analyse words but we will comprehend little of the whole. This reiterates the concept of reading and listening occurring in the wider context of situation and environment (Royer & Carlo 1991).

Naslund and Samuels (1992) criticise the limited-resource models in automatic word recognition in that they ignore the imposed pressures of increased tasks such as attending to meaning or adding voicing to pure decoding. They also acknowledge the importance of context and prior knowledge in comprehension. They prefer memory retrieval models to describe development of automaticity in reading. Before a beginner reader can comprehend what he is reading he has to have enough information about the text. Of course a child with decoding difficulties could develop comprehension problems because of the burden of memory and a possible syntactic limitation. Mann, Shankweiler and Smith (1984) found that ineffective phonetic representation may slow down the syntactic development and hence affect comprehension.

The processing limitation hypothesis (discussed by Aaron, Frantz & Manges 1990) proposes that deficits in spoken language are due to phonological or memory limitations of the reader and are not comprehension problems per se. This view contrasts with the

structural deficit hypothesis, which proposes the presence of primary syntactic and comprehension deficits independent from memory demands. If decoding skills are weak, this may limit reading comprehension, clouding the true problem. Aaron et al (1990) recommend that the proposition that dyslexics can have intact oral language skills be confirmed empirically.

A simple model of reading performance is: $R = D \times C$ (Reading = Decoding \times Comprehension). Thus both decoding and comprehension are necessary but not sufficient components for reading success (Tunmer & Hoover 1992). This equation is so simple yet incorporates so much. Hoover and Gough (1990) claim that the simple view of reading includes both decoding and linguistic comprehension - which are both necessary for reading success (and listening comprehension), neither being sufficient on its own. Researchers indicate that decoding and comprehension are dissociable components of reading and that one or the other could be developmentally arrested (Aaron 1991). The component of comprehension is a common feature in reading and listening, except for the difference in modality. Many researchers consider that they are mediated by the same cognitive mechanisms, and that reading and listening comprehension scores are highly correlated.

A model for reading needs to preserve those processes which are also involved in speech comprehension and production. This is one of the fundamental controversies in the literature on early reading development. Many researchers feel that reading is a form of language, and learning to read is merely an extension of linguistic development (Donaldson & Reid 1982; Catts & Kamhi 1987; Westby & Costlow 1991). Other authors advocate that learning to read is very different from language learning (Clark

1975; Edmiaston 1988; Butler & Miller 1990; Wallach 1990; Mason 1992).

Juel (1991) presents two contrasting basic paradigms for models of reading acquisition which can be expanded to include listening skills. The first is that the reading process is the same for the experienced reader and the beginner reader. That is, it is the search for meaning using syntactic and semantic knowledge. Listening may also be the same for older and younger children in their search for understanding what is heard. Yet this does not seem to adequately explain a developmental trend or a transference between auditory and visual skills. Alternatively, the reading or listening process is qualitatively different for beginner readers or listeners and experienced readers and listeners, who have increasing knowledge about orthography or phonology. This theory is what gave rise to 'stage' models of reading. Various authors have described different stage models (Miller & Smith 1990; and Chall, Ehri, Gibson, Gough, Hillinger and Mason, all of whom are discussed in detail by Juel 1991). All of these, according to Juel (1991) have similar qualities in that a) the child first discovers that print itself carries meaning and then two stages follow; b) a selective cue stage and c) a spelling-sound stage. Finally d) an automatic stage appears. Here of course motivation plays an important role and once reading becomes more automatic, the child becomes more motivated and reading improves. This is the end of the early literacy period.

However, Juel fails to incorporate listening into this overview. Listening could be considered a prerequisite or earlier phase of the stage model. Following this, the visual processing system must come into play and then a combination of auditory and visual

factors leading to automaticity. It is the following stage that is also of importance as one wants to establish whether it includes primarily reading strength or whether listening still plays a role.

One cannot help wondering why there is no agreement upon whether the stages are valid or how they occur. The sequence of the stages may be open to question, or the stages may not occur at all. Perhaps the skills should not be viewed in isolation but rather as an interactive 'whole language' process. There does appear to be some evidence for qualitative stages, considering the progress in reading acquisition. However perhaps these stages are imposed by the school system, stifling a 'natural' development. Juel (1991) feels that the child would not progress far if he stayed in the context phase without using graphic information. Instruction is necessary for sound-letter correspondences. However the auditory and visual processing skills need to be developed prior to decoding.

2.6 AUDITORY AND VISUAL PROCESSING FACTORS

It is important to understand the auditory and visual processing factors in listening and reading comprehension. Listening comprehension involves auditory skills alone, but both sensory modes are involved in reading comprehension. Thus children with poor auditory skills will probably show difficulties in both listening and reading comprehension, whereas poor visual processing will only affect reading. Nevertheless, it is possible that a strong auditory memory could compensate for a visual difficulty and vice versa. Perhaps the introduction of visual cues in reading could strengthen weak auditory skills. Auditory

and visual processing problems could coexist in a reading problem, as the auditory-visual link is essential. Memory factors play an important part in comprehension because some information must be retained in the auditory and visual memory representations to ensure some degree of understanding. Engle, Carullo and Collins (1991) report on studies showing correlations between memory span and sentence retention, and reading or listening comprehension. They found that memory tasks had as much predictive value for adults as for first graders. So perhaps practice in memory strategies is a realistic means of aiding reading comprehension. Visual memory skills are necessary to retain sight words whilst both auditory and visual skills can be used for words which can be spelled out phonically.

2.7 PREDICTIVE FACTORS OF READING COMPETENCE

It is acknowledged that there are many factors that play an important role in comprehension.

Assessing listening comprehension of a reader allows us to estimate reading comprehension without requiring the subject to decode written language (Aaron, Kuchta & Grapenthin 1988). Aaron et al (1988) feel that listening comprehension is highly related to reading comprehension and probably shares similar cognitive mechanisms. The possibility that listening comprehension can predict reading comprehension needs to be explored as it is important diagnostically and in prevention. This would allow a pure decoding problem to be treated effectively. However it is possible for reading comprehension to be weak, despite good decoding and listening comprehension.

Skilled decoders appear to have better comprehension skills (Stanovich 1982), but poor decoding skills are not the only cause of poor comprehension. Stanovich (1992) found that poor readers were less able in their use of general comprehension strategies, particularly with written text, but suggested that this was due to problems in dealing with more complex syntactic structures. It could also be related to cognitive strategy differences in memory or general lack of linguistic awareness. Stanovich suggests that comprehension strategies such as question asking, text structure identification, and imagery should be taught or facilitated. Perhaps too much emphasis is placed on decoding. The fact that certain poor readers show comprehension difficulty in listening as well as reading, leads to the assumption that the comprehension difficulty cannot be purely related to decoding.

Comprehension tasks are generally well practised in the school situation and therefore both modalities could be influenced by a particular teacher's focus. Therefore the focus of the teaching may be a predictive factor of good reading or good listening comprehension.

Spring and French (1990) used a discrepancy between reading and listening comprehension as an alternative to traditional IQ testing. They found scores to be significantly lower on reading comprehension than on listening comprehension in reading disabled children. Children with no reading difficulties scored slightly better on reading comprehension than on listening comprehension. This appeared to discriminate between the two groups effectively and hence IQ could be predicted from comparing reading and listening comprehension. However because of the verbal nature of

reading and listening, this cannot relate to non-verbal IQ scores.

Many authors use the ability to analyse and synthesise syllables and words as good predictors of reading ability (Blachman 1984; Van Kleeck 1990; Tunmer & Hoover 1992). So we cannot ignore the importance of these auditory skills in both listening and reading development. Yet according to Westby and Costlow (1991), poor readers spend too much time on isolated skill development, and not enough time with integrated text material and narrative processing. The ability to listen to and interpret conversation, stories and oral reading is an important type of auditory skill necessary for readers (Robeck & Wilson 1974; Sleight & Prinz 1985). According to Hoskins (1990), in written narrative, for example, the author introduces and develops a topic following the discourse structure of oral narrative. Thus, competence in oral narrative appears to be an important skill for appreciating narrative in print. In fact, according to Shanklin (1991), understanding the structures of texts often helps readers to organise and remember what was said.

Good readers are more aware of when they are not comprehending sufficiently, and able to self-monitor their comprehension ability. Metalinguistic abilities are also significantly related to listening and reading comprehension ability (Davey 1987) and need to be explored in terms of predictive value.

Another area highlighted as a good predictor of reading comprehension (discussed by Tunmer & Hoover 1992) is closure and cloze tasks, and language prediction skills, although good

readers do not need to use context to help them as much as poor readers.

It is possible that oral reading may help provide some self-monitoring because of the auditory feedback. Perhaps it is related to the fact that developmentally overt verbalisations occur prior to covert internal language, allowing for higher-order cognitive functioning (Miller & Smith 1990). This view is based on the work of Vygotsky and Luria. Positive effects of overt verbalisations are evident in encoding and storage. It is therefore important to observe the type of reading mode (loud or silent) used in assessments and to realise that the results could differ accordingly. Similarly, Miller and Smith (1990) point out that developmentally, once oral reading is established silent reading becomes dominant. This seems to corroborate the stage model of reading development. Carlisle and Felbinger (1991) report on research showing that oral reading comprehension is better than silent reading but this may vary with age. It may be that the auditory mode comes into play and that oral reading requires extra concentration, albeit extra stress on working memory because vocalisation is used. Oral reading may be an important factor in assessment and treatment methods. Oral reading may be an intermediate step in the process from listening comprehension to reading comprehension. Once listening comprehension is established the child needs to be able to hold the information or story in the auditory memory together with the visual component in order to retell the piece, which can then lead to reading comprehension. Thus oral reading may be an important step in the process towards formal reading comprehension, which may be omitted too often. An ability to retell a piece may be the means of telling whether the child is

competent and ready for formal reading comprehension. This may be influenced by memory factors which are also necessary in order to retain a piece sufficiently to comprehend it as a whole.

Bell (1991) feels that gestalt imagery - the ability to create imaged wholes - is a critical factor in oral and written language comprehension as weak oral or reading comprehension may result from processing 'parts' rather than 'wholes'. Bell (1991) emphasises the importance of gestalt imagery in language comprehension. She postulates on the possible causal factors of weak imagery: weak decoding which can distort images, weak vocabulary if unknown words are critical to the whole, inadequate prior knowledge and lack of background experience. Thus the ability to process in 'wholes' may be a predictor of good reading comprehension. When reading or listening to a passage of text in anticipation of being asked questions, the reader or listener constructs, retains and integrates an internal representation of the meaning of the text as a whole with a different perspective.

2.8 PATTERNS OF POOR READING ABILITY

By comparing reading and listening scores, it may be possible to determine which is the likely cause of poor reading comprehension - decoding or language comprehension. Children with reading problems do not necessarily present with the same reading and listening patterns. A breakdown could occur at any phase, with a variety of different symptoms or causes and possibly a different means of treatment so that a reading comprehension problem may be separate from a decoding problem or a listening comprehension problem or a language or auditory processing

problem. Thus the difficulty must be differentially diagnosed according to the cause and the symptoms.

Three major routes to the normal reading of words have been proposed by Coltheart (1978) and Singh (1993):

- The reader has an internal grapheme-phoneme correspondence system, where a letter string is analysed into constituent graphemes and converted into phonemes. The child may read words at a superior level to that of more meaningful units.
- The letter string is analysed into *syllables* rather than phonemes. Semantic comprehension occurs after oral output.
- There are two separate lexicons - one semantic and one phonological. This is a radical view in that it rejects the view of an internal lexicon of semantic, phonological and orthographic information. The unit here is the *whole word*. The phonological representation gains entry to the semantic lexicon with visual representation through morphological decomposition.

Similar processes can be drawn up for the representation of oral words to get meaning from listening. This would include an auditory perception of phonemes, syllables and words, and longer units, although in the auditory mode the distinction between these parameters is affected by the context in which they occur whereas in reading the words are more clearly separated and visually stable.

There appear to be three different patterns of reading versus listening comprehension among poor readers (Gough & Tunmer 1986; Carlisle 1989b; Royer et al 1990; Carlisle 1991; Aaron 1991):

- reading scores considerably below listening scores (specific reading disability or dyslexia)
- reading scores exceeding listening scores considerably (nonspecific reading disability (hyperlexia), or attention or motivational deficit)
- comparable reading and listening scores (generalised cognitive deficit or 'garden variety')

Thus it appears that poor readers may display comprehension deficits independent of decoding. Good readers tend to present with a similar pattern for both modes. So listening comprehension should assist in determining the cause of poor reading and thus a child's reading or learning potential. Establishing diagnostic information of a reading problem and indeed what role listening plays in decoding and comprehension is therefore paramount. Care must be taken to ensure that too much emphasis is not placed on secondary skills thereby losing touch with the primary need by focusing on the wrong strategies.

In summary, assessing reading comprehension, listening comprehension, and decoding skills may be a viable means of sorting out different types of reading problems. Therefore a new classification system may be feasible. This would allow for appropriate treatment methods, which is the ultimate aim in this process.

2.9 FURTHER THEORETICAL CONSIDERATIONS

Of underlying importance is what we do with these theories and how language, cognitive, reading and listening aspects can be included in an effective treatment plan. Tunmer and Hoover (1992) put forward three important factors to consider when reading:

- Learning to read may involve qualitatively different (but perhaps overlapping) stages in which different component skills are the focus of each stage. Thus these component skills must be learned prior to reading competence.
- The acquisition of component skills may depend on cognitive or linguistic abilities that may affect the rate at which children progress through the stages. So individual differences and individual pace needs to be considered.
- The acquisition of each component skill may be facilitated by particular methods of instruction, and different methods may be appropriate at different stages in the reading acquisition process.

These concepts can be related to listening skills too, in considering stages of development in comprehending auditory language, individual differences and training of auditory skills.

Two theoretical views of the listening and reading comprehension process are discussed by Horowitz and Samuels (1985) and Carlisle and Felbinger (1991). One view suggests that once the child is skilled at decoding, little attention or effort is necessary and there is therefore no difference between reading and listening

comprehension because the child uses the same linguistic and cognitive skills as in oral language processes. This view tends to ignore links between auditory and visual components.

In contrast to this unitary comprehension process view, the dual listening comprehension view suggests that there may be processing differences, linguistic differences, social-situational differences, contextual differences, and task differences that make comprehension under oral and written modes complex in different ways.

Of course the practical implications of each of these theories are important too, since the task of the teacher in the former theory would be to get the child to become an automatic decoder following which the natural language comprehension process would take over. Then once automatic, the student's level of reading comprehension would become equal to the listening comprehension level. According to Homan et al (1986) this takes place approximately at the standard two level.

On the other hand, if the second theory is considered to be more accurate, the child must become automatic in decoding as well as learning all the special skills needed to provide the missing elements in writing which are present in speech. Although this involves more than decoding, it seems more realistic than ignoring linguistic and cognitive issues during the learning to read stage.

The consequences of a poor reading start on later reading can be devastating and so early reading methods are important. In fact, intelligence is often considered synonymous with how skilled one

is at reading and writing (Miller 1990). Of course this is not necessarily true, but the nature of intelligence tests probably adds credence to this view. As Stanovich (1991) points out the initial success or failure of early reading becomes magnified because reading is embedded in a particular social, instructional and cognitive context. This highlights the critical need for positive early reading experiences. Poor listening skills can affect reading comprehension. Poor decoding skills can limit what the child reads and hence exposure is limited and progress is slow. Thus the poor decoder becomes a poor reader and the decline continues. This may result in the child's output reflecting a poorer IQ than is realistic.

Speech therapists are playing an increasingly active part in identifying and treating comprehension and reading disorders. The language related areas are of particular interest in our field. It is vitally important to understand the relationship between reading development and language abilities. After all, we must be able to diagnose a language-based reading disorder effectively in order to treat it effectively. Reading incorporates many language skills as well as cognitive skills. Westby and Costello (1991) view basic literacy as a natural extension of an individual's linguistic development in an adequate environment and the means by which we assess the reading can determine many factors that are needed in the teaching of reading and listening disorders and the treatment of reading or listening comprehension disorders.

2.10 SUMMARY OF CHAPTER TWO

This chapter dealt with the theoretical framework of reading and listening comprehension. Models were presented to show the support structures necessary in reading and listening comprehension, the prerequisite skills for reading, and the flow of development of reading and listening skills. Important factors related to the development of these skills were discussed, including visual and auditory processing skills. Similarities and differences between reading and listening were highlighted, as were a variety of controversial issues in the literature. Finally, poor reading and listening patterns were discussed, and the need to reveal which patterns to assist with diagnosis and treatment.

CHAPTER THREE:

THE ASSESSMENT OF LISTENING AND READING COMPREHENSION

3.1 INTRODUCTION

The aim of this chapter is to discuss the factors that must be taken into consideration in assessing reading and listening comprehension and in selecting tests.

From the model presented in chapter two (Figures 2.2 and 2.3), it can be seen that there are various factors which need to be considered in assessing reading and listening comprehension in order to get reliable results. The support system discussed in Figure 2.1 shows the importance and interrelationship of the socio-cultural aspects of reading and listening as well as the isolated skills involved in the process of listening and reading.

It is important to understand the process of reading. Following this the nature of a reading disorder can be established. The difficulty may lie in decoding or in comprehension or in an underlying language or cognitive deficit. A goal of assessing comprehension deficits should be to determine whether or not they are caused by basic language-processing problems (Carlisle 1989b), because the treatment should be based on the underlying problem. It is difficult to measure the skill of comprehension of reading or listening in isolation as comprehension is a complex language-cognitive skill. Reasoning skills and question-answering strategies may detract from or be the underlying

problem and related difficulties may be observed rather than the actual comprehension problem.

Accurate assessment of reading with a comparative listening test should help determine the type of reading problem (Carlisle 1989a and, helping to establish a teaching programme. Standardised tests are often not diagnostic, although they may be important in diagnosing whether a problem exists in comparison to peers. But testing should aid in giving cues for teaching or remediation. The link between assessment and treatment is vital. As Westby and Oetter (1996) point out, quantitative rather than qualitative assessments seldom provide useful information to guide intervention. Thus a combination of both methods of assessment would be beneficial.

3.2 SOCIO-CULTURAL FACTORS

The expectations of society play an important role in the upbringing of the child and the priorities of the environment. Normative data can be a problem when they are used on different population groups, although they can also be informative of a lack in a particular group which may need to be addressed. The child's prior exposure to the type of testing and response methods are also important. Society tends to dictate the areas of importance in schooling needs and expectations and hence normative data may vary depending on the focus of the community or educational system. As Royer and Carlo (1991) point out, modern comprehension theories suggest the interactive process of text, environmental context and the listener's or reader's knowledge of the world.

Some factors are felt to be important in any assessment procedures (Brown 1980). These general principles of testing must be considered in any environment. They include practicality (of the tester's time limitations, financial constraints, administration ease and information gained), reliability (consistency with which the process or scoring procedure can be repeated), and validity (the degree to which the test measures what it set out to measure).

3.3 ISOLATED SKILLS

Language-processing skills as needed for understanding extended discourse should be an important part of any diagnostic test of comprehension. Royer et al (1986) points out that the comprehension of passages has two components: a) the act of mentally representing the message, which is the result of language processing, and b) the mental manipulation of the message as represented in the memory, which is the reasoning or application of strategies. Thus comprehension involves both language processing and memory and cognitive aspects. Language comprehension should be assessed in listening and reading tasks. Carlisle (1989b) feels that these two tasks use the same basic psychological mechanisms. If this is so, it should only be necessary to test one of these skills. However because of the complex nature of these skills, differences in the abilities could be diagnostically important.

In the earlier stages of the model in chapter two (Figure 2.3), the auditory processing skills play a vital part in listening ability and problems here must be ruled out to ensure adequate flow to the following levels. Visual processing skills come into

play when reading begins but the splinter skills must be established before reading can develop. Of course language ability, cognitive skills and memory factors have to be considered here too.

3.4 PREDICTIVE VALUE

Royer et al (1990) feel that a reading/listening ratio should indicate the potential that a reader should reach according to his general language comprehension ability. However this need not necessarily be true since various factors could be contributing to the performance of the child. If a visual problem exists the listening score cannot indicate a reading potential until the visual component is remediated.

The diagnostic potential of comparisons of listening and reading skills is important as distinctive patterns of listening and reading comprehension deficits have been found (Carlisle 1989a). These patterns vary in the different age-groups with listening performance normally exceeding reading performance until the sixth grade/standard 4 (Carlisle 1989b). Therefore testing needs may need to vary depending on the age of the child and the literacy of the community. Difficulties in both skills may reflect language difficulties, metacognitive problems or working memory deficiencies. On the other hand difficulties in only one skill could reflect different underlying difficulties.

Carlisle (1989b) states that children who have difficulty listening, as well as those who have difficulty reading, also have difficulty learning. Comparable diagnostic measures could be important in understanding school learning success and the

source of reading comprehension difficulties. Some researchers (pointed out by Carlisle 1989a) have questioned the value of comparing listening and reading comprehension skills primarily because they ignore the differences in the message of normal listening and reading and the medium of delivery. However, testing comprehension with similar content and structure in listening and reading may be a good reflector of school needs.

Carlisle (1991) acknowledges that comprehension is hard to assess, because it is a receptive language process in which the expressive language capabilities may be overburdened and it appears that little is comprehended, or the questions asked may provide additional information and then skew the response. As Carlisle (1989a) discusses, prior knowledge can affect the comprehension scores in ways other than general comprehension capabilities. Therefore it is important that passages must be similar and appropriate to allow for fair comparison between listening and reading. This is why it may be practical to use typical classroom-type passages. Comprehension is also problematic in that it involves more than pure retention of the writer's meaning - it involves the reader's perspectives too (Carlisle 1989a), as well as the interpretation of the reader, which may differ from that of the writer.

3.5 METHODS OF TESTING

Various methods of testing reading and listening comprehension have been used. These are depicted in Table 3.1. The first quadrant shows different methods of testing, including areas tested and whether the test assesses in a group or individually. The variety of types of testing are depicted in quadrant two.

Situations of testing may affect results. The third quadrant reveals the different materials that can be used in testing. The length and complexity of the material may vary. The many types of responses required are listed in quadrant four. These range from retelling an entire passage to clozing sentences with single words to selecting a correct response. The wide variety of all these factors used in different research may be the reason for different results observed.

Table 3.1: Factors to consider in testing and response methods

Method of testing	Type of testing
decoding of reading comprehension of reading comprehension of listening comprehension of reading & listening individual tests group tests	standardised profiles subjective observation in different situations school scores contextualised decontextualised
Material	Type of response
stories sentences factual passages (background knowledge) longer pieces shorter passages simple linguistic structure complex linguistic structure	written response oral response retelling story free recall answering questions cloze procedures reading/listening once multiple choice passage available during answering

The diagnostic value of assessing listening and reading comprehension is becoming more and more apparent. Yet few standardised test batteries include listening as well as reading comprehension tests. There are a number of reasons why listening comprehension tests are not commonly included in reading tests. It has not been considered of significance to have a comparison of the two skills. Some critics feel that the processing demands

are so different that the two skills cannot be reliably compared (reported in Carlisle 1989a). Yet, as discussed previously, the two skills interrelate in many ways as reading cannot proceed without the prerequisite skill of auditory comprehension. The exact developmental point at which the listening and reading skills converge is not certain (Carlisle 1989b) and therefore developmental studies are important.

Table 3.2 highlights some of the tests commonly used in South Africa, as identified by a number of remedial teachers and therapists, to assess listening and reading comprehension. Some of these test both skills while others test only reading (comprehension and/or decoding). It is evident that there is a dearth of tests that combine listening and reading comprehension. Those that do are generally standardised on other population groups (British and American). The tests listed are also generally devised for diagnostic purposes on set passages and are therefore not freely available for use by the classroom teacher.

Standardised testing has been traditionally used in school settings. Whole language advocates are opposed to this and advocate continuous observations with emphasis on strengths (Shanklin 1991; Weaver 1991). This would have positive effects on the child's self-esteem. However in the school setting and particularly with growing numbers in classes, and for research needs, standardised scores are practical. Critics also question the value of assessing listening to passages as unrealistic of conversational speech (Carlisle 1989a). However this type of listening is realistic in terms of school requirements.

Table 3.2: Tests commonly used to assess listening and reading comprehension

Test	Areas tested	Type	Comments
Burns & Roe informal reading inventory (Burns & Roe, 1993)	Listening & reading comprehension	Individual	Diagnostic test especially useful for detailing where breakdown of comp. occurs
Durrell Analysis of Reading Difficulties ¹	Visual memory of words; identification of sounds in words; listening comprehension; oral and silent reading comprehension	Individual	American norms Original test development is old
Edinburgh Reading Test Godfrey Thompson Unit ²	Silent reading comprehension	Individual	Breaks down the analysis of comp. British norms
Gates-McKillop-Horowitz Reading Diagnostic Test ¹	Oral reading; word recognition; phonics; spelling & writing; listening skills	Individual	Norm-referenced; lasts 60 - 90 minutes; aids in remediation planning
Listening & Reading Comprehension English First Language Test - HSRC (Callis & Chamberlain, 1992)	Reading, writing and listening	Group	Diagnostic test standardised on SA English First Language children
MacMillan Group Reading Test ²	Reading comprehension	Group	Cloze procedures; British norms with standards of reading & level of attainment
Neale Analysis of Reading Ability - Revised British Edition (Neale, 1988)	Reading rate, comprehension, & accuracy	Individual	British norms
Schonell (Schonell, 1956)	Silent reading comprehension	Group	Diagnostic test with British norms
Stanford Diagnostic Reading Test ¹	Auditory discrimination; reading; vocabulary; phonetic analysis; reading comprehension; word reading; reading rate	Group	Diagnostic battery - 2 hours. Gives percentiles and grade equivalents; American norms
Sentence Verification Technique (Royer, Greene & Sinatra, 1987)	Reading & listening comprehension	Group	Screening test with diagnostic potential for evaluating types of errors; can be devised by classroom teacher on any curriculum-based material
Woodcock Reading Mastery Test ¹	Letter identification; vocabulary subtest; word comprehension; reading comprehension	Individual	Cloze procedure; diagnostic test with American norms

¹ Richek, List & Lerner, 1983; ² Salvia & Ysseldyke, 1978

Children are generally exposed to narratives, but written and oral narratives are different and the type of narrative that the child interprets in everyday life may not be similar to that in the school context (Taylor 1988). Westby and Costlow (1991) feel that poor readers spend too much time on isolated skill development, and not enough time with integrated text materials and narrative processing. Perhaps this is true, yet poor readers often do not develop the skills naturally as do other children and therefore formal help is required. Robeck and Wilson (1974) point out that the ability to listen to and interpret conversation, stories and oral reading is an important type of auditory skill necessary for readers. Thus, competence in oral narrative appears to be an important skill for appreciating narrative in print. Yet the value is controversial and the type of oral or written narrative needs to be varied to allow proficiency in all types.

3.6 PROBLEMS IN TESTING

The methods used to evaluate comprehension may present problems and may account for much variation in reading performance because of the text itself, or memory and expressive language factors. Aaron (1991) stresses the need for a standardised test of listening comprehension, uncontaminated by memory, attention, motivation, vocabulary, or sentence complexity effects. Although it would be useful to test these skills without contamination of other skills, it is difficult to isolate them. However this in itself is an important diagnostic factor since the combination of skills may be the problem.

As for all areas of linguistic functioning, the problems of

assessment must be addressed - contextualised vs decontextualised testing, materials (sentences versus paragraphs), group vs individual tests, the tasks, the background knowledge, the context and structure, the use of the same type of tests used in the classroom, the type of response used (for example, cloze procedures versus free recall) (Valencia & Pearson 1988; Carlisle 1989a). Within the South African context the need for both screening and diagnostic tests is particularly apparent in order to establish diagnostic and treatment methods that are suitable for including a broad spectrum of the population in an economically viable manner.

The appropriacy of complexity is also important in devising a suitable test (Carlisle 1989a). Carlisle suggests using passages typical of classroom use. Of course this would limit the testing to this type of environment. Classroom passages vary considerably and complexity involves increased memory, linguistics, length, and metalinguistic factors. Readers are able to reread to find a word to fill in whereas listeners cannot. Group tests are more valuable and practical for classrooms of increasing size. It is acknowledged that comprehension by asking questions is not similar to the natural environment but is commonly used in classroom situations.

Carlisle (1989a) emphasises the need for care in the technique used in the evaluation: answering questions (which requires particular reasoning strategies); free recall (determined by memory and expressive language factors); cloze procedure (filling in the blanks where words have been omitted tests sentence comprehension and word knowledge rather than passage knowledge); multiple choice (where guessing may be used). Each of the

response types have different problems which must be acknowledged when comparing results with other testing procedures.

Bedford-Feuell et al (1995) are opposed to methods of questioning such as free recall and cloze procedures in favour of the sentence verification method. Different methods are therefore favoured by different testers for various reasons; for example, free recall may be selected although expressive language problems will create problems. Thus, individual differences come into play and must be considered in the assessment techniques selected.

The working memory, defined by Stothard and Hulme (1992) as the use of temporary storage in more complex cognitive tasks, would probably affect the sentence comprehension of children with reading difficulties, and possibly in listening as well. Therefore in segments longer than sentences inefficient working memory would affect comprehension (Spring & French 1990). Yet the diagnostic value lies in the ability of the test to identify difficulties in comprehension of differing passage types, lengths, difficulty and background knowledge. Some material may be enhanced by background knowledge. For example, technical passages would favour certain subjects and may therefore be less appropriate than story passages.

3.7 SUMMARY OF CHAPTER THREE

This chapter discussed the factors involved in assessing listening and reading comprehension as introduced in the model in chapter two and considerations for the selection of an assessment procedure for comparing reading and listening comprehension in the primary school child.

CHAPTER FOUR: METHODOLOGY

4.1 INTRODUCTION

In this chapter, the research methodology used in this study is discussed. First, the aims and objectives of the study are identified, as well as the research design. Then the subjects selected are presented. The pilot study is discussed with the results and recommendations thereof. Finally, the procedures and data analysis used in the study are described.

4.2 AIM, SUBAIMS AND HYPOTHESES

4.2.1 Aim

The main aim of this study was to compare the listening comprehension and reading comprehension of 9-12 year old children (standard 2 to 4).

4.2.2 Subaims of the study

- to establish the level of performance on each test in order to compare listening and reading ability;
- to compare scores on the SVT and HSRC tests;
- to establish whether the SVT and HSRC scores differentiate between the different age-groups;

- to describe some individual profiles of scores and to analyse error patterns according to SVT sentence types;
- to compare listening and reading comprehension scores with school performance scores.

4.2.3 Hypotheses

- Listening and reading scores will be comparable, since by standard 2 reading is firmly established and becomes the dominant form of instruction. Reading comprehension will therefore have caught up with listening comprehension.
- The SVT scores will correlate well with the HSRC test scores.
- Both tests will distinguish effectively between age groups.
- Differing individual listening and reading patterns will emerge due to the different underlying problems involved.

4.3 RESEARCH DESIGN

The study is primarily a descriptive design (Leedy 1993), which looks at 88 children across three age-groups by means of comparing their performance on two tests of listening comprehension and two tests of reading comprehension. It is in part a quantitative study in the sense that it compares scores between and within tests. Descriptive statistics are also included because of the nature of the data and the need to expound on individual and group differences. The study is one of inter-group and between-group comparisons, based on group tests

in context. Although cautiously used because of the nature of the measures used for evaluation, a measure of external validity will be established by school performance scores.

4.4 SUBJECTS

4.4.1 Selection Criteria

The subjects were selected according to the following criteria:

- **Language:** Only English first language children were included in view of the effect of bilingualism (Cummings 1984). The children were selected from an English-speaking primary school.
- **Age:** The age of the standard 2 subjects selected was 9,0 - 9,6 years, of the standard 3 subjects was 10,0 - 10,6 years, and of the standard 4 subjects was 11,0 - 11,6 years. This six month gap between groups was recommended following the pilot study (see below) where the three groups were not distinct enough. The subjects ranged in chronological age from 9,0 to 11,6 years with a mean age of 10,4 years. This overall age group was felt to be appropriate because formal reading instruction has stopped and reading and listening comprehension should be sound (Homan et al 1986).
- **Remedial problems:** No child receiving remedial help was included as it was felt that this would skew the results, since testing was aimed at assessing an average group of children without specific reading difficulties.

- IQ: IQ was within the normal range as rated by teachers.

4.4.2 Description of subjects

All subjects selected were from the same private boys school. This was accessible to the researcher and it was felt that using only one sex would not influence the results. All subjects were presumed to be from a mid-high socio-economic group, as the fees at this school would necessitate this. As they were from the same school, no major effect of teaching differences was expected and similar levels of reading were expected except for individual differences.

Twenty-eight standard 2 subjects, 30 standard 3 subjects and 30 standard 4 subjects were used in this project. All children in the school fitting the criteria were included in order to prevent any bias in the selection of subjects (Katzner, Cook and Crouch 1978). It is acknowledged that a larger sample will have better external validity because interpretation of the data with a smaller sample is limited.

The subject description is outlined in Table 4.1. These criteria were confirmed by the class teachers, who also provided school performance ratings according to the most recent English marks. These marks were compiled from a combination of a number of skills for example, oral work, written work, comprehension, and spelling and were used for correlational purposes only.

Table 4.1: Subject description

	Std	No. of subjects	Socio-economic status	Mean age	Age range
Group 1	2	28	mid-high	9,4	9,0 - 9,6
Group 2	3	30	mid-high	10,3	10,0 - 10,6
Group 4	4	30	mid-high	11,4	11,0 - 11,6

4.5 PILOT STUDY

The pilot study was carried out on a small group of subjects (five in each age group) from a girls' school with similar socio-economic background as the subjects for the main study. The teachers selected a group of students with a broad range of abilities to ensure a typical group. Although boys were used in the main study, there was not felt to be any major differences as the objective was to establish administrative issues such as the applicability of the two tests and to ensure the administrative aspects of the testing procedure on a group of subjects.

The aims, procedures, results and recommendations of the pilot study are presented in Table 4.2. From this table it can be seen that the pilot study raised some questions which were dealt with so that testing for the main study could continue.



Table 4.2: Description of the aims, procedures, and conditions of the pilot study

Aims	Procedures	Results and recommendations
to establish the time taken for testing	HSRC & SVT listening tests were administered to all subjects on day 1, and the two reading tests were administered to all subjects on day 2.	The testing was found to take approximately one hour on each day. No subjects failed to complete any test within the given time. The time was therefore felt to be appropriate and no alterations were necessary.
to determine the appropriateness of instructions and test procedures	Instructions were given according to the HSRC manual and Royer (1986) and Royer et al (1987) for the SVT. Practice examples were given as in the main study. Testing environment was well-lit, quiet and comfortable, with subjects sitting at desks similar to those used in the classroom. It was ensured that all subjects could adequately hear the tape recording and instructions. The order of presentation was varied to control for errors that could be attributed to order of test administration. On the first day (listening tests) the HSRC test was administered after the SVT and on the second (reading tests) the HSRC test was carried out first.	The instructions were found to be clear and appropriate for all subjects. All environmental factors were found to be effective. No subjects made errors due to misunderstandings of procedures. Some subjects requested help in terms of reading certain words and asking for meanings of words. They were told to continue with the test and to leave out items that they did not understand.
to determine the fatigue factor in the subjects.	A subjective evaluation of the subjects was made during testing.	The subjects appeared to rush through the end of the last test - SVT reading test - in order to finish. It was therefore decided to present both the SVT tests first in the main study as they are shorter than the HSRC test and would be more likely to skew the results if rushed. The attention of all subjects was adequately maintained throughout the tests and no subjects found it difficult to complete the tests due to fatigue. The promised reward of chocolate was found to be motivating for the subjects with the surprise element of the reward appropriate.
to evaluate the applicability and relevance of the analysis procedures	The researcher transcribed all raw data onto data capture sheets. An independent rater checked all the transcriptions and the computer print outs to avoid any errors.	The analytic procedure was found to be appropriate and the use of a second rater valuable. It was found that the differences between the groups were limited because of the close age range. It was therefore decided to use only the subjects in the first half of each age group in order to create a greater age gap between groups.

Table 4.3: Comparison of HSRC and SVT listening and reading comprehension tests

Function	HSRC	SVT
Purpose	comparison between listening and reading comprehension, without tapping question-answering abilities	
Use	group diagnostic measure with set passages	group screening/diagnostic test with classroom material
Nature of tasks	short passages and poems	single passage
Response category	multiple choice	yes/no response
Scoring method	number of correct responses	number of correct responses and analysed by type
Competence category	prior knowledge not considered important, memory will play a role	
Cognitive level	concrete operations	
Difficulty level	Std 2, 3, 4	Std 3
Sample items	provided	
Levelling variables	longer test; time limit set in reading subtest	shorter test; no time limit set
Standardisation	on SA population	not standardised

4.6 MEASURING INSTRUMENTS

Four tests were used to assess reading and listening comprehension.

- Performance Test: Listening comprehension for English first language. Elementary level form S (Callis & Chamberlain, 1992a)
- Performance Test: Reading comprehension for English first language. Elementary level form S (Callis & Chamberlain, 1992b)
- Sentence Verification Technique - Listening comprehension, standard 3 level (Royer undated)
- Sentence Verification Technique - Reading Comprehension, standard 3 level (Royer undated)

Although there are numerous reading tests available which test both decoding and comprehension skills, there are very few diagnostic tests which combine the listening and reading comprehension skills. Diagnostic measures and clinical practice are generally separate areas, but there is a need to draw these two areas together to make education more meaningful. Stephens and Montgomery (1985) suggest that more than one test should be used in assessments and that local norms are preferable. The HSRC and SVT tests were selected as two separate means of assessing comprehension of reading and listening. These are both contextual tests incorporating passages which relate to real-life situations and typical school exercises. Both tests comprise listening and

reading subtests which are as alike as possible, with the exception of the mode of reception. Both are group tests, which is a more practical means of testing. The HSRC is a diagnostic test which has the advantage of being standardised on South African English first language children. The SVT has the advantage of being a useful classroom tool (Royer et al 1987) which can be used with curriculum-based material by the teacher in a short group test. The SVT was originally introduced as a measure of reading comprehension (Royer et al 1987) but as Royer et al (1990) point out, it is ideally suited for assessing listening comprehension.

When listening and reading comprehension are compared, it is also important to keep the level of vocabulary difficulty, sentence complexity and sentence cohesiveness more or less equivalent. Both tests adhere well to this (Royer et al 1987; Callis & Chamberlain 1992). However, memory and attention cannot be totally controlled for because of the nature of the testing and the complexities of the skills. Ability levels vary between individuals and stage of development because of developmental differences in skills and variations in developmental speeds.

The tests are designed for the primary school child in the Piagetian stage of concrete operations (6-11 years), where the child can now focus on form of language and meaning (Van Kleeck 1984), but cannot yet comprehend metaphors and linguistic ambiguity as in the 11 year old formal operational stage. The HSRC test was designed for standards 2, 3, and 4. A standard 3 level passage was selected for the SVT test as a middle ability of the three age groups.

One of the major differences between the two tests is the length of the tests. The comprehensive HSRC test is useful as a diagnostic assessment tool, but is not a practical tool for regular use in the classroom because of its length. Therefore, if the SVT could show similar trends of difficulties, it would be an excellent tool for teachers or therapists to use in order to evaluate both the passages used in class as well as pupils' progress in terms of listening and reading comprehension. Results have been promising in this regard. Carlisle (1991) found that the SVT distinguished clearly between good and bad comprehenders. Results were consistent with other reading test scores. So it seems that the SVT is a promising method for diagnosing comprehension deficits, and in fact may add information as to why the deficit occurs because of the analysis of the error types. She also found that good and bad comprehenders differed in terms of error patterns and this could provide further diagnostic pointers to their comprehension difficulties. Assessments should, after all, guide the teacher to plan appropriate activities to meet the needs of the class or individual. Therefore the use of classroom or curriculum material, as in SVT, is useful. The benefits in testing listening and reading comprehension can be successfully evaluated because of the fact that the SVT test can be based on virtually any linguistic material and material can be selected and readily constructed by classroom teachers (Royer et al 1987; Royer & Carlo 1991).

In order to compare various aspects of the two sets of tests the model devised by Dunkel, Henning and Chaudron (1993) for the general framework of listening comprehension assessment has been adapted in Table 4.3 to include reading comprehension.

Table 4.4: Description of the HSRC and SVT tests

	Purpose	Procedure	Analysis	Advantages
HSRC Tests (Callis & Chamberlain 1992)	<ul style="list-style-type: none"> - to assess language development in listening, speaking, reading or writing - to determine general language proficiency - for diagnostic purposes 	<ul style="list-style-type: none"> - students listen to or read prose passage, poems and single sentences - forty questions are asked which require multiple choice answers - in the reading test students are allowed to return to the text 	<p>analysed according to percentages (normative data are available according to South African population)</p>	<ul style="list-style-type: none"> - are standardised on South African children - established as objective, valid, reliable and economical measurement instruments in determining the ability to get meaning from the spoken (listening comprehension) or read (reading comprehension) word - details on standardisation, reliability and validity are provided
SVT Tests (Royer et al. 1979; Royer 1986; Royer et al. 1987; Carlisle 1991)	<p>to determine if a sentence has been comprehended by establishing whether the sentence is represented in memory in a form which preserves the meaning, but not the surface structure of the message. It is based on the theoretical assumption that successful language comprehension is a constructive process (the listener or reader must construct the meaning of the message using extra-textual information sources).</p>	<ul style="list-style-type: none"> - students listen to or read a passage - sixteen sentences are presented which require a yes/no response, 'yes' if the idea of the sentence is in the original passage, and 'no' if the idea is not in the original passage. Four types of test sentences are used: originals (exact copies of passage sentences); paraphrases (word changes while retaining meaning of the sentence); meaning changes (one or two word changes to result in a different meaning); and distracters (consistent in theme with original passage, but differs in meaning and wording). The first two types require yes responses and the second two require no responses. - in the reading test students are not permitted to turn back to the text 	<p>analysed according to percentages</p>	<ul style="list-style-type: none"> - readily usable by classroom teachers and in class situation - can be used with any age-appropriate curriculum material - place similar requirements on the student's memory in listening and reading, because student doesn't have passage in front of him during the testing phase in either test - test comprehension of sentences within context without testing reasoning or intelligence abilities - is sensitive to differences in text difficulty - reading and listening comprehension can be compared without tapping question-answering abilities - test sentences are arranged to avoid responses from memory - the four types of test sentences appear to tap language-processing abilities. Therefore evaluating the four types of sentences may help in evaluating processing strategies

This table covers a broad spectrum and shows how the two tests overlap in many areas, although differences are apparent. It is acknowledged that the test differences may account for some of the differences found in the results. This may provide interesting guidelines for future research. A detailed description of these tests is found in Table 4.4. Examples of the instructions, practice examples and responses are provided in Appendices A and B.

4.7 PROCEDURES AND APPARATUS

4.7.1 Testing environment

- Group testing was carried out in the three groups in the familiar classroom setting which reduced the level of anxiety to some degree (Haynes 1978). Further precautions were taken to reduce unnecessary anxiety in the children by explaining that testing was for research purposes and that the scores would not be reflected personally.
- The test room was well lit and well ventilated.
- Background noise was kept to a minimum by ensuring no walkway past the classroom and no testing during school breaks.
- The children were seated comfortably at desks.
- Testing was carried out by the researcher, who was reasonably familiar to the subjects as she worked in the school.
- All subjects could hear the tape well as they were asked this

during practice examples prior to testing.

- Testing was carried out during the second term of school. By this stage, the subjects were well settled into their classes and the curriculum was well established.

These procedures were all found to be appropriate in the pilot study.

4.7.2 Data collection

- Testing was administered as early in the day as possible, as recommended by the HSRC, before subjects were fatigued by other activities.
- The four tests were administered over two days in the same week. The same tests were applied to all three groups on the same day so as to ensure no discussion between subjects. Both listening tests were administered on the first day, and both reading tests on the second day. The duration of testing per day was approximately one hour (+- 40 minutes for HSRC, and 20 minutes for SVT) with a short break between the two tests.
- The SVT test was administered first, because it was shorter and would not be affected by fatigue after the longer HSRC test (as found in the pilot study).
- Prior to testing, instructions to the group were read by the tester. Care was taken to ensure that all subjects were clear on all necessary aspects of the testing procedure.

- Motivation to continue testing was increased by promising a reward after all the testing was completed.
- Practice examples were carried out. No feedback was given except on practice items. Practice examples were printed on separate sheets of paper before the main test.
- Instructions for the SVT (Listening) were (adapted from Royer; Carlisle): 'This is a listening task. Listen to the story on the tape. Try to remember as much as you can. After the tape, you will turn the page and answer some questions about the passage.'
- Instructions for the SVT (Reading) were (see Appendix B): 'Read the passage in front of you. You can only read it once. Try to remember what you have read. After you have finished you will turn the page and answer some questions about the reading.'
- Instructions for the HSRC tests (see Appendix A): followed according to the test manual (Callis & Chamberlain 1992a p 3-5).
- The tape recordings were not replayed.
- There was a 40 minute time restriction on the HSRC reading test but no other time limits on any of the other tests.
- All tests were presented according to the authors' instructions. No changes were made to the body of the tests in order not to disrupt the validity of the normative data.

Table 4.5 lists the equipment used for the testing.

Table 4.5: Testing equipment

Subjects	Tester
- pencil - eraser - response sheets - practice examples - reading passages	- tape recorder and cassette for listening passages - instructions for all tests

4.8 DATA ANALYSIS

All tests were scored according to test requirements and were calculated and computerised.

Data was transcribed onto data capture sheets (see Appendix C). Percentage scores were calculated for each subject on each test. Listening and reading scores were compared on both tests. Listening and reading scores were also compared between tests. SVT scores were compared across the four question types. Scores were compared to school performance scores. Scores were compared across the three age-groups on both tests.

4.8.1 Statistical analyses

- Percentages were calculated on all tests for each subject. Royer et al (1987) feel that if the average performance on the SVT falls below 65% the passage is probably too difficult, and if it is above 85% the passage is probably too easy. Percentages were used in order to keep the scores uniform with evaluation of the mean, the standard deviation

and the range.

- An Analysis of Variance was used to compare the progressive levels of the tests (Steyn et al 1994).
- The mean and standard deviation was established.
- T-tests (Freund and Walpole 1987) were used to establish the difference between the means.
- Ranking orders of test results were used to compare individual scores.
- Correlation coefficients were calculated to establish the strength of the relationships between test scores.

4.9 SUMMARY OF CHAPTER FOUR

This chapter described the methodology of the study. It included the aims and the hypotheses of the study, research design and, subject selection. The pilot study was described, which indicated some recommendations for the main study. Measuring instruments selected were presented and procedures of testing and equipment were detailed. Finally data collection and analytic procedures were discussed.

CHAPTER FIVE: RESULTS AND DISCUSSION

5.1 INTRODUCTION

The purpose of this study is the comparison between listening and reading comprehension using the HSRC test and the SVT test. The main aim was to compare listening and reading comprehension across three age groups of standard 2, 3 and 4.

In this chapter the results of the tests are presented and discussed. First, an overview is given of all the listening and reading comprehension results on both tests to highlight the patterns. Then the results for each test are discussed in terms of the group as a whole and the three age groups.

Thereafter the results of the HSRC and SVT tests are compared to evaluate how they overlap and to discuss the possible reasons for any differences found.

The SVT results are further discussed in terms of the four types of responses and error patterns. Finally the test results are compared to the subjects' English marks.

5.2 OVERVIEW OF LISTENING AND READING COMPREHENSION ON HSRC AND SVT TESTS

In order to highlight the comparison between listening and reading comprehension, a global overview is presented. Figure 5.1 gives a graphical representation of all the test scores in percentages.

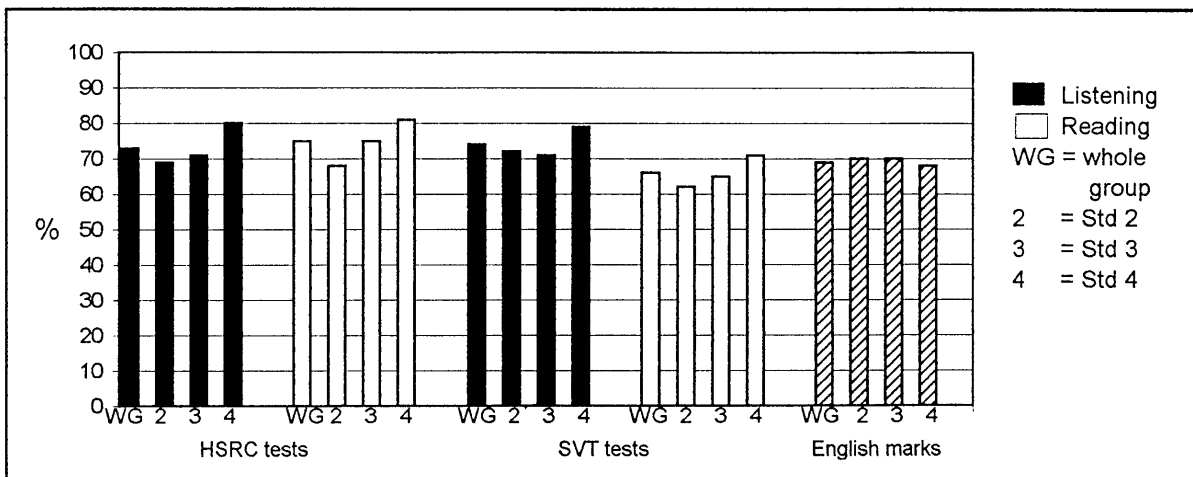


Figure 5.1: Overview of all test results and English marks for whole group and standard 2, 3 and 4 groups individually

In Figure 5.1, it can be seen that in the HSRC test listening and reading scores across the whole group are similar, with listening slightly weaker than reading (listening-73%; reading-75%). This is not the case with the SVT test, where listening is significantly stronger than reading (listening-74%; reading-66%). However when considering these results, one must be aware that the whole group scores may have a tendency to mask the differences in each age group.

Figure 5.1 also clearly shows a definite increase in ability from standard 2 to 4 in the HSRC and SVT tests in both listening and reading modes.

When comparing the HSRC and SVT tests (Figure 5.1), the scores on the two listening tests are fairly similar (HSRC-73%, SVT-74%), whereas the SVT reading scores are considerably lower than the HSRC reading scores. This may be related to a variety of factors, particularly in test structure and response modes. However it is interesting that these differences in test structure and response did not affect the listening test.

Figure 5.1 also highlights the differences between the two tests in the individual groups. In the listening mode, the two test scores are fairly similar in all three groups. However the reading tests show considerable variation, with the HSRC reading scores being substantially higher than the SVT reading scores.

Finally, the English marks are shown in Figure 5.1. Here similarities in scores are evident. This is to be expected, because the HSRC and SVT tests were easier for the standard 4s than the other 2 groups, whereas, English marks are based on more advanced work for each subsequent group.

5.3 DETAILED ANALYSIS OF RESULTS FOR WHOLE GROUP AND BY STANDARD

5.3.1 Introduction

From Table 5.1, it is clear that the relationship between listening and reading on the two tests is inconsistent. Reading

scores are significantly lower than listening scores on the SVT test, while the scores are similar (reading slightly higher) on the HSRC test. These inconsistencies will be discussed later.

Table 5.1: Comparison of listening and reading across the whole group using a T-test of significance (P value)

Test	L	R	Comparison	Significance
HSRC	73%	75%	R>L	not significant (P=0,17)
SVT	74%	66%	L>R	significant (P=0,00; P<0,01)

5.3.2 Comparison of listening and reading scores across the whole group on HSRC tests

Here the trend favours reading over listening in the group as a whole (see Table 5.1 and Figure 5.1). However this difference is very slight (listening-73%; reading-75%). Therefore one can say that these two scores are similar which is what was hypothesised (refer to section 4.2.3). By this age, reading skills should have caught up with listening skills, hence the similar strategies being used as the crossover of auditory and visual processing is now evident (Homan et al 1986; Sticht & James 1984) and the child is in the 'reading to learn' stage (Sawyer & Lipa 1981).

The results in this study correlate with the findings of Spring and French (1990), who found that normal readers of the same age level scored slightly higher, although not significantly, on reading than listening.

Because the listening and reading scores are similar, it could be considered appropriate to use listening as a measure of

optimal functioning in reading. It is generally accepted that there are problems with accepting IQ scores as a baseline of expected reading comprehension performance (Carlisle & Felbinger 1991). There may be problems with using listening tests for this purpose. The strategies used in listening and reading are not fully understood and the age at which the two modes overlap is not certain. It is therefore premature to make such definite statements, although this issue is an important one which warrants further research. Some children may be better at reading comprehension than listening comprehension and therefore listening comprehension cannot be a measure of individual ability in reading. It would be important to determine each individual's levels of performance in both modalities to avoid the misinterpretation of capability levels.

Children with reading disabilities have been found to score significantly lower on reading than listening comprehension (Royer & Cunningham 1981,; Sticht & James 1984; Spring & French 1990; Carlisle & Felbinger 1991). Normal readers scored slightly higher on reading than listening comprehension. They used the Peabody Individual Achievement Test which uses sentences rather than passages. Although the subjects were the same age as the subjects in this study, they were not divided into separate age-groups, but rather looked at as a whole group. The results were therefore similar to the findings of the present study with regard to the HSRC results for the whole group.

5.3.3 Comparison of listening and reading scores across the whole group on SVT tests

On the SVT test (Table 5.1 and Figure 5.1), listening is the stronger mode (reading-66%; listening-74%), so it would appear that using the earlier developing auditory sense alone, without the aid of visual cues, is the better skill in the group overall. This suggests that it would not be realistic to use listening comprehension as a measure of optimal reading comprehension. Moreover, this difference would be even greater in the remedial population with children with reading deficits (Royer et al 1990).

These results may be related to the fact that children at this age are still stronger auditorily with visual input becoming stronger later. In fact, it seems that listening and reading ability may change across time through instruction or increased reading proficiency, even if it occurs after the primary school period. Even though listening and reading may use the same processes there are different demands on listeners' and readers' cognitive processes. It is also possible that at a later stage, listening comprehension may once again become stronger when the use of reading diminishes after the school years.

Royer et al (1990) conclude that the differences between listening and reading comprehension are dependent on the reading ability of the reader and the difficulties of the passage used. In this study the groups were not divided into ability groups, although the individual trends (discussed later) show interesting patterns. The passages used within each test were constant in

terms of difficulty, although the reading levels of the subjects varied.

5.3.4 Comparison of listening and reading scores on HSRC tests in standard 2, 3, and 4 groups

The scores of the individual groups are now considered separately to see if there are patterns masked by the overall scores. Readers should once again refer to Figure 5.1 for the graphical representation of the scores in the three age groups.

Table 5.2: Comparison of listening and reading on HSRC tests in the three groups

Std	L	R	Comparison	Significance
std 2	69%	68%	R<L	not significant (P=0,91)
std 3	70%	75%	L<R	not significant (P=0,63)
std 4	80%	81%	L<R	significant (P=0,00; P<0,01)

Table 5.2 shows the progression of the scores from standard 2 to 4. It is interesting to note that the reading score is lower than the listening score in the youngest group but higher in the two older groups. These differences are slight, but this trend confirms the third hypothesis (see 4.2.3) as reading is expected to become the dominant mode in older years and be used more extensively after the standard 2 year. Sticht and James (1984) put the age of equivalent ability in the two modes as the 5th year of school, that is, standard 3, which would correlate with these findings. Spring and French (1990) agree that the reading comprehension catches up to the listening comprehension from standard 2 to standard 6. One would therefore expect a slow

increase across a group of average standard 2 to 4 children. Royer et al (1990) agree that reading and listening comprehension develop independently with reading comprehension being more sensitive to instruction.

Carlisle (1989b) also found that good comprehenders scored slightly better on reading than listening while poor comprehenders scored equally on both, with overall comprehension weakness. Her subjects were at a standard 5 level, and therefore reading should have been well established. These results correlate with the standard 4 group results in the present study. Sticht and James (1984) found this age group to perform equally on both modes.

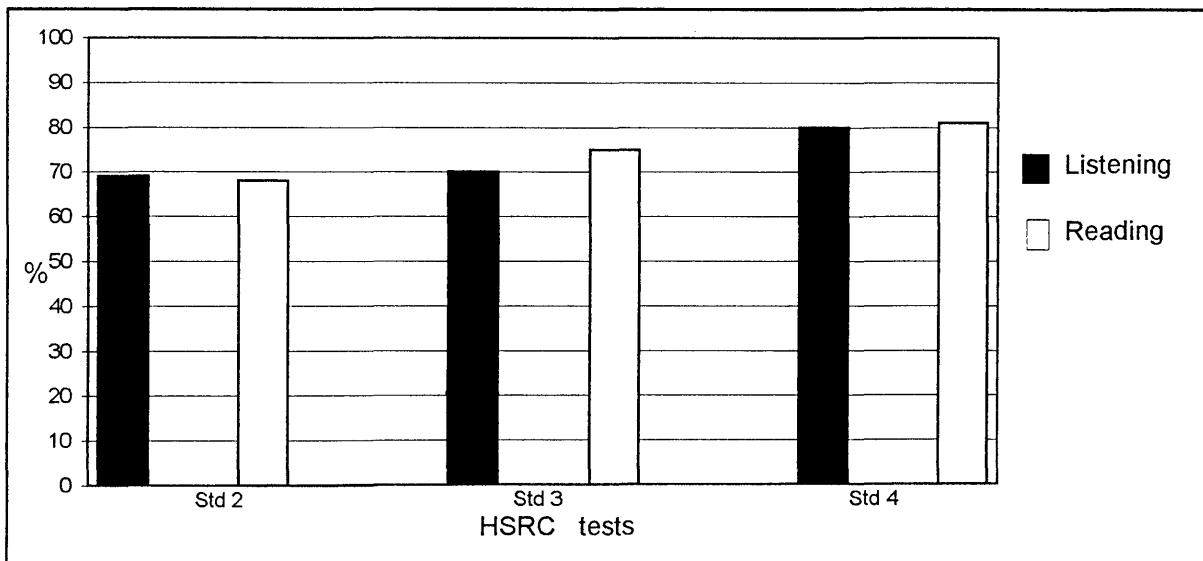


Figure 5.2: HSRC listening and reading test scores across the three groups

Figure 5.2 shows that the improvement in HSRC scores is steady from standard 2 to 4 in both listening and reading although minimal between standard 2 and 3 in the listening mode. So there seems to be a better growth in the reading mode between standard

2 and 3, probably due to instructional factors, that is, the increased use of reading as opposed to a focus on listening as in earlier years. Thus the HSRC tests appear to be relevant in assessing the level of testees. Perhaps this is due to the fact that they have been standardised on South African children.

Table 5.3: Top and bottom ten scores on HSRC listening and reading tests

TOP 10	Std 2	Std 3	Std 4
	HL HR	HL HR	HL HR
	S=25 — 25	S=53 — 44	S=59 — 73
	14 28	44 53	60 58
	15 15	49 36	75 59
	5 27	52 42	85 60
	23 3	42 39	58 72
	26 14	43 38	71 70
	7 4	39 52	87 61
	8 5	41 29	66 63
	1 6	40 34	61 75
	12 8	30 50	72 67
Overlap	5	5	6
<hr/>			
BOTTOM 10	Std 2	Std 3	Std 4
	HL HR	HL HR	HL HR
	S=19 — 16	33 — 54	67 — 64
	22 13	31 47	69 84
	16 22	35 35	86 86
	24 9	54 51	62 87
	21 19	34 31	84 82
	13 21	32 46	65 62
	11 11	57 41	80 83
	2 24	51 43	70 81
	18 17	50 40	82 80
	17 2	47 48	81 71
Overlap	9	5	6

HL = HSRC listening test; HR = HSRC reading test; S= subject

In Table 5.3 the subjects in each standard who obtained the ten highest scores and the ten lowest scores are listed. In these tables subjects are represented by their unique numbers (subjects in standard 2 were numbered from 1 to 28, in standard 3, from 29 to 58, and in standard 4 from 59 to 88). It can be seen that five or six subjects scored in the top ten in all three standards in both listening and reading. Not all subjects are in both lists, however, implying that although many good listeners are good readers, there are a number of subjects that show different patterns. Similarly many of the poor readers are also poor listeners, especially in the standard 2 group, where nine of the weakest listeners were also the weakest readers. The overlap was not as strong in the older groups, but there was at least a 50% overlap.

5.3.5 Comparison of listening and reading scores on SVT tests in standard 2, 3 and 4 groups

When comparing the reading and listening scores obtained in the SVT tests, across the three age groups, the overall trend across the whole group is confirmed in that the reading scores are consistently lower than the listening scores across all three age groups. These differences are significant in the standard 2 and 4 groups (see Table 5.4 and Figure 5.3).

Table 5.4: Comparison of listening and reading scores on SVT in the three groups

Std	L	R	Comparison	Significance
std 2	72%	62%	R<L	significant (P=0,00; P<0,01)
std 3	71%	65%	R<L	not significant (P=0,09)
std 4	79%	71%	R<L	significant (P=0,01; P<0,02)

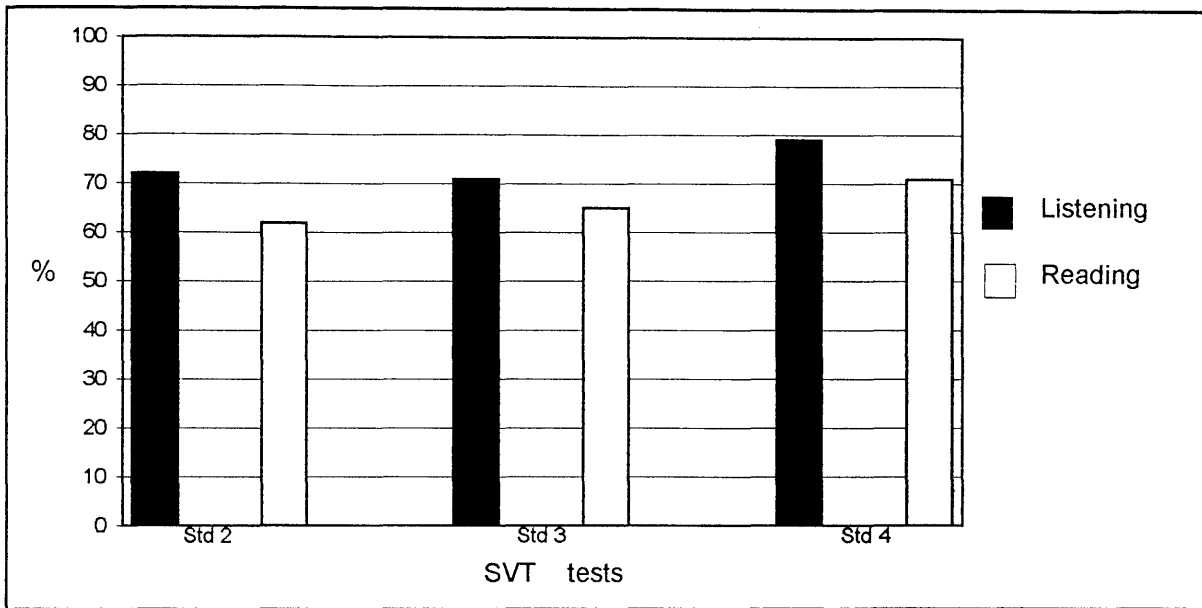


Figure 5.3: SVT listening and reading test scores across the three groups

From Figure 5.3 and Table 5.4, it can be seen that the difference between listening and reading is largest in the standard 2 group. This larger gap may be due to the fact that reading is not as firmly established as in the older sample. Yet the reading scores are all lower (significantly in standard 4 as well as in standard 2), implying that perhaps the reading levels have not yet surpassed the listening abilities even in the standard 4 group. The difference may be attributed to the fact that there is still the primary reliance on paralinguistic cues such as prosody, intonation and facial expression, and the subjects may tend to ignore the punctuation clues. However, as discussed above, this pattern was not found in the HSRC tests, where reading became the stronger mode in later groups. It would therefore seem either that the tests are testing different aspects of comprehension or that the nature of the test material or the type of response required is influencing performance.

So, in the SVT, reading and listening scores are not as similar as expected, which is not consistent with the HSRC test. Listening and reading are both language comprehension processes but, as Danks and End (1987) state, these modes impose different cognitive, text and situational characteristics. The strategies of comprehension of the two modes may still be different at this stage since the texts were of the same level.

In support of the SVT findings, Lynch (1988) attributes higher scores in listening comprehension than silent reading comprehension to the rich linguistic cues available in spoken passages such as voice intonation, appropriate pauses and smooth articulation, which are cues not available in reading. Carlisle (1989b) found average scores of listening-86,1; and reading-77,9 in grade 6 subjects (standard 4) on SVT tests, that is, poorer reading than listening, as found in the SVT tests in this study. Carlisle and Felbinger (1991) state that listening is usually superior to reading in the primary school years.

Many early school tasks require listening and it is therefore possible that children have learned this skill and practised listening skills more than reading skills. However later school demands may be primarily in the reading mode and therefore, in higher standards, the reading mode may become the more practised skill and stronger. This progression is also reflected in Figure 5.3.

Other studies reported by Carlisle and Felbinger (1991) have also shown the SVT to be sensitive to grade-level differences. Royer et al (1990) found that 4th and 6th graders did better on reading

than listening on easier passages but that listening was better than reading on more difficult passages. Royer et al (1986) suggested that when readers who are developing their reading skills read easy materials, the fact that they can proceed at their own pace and reinspect the text when they have difficulties allows them a better understanding. This may explain why the standard 4 subjects showed no significant difference between listening and reading scores. However, with more difficult vocabulary and syntax these advantages could disappear, overwhelming the developing reader (for example, standard 2s) and hence listening comprehension would be better (as in Royer et al's 1986 study as well as in this study). Here, a standard 3 level passage was used, so standard 2 should do better in listening than reading, as the passage was more difficult for them. Although the passage was easier for the standard 4s, they did not do better in reading, but as mentioned the gap was less.

Table 5.5 shows that there is considerable overlap in the SVT test (as in the HSRC test) of the subjects that scored best or weakest in both listening and reading tests. At least five or seven of the top ten subjects overlapped. Similarly there was considerable overlap in the bottom ten scores. However about half the group did not overlap, showing that there must be different patterns of performance.

Table 5.5: Top and bottom ten scores on SVT listening and reading tests

TOP 10	Std 2		Std 3		Std 4	
	SL	SR	SL	SR	SL	SR
S=27	27	25	41	36	63	59
1	1	26	36	29	59	60
4	4	27	37	32	66	66
8	8	14	39	33	73	75
20	20	1	42	30	77	85
5	5	5	48	35	61	64
6	6	18	29	39	70	65
12	12	23	32	40	75	77
14	14	6	38	42	87	80
23	23	8	44	53	60	58
Overlap	7		5		5	
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BOTTOM 10	Std 2		Std 3		Std 4	
	SL	SR	SL	SR	SL	SR
S=16	16	11	43	51	84	67
22	22	7	34	44	62	86
21	21	24	33	54	86	80
11	11	22	57	49	81	62
28	28	4	50	57	63	58
19	19	16	54	55	87	85
3	3	12	51	50	83	84
24	24	21	49	47	79	82
18	18	19	31	37	78	81
17	17	15	53	52	70	76
Overlap	6		5		4	

SL = SVT listening test; SR = SVT reading test; S=subject

As Royer et al (1990) point out, it seems clear that good readers have a different pattern of abilities from poor readers. They found that good readers performed better on listening as well as reading SVT tests. There are however conflicting reports here,

since Horowitz and Samuels (1985) found similar scores on listening tests with good and poor readers. One needs to examine the differences in the subjects and texts used in the various studies. According to Royer et al (1990), the results seem to vary according to the ages of the subjects, the reading ability and the difficulties of the text.

5.3.6 Correlation between scores

There seems to be a trend in this study, that if high scores are achieved by individuals in the reading test, high listening scores will follow.

Table 5.6: Pearson Correlation Coefficients between tests

	HL/HR	SL/SR
Whole group	0,65	0,35
std 2	0,80	0,52
std 3	0,50	0,16
std 4	0,41	0,30

HL = HSRC listening test; HR = HSRC reading test; SL = SVT listening test; SR = SVT reading test

A Pearson correlation analysis (Table 5.6) showed a positive correlation across the whole group, but not a significantly strong correlation. This was particularly noticeable in the HSRC tests ($P=0,65$). The scores on the SVT tests do not show much correlation although it is still positive ($P=0,35$). In the standard 2 group, the correlation between SVT-listening and SVT-reading is fair and strong between the HSRC-listening and HSRC-reading tests. In the standard 3 and 4 groups, the correlation between listening and reading in both tests is positive, although

not particularly strong, being weakest between the SVT listening and reading. So it appears that those who did well in reading generally performed well in listening, although not consistently.

5.4 COMPARISON BETWEEN HSRC AND SVT TESTS

The aim of this section is to compare the results of the two tests to determine the extent of any overlap between them or whether the scores are markedly different which would imply that they test different aspects of comprehension or require different cognitive strategies.

As Muma (1983) warns, short evaluations can lead to misrepresentation and distortion of the process. This must be kept in mind when interpreting the data and developing a realistic picture of the child or making generalisations. Brown (1980) points out that validity of tests can be established by comparing the findings of a test to those of an established standardised test. If they compare well, then one can assume that they are comparing the same behaviour. They may on the other hand be assessing different aspects of a similar behaviour, hence inconsistent results.

5.4.1 Comparison of HSRC and SVT tests across the whole group

There were clearly areas of overlap in the two tests but also significant variations. As shown in Table 5.7, there does not seem to be any significant difference between the two tests in the listening mode. Thus one could view the two tests to be interchangeable. However there is a significant difference

between the scores in the reading mode. These differences can also be seen graphically in Figure 5.1.

Table 5.7: Comparison of HSRC and SVT tests across whole group of subjects

Mode	HSRC	SVT	Relationship	Significance
L	73%	74%	HSRC<SVT	not significant (P=0,22)
R	75%	66%	SVT<HSRC	significant (P=0,00; P<0,01)

It seems strange that the differences are not observable in the listening mode, but are significant in the reading mode. If the reason for this difference lies in the nature of the test material or in the response required, then one would have expected this difference in both reading and listening (refer to differences between tests in Chapter 4). It could be that the difference is a result of the subjects being allowed to reread in the HSRC test and to the shorter nature of some passages, which pulled the HSRC reading scores up. This would explain why no difference is shown in the listening test. The SVT may be relying not only on memory but also, as Royer et al (1996) point out, on the ability to use text structure to integrate ideas in the passage, giving a more reflective measure of comprehension. From these results, it would appear that the SVT could be accepted as a classroom assessment tool for listening comprehension and this would be of great value to the teacher, who can use classroom texts for evaluating comprehension. The SVT-reading test can give interesting additional information on the child's ability in reading comprehension without the crutch of rereading. Perhaps the memory boost in rereading is a major factor in the difference in the scores.

Alternatively, the differences found between these two tests may be a reflection of different task requirements in the answering strategies. The SVT has the forced-alternative answer format and therefore guessing may be a problem, skewing the results. No adequate method has been proposed to allow for this bias so the results must be viewed with some reservation. When different response types are used - in this instance, sentence verification and multiple choice, it may be expected that some difference will be found in the results of the two tests. Carlisle (1989a) points out that there may be a metacognitive strategy that causes this difference. The subjects may be more familiar with a multiple choice format and therefore the SVT choice format may be a more difficult type of questioning, and more likely to produce errors. However one would have expected this to have affected the results of the SVT listening test as well as the reading test.

Another factor that could cause a difference between the HSRC and SVT test scores is the length of the tests. There is a limited sample of behaviour in the shorter SVT test and therefore the HSRC may evaluate more effectively over a greater sample of ability. However again this should have been observed in both the listening and reading modes.

Bedford-Feuell et al (1995) found that the SVT results correlated highly with the New Macmillan Reading Analysis comprehension scores. They felt that the listening test provided a valid method of assessing listening comprehension and gave a useful means of distinguishing between specific reading difficulty and general learning difficulty. Carlisle (1989b) also found similar scores on the SVT and Gates-MacGinite Reading Tests. Although the results in this study were not highly correlated in the reading

tests, one needs to acknowledge methodological areas of difference, which could account for the differences found. These differences would be evident in any two tests, and need not distract from the value of each individual test.

We now turn to a comparison of scores for each group. The scores across the whole group may mask results within the group, and therefore it is important to highlight the difference between each individual group.

5.4.2 Comparison of HSRC and SVT listening tests within standard 2, 3, and 4 groups

Table 5.8: Comparison of two listening tests between standards 2, 3 and 4

Std	HSRC	SVT	Relationship	Significance
std 2	69%	72%	HSRC<SVT	not significant (P=0,10)
std 3	70%	71%	HSRC<SVT	not significant (P=0,64)
std 4	80%	79%	SVT<HSRC	not significant (P=0,80)

From Table 5.8, it can be seen that the scores in the two listening tests are reasonably comparable in each of the three groups. There are no significant differences. This is also graphically represented in Figure 5.1. There does not appear to be a particular trend for one test to be easier. There are very few listening tests available and therefore not much research to establish how SVT and other measures compare.

Table 5.9: Comparison between top and bottom ten scores on both listening tests

TOP 10	Std 2		Std 3		Std 4	
	HL	SL	HL	SL	HL	SL
S=25	27	27	53	41	59	59
14	1	1	44	36	60	60
15	4	4	49	37	75	66
5	8	8	52	39	85	75
23	20	20	42	42	58	85
26	5	5	43	48	71	64
7	6	6	39	29	87	65
8	12	12	41	32	66	77
1	14	14	40	38	61	80
12	23	23	30	44	72	58
Overlap	6		4		6	
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BOTTOM 10	Std 2		Std 3		Std 4	
	HL	SL	HL	SL	HL	SL
S=19	16	16	33	43	67	84
22	22	22	31	34	69	62
16	21	21	35	33	86	86
24	11	11	54	57	62	81
21	28	28	34	50	84	63
13	19	19	32	54	65	87
11	3	3	57	51	80	83
2	24	24	51	49	70	81
18	18	18	50	31	82	78
17	17	17	47	53	81	70
Overlap	8		7		5	

HL = HSRC listening test; SL = SVT listening test; S = subject

Table 5.9 shows that there is considerable overlap between the two listening tests in individual comparisons of top and bottom scorers (particularly poor scorers). However, if the tests were testing exactly the same skill, one would have expected more

overlap. However one must consider individual variables and factors on the day of testing which may influence results.

5.4.3 Comparison of HSRC and SVT reading tests in standard 2,3 and 4 groups

Table 5.10: Comparison of HSRC and SVT reading tests in three groups

Std	HSRC	SVT	Relationship	Significance
std 2	68%	62%	SVT<HSRC	not significant (P=0,15)
std 3	75%	65%	SVT<HSRC	significant (P=0,01; P<0,02)
std 4	81%	71%	SVT<HSRC	significant (P=0,00; P<0,01)

As can be seen from Table 5.10, the SVT scores are consistently lower than the HSRC scores, with standard 3 and 4 being significantly different. It would appear that these two tests cannot be reliably compared. As mentioned previously, the primary reason seems to be the fact that the SVT passage cannot be reread whereas the HSRC passage remains in front of the subject when answering the questions. Again this may suggest that the SVT is testing something different, for example memory and interpretation of read material.

Carlisle and Felbinger (1991) report on SVT performances that correlate moderately with other silent reading measures. Thus, perhaps complete correlation cannot be anticipated but focus should be made on specific results and the individual patterns of difficulty. They also report that performances on SVT tests have been shown to correlate moderately with performances on group standardised reading measures. They also did not find a

particularly close si



e reason here is also

the differences in the lengths of the passages.

Although the HSRC reading test scores are higher than the SVT scores, they do not seem to be unduly high and the SVT scores are still within a normal level, being neither too high or too low for an average group.

Table 5.11: Comparison between top and bottom ten scores on both reading tests

TOP 10	Std 2		Std 3		Std 4	
	HR	SR	HR	SR	HR	SR
S=25	25	25	44	36	73	63
	28	26	53	29	58	59
	15	27	36	32	59	66
	27	14	42	33	60	73
	3	1	39	30	72	77
	14	5	38	35	70	61
	4	18	52	39	61	70
	5	23	29	40	63	75
	6	6	34	42	75	87
	8	8	50	53	67	60
Overlap	6		5		7	
BOTTOM 10	Std 2		Std 3		Std 4	
	HR	SR	HR	SR	HR	SR
S=16	11	11	54	51	64	67
	13	7	47	44	84	86
	22	24	35	54	86	80
	9	22	51	49	87	62
	19	4	31	57	82	58
	21	16	46	55	62	85
	11	12	41	50	83	84
	24	21	43	47	81	82
	17	19	40	37	80	81
	2	15	48	52	71	76
Overlap	6		3		6	

HR = HSRC reading test; SR = SVT reading test; S = subject

Again there seems to be considerable overlap (Table 5.11) in the top and bottom scorers in the reading tests, with generally more than half the top and bottom scorers being the same subjects. Thus it appears that the good and poor readers are being identified by both reading tests efficiently although not consistently.

5.5 COMPARING TYPES OF ERRORS MADE ON THE SVT TESTS

In this section, the four types of questions used in the SVT tests will be compared in terms of the number of errors made on each question type to determine whether there is any pattern. Table 5.12 gives an overview of the four question types used in the SVT tests.

Table 5.12: Four question types used in SVT tests

Type of question	Definition
Originals	Sentences taken exactly from the passage
Paraphrases	Sentences with the same meaning but with different word choice and word order
Meaning changes	Sentences similar to originals except for the substitution of one word, which changes the overall meaning but does not contradict reality
Distractors	Sentences with information on the topic not mentioned in the original passage, but consistent with the theme in the passage

It is interesting to compare students' patterns of errors. We need to determine whether students weaker in listening make more of the same errors than others or whether they make different types of errors. Carlisle and Felbinger (1991) point out that

differences may also indicate a student's ways of compensating for difficulties.

As can be seen in Figure 5.4, most errors in the listening test were made on originals, while least errors were shown on meaning changes.

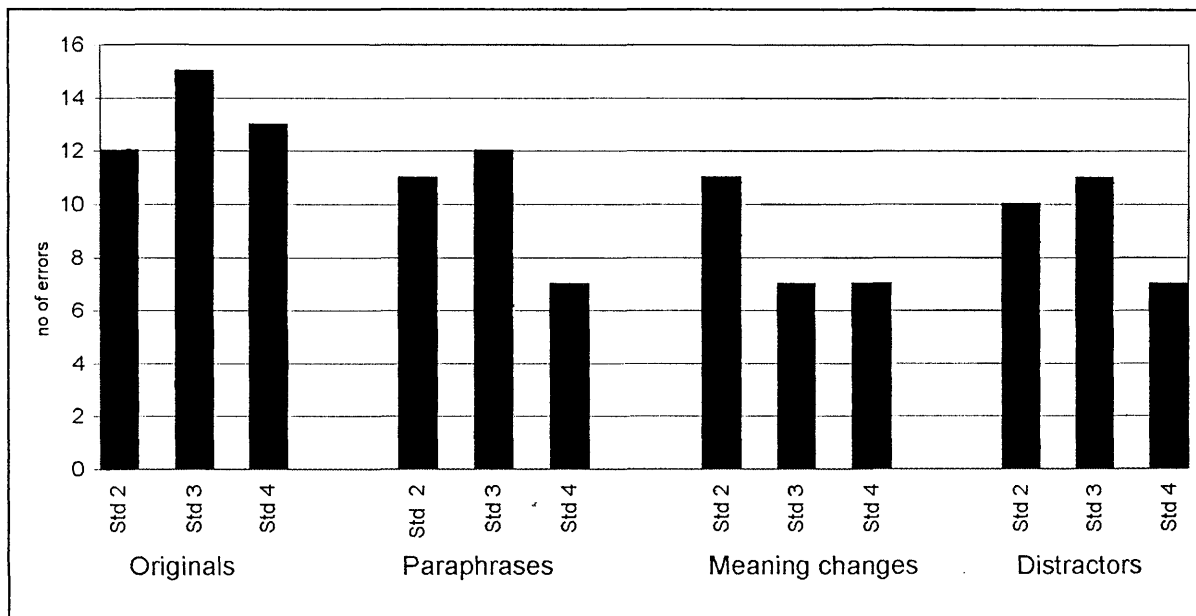


Figure 5.4: Number of errors on each question type in SVT listening test

From Figure 5.5, it is clear that in the reading test, subjects made most errors in paraphrases and least errors in originals. This is interesting because it is different from the pattern in the listening mode.

SVT sentence types can reveal different comprehension problems. Responses to originals and paraphrases show the ability to identify ideas that were in the passage and serve as a measure

of language comprehension, paraphrases being a somewhat more sophisticated level of language comprehension (Carlisle & Felbinger 1991). It is important to note that in the listening mode, the number of errors for each question type (originals = 40, paraphrases = 30, meaning changes = 25, distractors = 28) did not vary as much as in the reading mode.

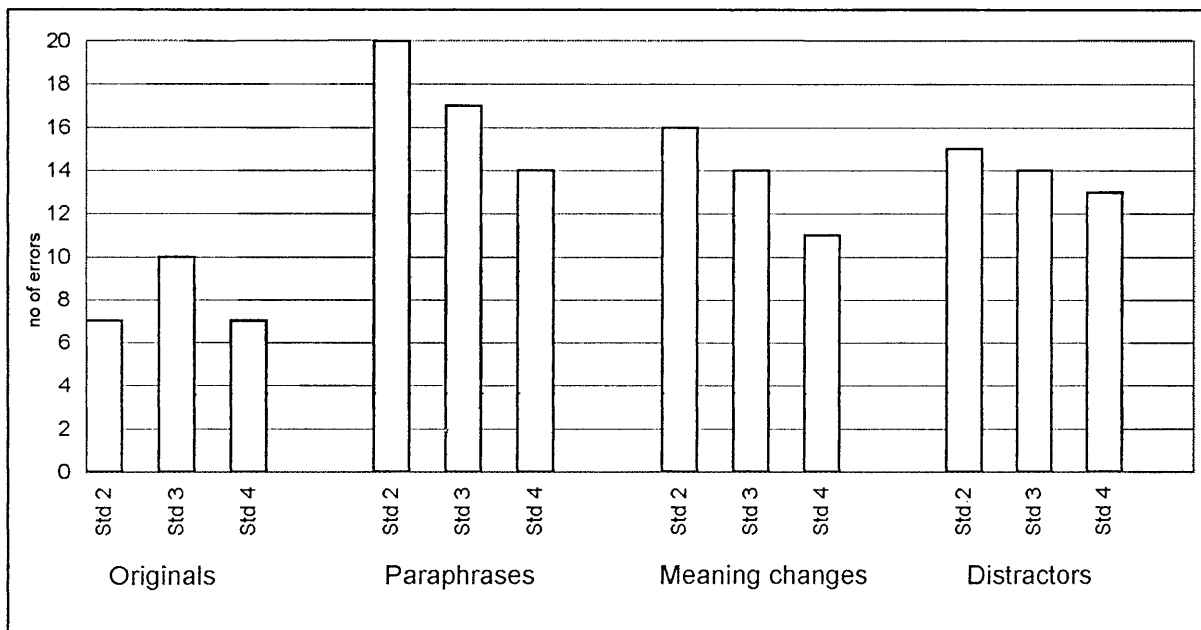


Figure 5.5: Number of errors on each question type in SVT reading test

Previous studies (as reported by Carlisle & Felbinger 1991, Carlisle 1989a; Royer et al 1979) have shown more accurate responses to originals than paraphrases by good comprehenders, possibly because of more flexibility needed in paraphrases. This was confirmed in the reading mode, but the number of errors in

the listening mode was surprising. Carlisle and Felbinger (1991) point out that errors on meaning changes show limited care paid to exact wording and hence the resulting meaning of the sentence. The subjects here were able to cope with both paraphrases and meaning changes better in the listening mode. One also needs to consider that the subjects may have simply hurried through the reading passage to get it finished, whereas they all had to listen equally to the listening passage presented.

Table 5.13: Errors made by top and bottom ten students in both SVT tests

	Most errors	Least errors	Others
SVT Listening			
Top 10	paraphrases (3)	distractors (1)	originals (2) meaning changes (2)
Bottom 10	meaning changes (24)	originals (17)	paraphrases (20) distractors (21)
SVT Reading			
Top 10	distractors (6)	originals (2)	paraphrases (4) meaning changes (4)
Bottom 10	paraphrases (29)	distractors (18)	originals (20) meaning changes (20)

Table 5.13 shows a frequency count of error types of the top and bottom ten subjects in the SVT reading and listening tests. There seems to be very little difference between all error types. The top subjects made few errors overall with minimal differences and the poor readers made many errors overall with a more diverse scatter.

Carlisle and Felbinger (1991) hypothesised that poor listeners would show errors in the listening subtest in paraphrases and

meaning changes because of problems encoding information or attending to linguistic detail. This was evidenced here. They also hypothesised that poor readers made errors in the reading subtest on paraphrases because of difficulties in encoding ideas in memory because of poor word recognition or no prosody. This also occurred in this study. The poor listeners showed numerous errors on all sentence types because weak basic comprehension has an adverse affect on all language aspects.

According to Royer et al (1987) readers should be able to judge that originals and paraphrases have the same meaning whereas meaning changes and distractors do not, if they can remember the meaning of a text. Carlisle and Felbinger (1991) found different results from these. They found that good and poor comprehenders had most difficulty with meaning changes suggesting that insufficient attention is paid to exact wording. In this study, subjects found paraphrases, meaning changes and distractors more difficult than originals.

5.6 COMPARISON BETWEEN ENGLISH MARKS, HSRC AND SVT SCORES

Figure 5.1 gives a graphical representation of the comparisons between the English marks and the group as a whole, as well as the individual standard 2, 3 and 4 groups.

Table 5.14 shows that the English school marks reveal no consistent pattern. The non-significant differences highlight the closer relationships between the English marks and the tests. The most comparable score to the English marks achieved at school appear to be the HSRC listening, therefore perhaps the child's overall ability in English is better reflected in listening

ability which is the first skill acquired in the developmental pattern. The English marks were significantly higher than the SVT reading in standard 2 and 3. Therefore the SVT seems to be testing an area not related to school results. In standard 2 and 3, the English marks seem to reflect the subject's listening scores more effectively than the reading scores. By standard 4, the reading scores on the SVT improved sufficiently and did not make a significant difference anymore. Overall, the standard 4 English marks cannot be said to be reflecting either listening or reading scores per se. The English mark is made up of a composite of reading, comprehension, written language, grammar, spelling and literature and therefore cannot be closely compared to pure comprehension scores. However it is interesting to note which areas seem to be most reflected in the academic results.

Table 5.14: English marks compared to HSRC and SVT listening and reading tests

	Eng mark	HL	HR	SL	SR
whole group	69%	E<HL	E<HR *	E<SL *	E>SR *
std 2	70%	E>HL	E>HR	E<SL	E>SR *
std 3	70%	E=HL	E<HR *	E<SL	E>SR *
std 4	68%	E<HL *	E<HR *	E<SL *	E>SR

* significant at the 0,05 level

HL = HSRC listening test; HR = HSRC reading test; SL = SVT listening test; SR = SVT reading test

A correlation analysis showed that across the whole group, the English marks correlated strongest with HSRC listening and HSRC reading, but not significantly (0,5 and 0,4) and least with SVT reading. There was a stronger correlation in the standard 2 group between English and all the tests especially HSRC reading (0,7) and HSRC listening (0,6). In the oldest group, the correlation

between English and all test results was weak, although slightly stronger with reading. This is expected as reading plays a greater role in school assessments as the years progress.

When individual marks and test scores were compared, those who did well in English generally did well in both listening and reading and the poorer students generally did less well. More specifically, the top and bottom three English students in each standard frequently appear in the top ten or bottom ten scores respectively in the listening and reading tests, although individual differences are evident. Full details can be seen in Table 5.15.

In Table 5.15 it can be seen that in the standard 2 group, the top English mark student (S=25) scored top scores in all tests except SVT listening. This shows an overall good listening and reading ability. However the third best English mark student only did well in the HSRC listening test. On the other hand, the weakest three English students consistently showed poor scores across all four tests.

In the standard 3 group, there is less consistency. The top English student (S=38) did not score in the top five scores in any of the four tests. There is no observable pattern in this group. The weakest English subject (S=54) however showed consistently weak scores in all four tests. It is interesting to note that subject 33, who did weakest in HSRC listening test (see Table 5.10), showed a weak score in the SVT listening test, but the reading scores were not weak and neither was the English mark (see Tables 5.11 and 5.15). This subject is clearly a poor

listener which does not seem to affect his reading comprehension or overall English competence.

In the standard 4 group, there is some consistency with the top students. Subject 59 was consistently strong overall. Subject 73 showed good reading scores in both tests which were not shown in the listening scores or English marks (see Tables 5.10, 5.11 and 5.15). The weaker subjects showed an inconsistent pattern with generally no observable trends. Thus, it is important to note a student's individual pattern of ability in order to provide the most effective teaching plan.

Table 5.15: Test performance of the subjects with top and bottom English marks

	Top 3 Eng. marks	Scored in top 10	Bottom 3 Eng. marks	Scored in bottom 10
std 2	S=25 15 7	HL, HR, SR HL, HR HL	S=22 24 16	HL, HR, SL, SR HL, HR, SL, SR HL, HR, SL, SR
std 3	S=38 44 42	HR, SL HL, HR, SL HL, HR, SL, SR	S=54 47 46	HL, HR, SL, SR HL, HR, SR HR
std 4	S=58 59 60	HL, HR, SL HL, HR, SL, SR HL, HR, SL	S=87 86 85	HR, SL HL, HR, SL, SR SR

S = subject

HL = HSRC listening test; HR = HSRC reading test; SL = SVT listening test; SR = SVT reading test

5.7 SUMMARY OF CHAPTER FIVE

- The listening and reading comprehension scores were found to be similar on the HSRC test as hypothesised. However the

SVT test showed a significant difference between reading and listening scores.

- Similar results were found on the listening tests of the HSRC and SVT tests. The reading tests, however showed significant differences with the HSRC scores being higher.
- The HSRC tests showed a significantly better listening score in standard 2 and a slightly better reading score in standards 3 and 4. However on the SVT tests, the reading scores were weaker in all three age groups, with a larger gap in the youngest group. A steady increase in scores was observed as age-groups increased.
- Indications were found that the subjects who scored well (or poorly) in the reading tests, also scored well (or poorly) in the listening tests. Top and bottom scores were compared.
- Error types were analysed on the SVT tests with interesting trends noted.

CHAPTER SIX: INTEGRATION, CONCLUSIONS AND IMPLICATIONS

6.1 INTRODUCTION

This chapter provides an integration of the results from the study as well as the conclusions. This is followed by a discussion of the clinical implications, limitations of the study and recommendations for further research.

When one embarks on any kind of research, one has to keep in mind that the research is limited to the variables that one is looking at under limited circumstances. It is also acknowledged that one may not always discover complete answers as one had anticipated. As Petrie (1981) states, one need not be investigating absolute truth. However, the process of the research and the sharing of further knowledge makes the process valuable.

Although listening and reading comprehension have been investigated, there is still a need to look more deeply at their comparison and to find effective measurement tools. The two tests selected were felt to be effective in the South African situation, particularly given the increasing need for classroom assessments. However it is acknowledged that there are limitations in generalising results from a selected and limited sample. Therefore the study was conducted with the view to describing findings in order to uncover further diagnostic, therapeutic and research needs.

The aim of the study was to investigate reading and listening comprehension in primary school children using two testing procedures. The nature of the research is descriptive, but quantitative results help to make the findings more objective.

6.2 INTEGRATION OF MAIN FINDINGS AND CONCLUSIONS

6.2.1 Comparison of listening and reading comprehension

Across the whole group of subjects, reading scores were slightly better than listening scores in the HSRC test, but significantly poorer in the SVT test.

The results found in the HSRC test concur with the hypothesis that by standard 2, reading should have caught up to listening levels and that therefore scores in this age group should be similar. Although reading was slightly better than listening in the whole group, the difference was small and hence the scores are taken as being similar. The subjects may be viewed as being in the 'reading to learn' stage (Sawyer & Lipa 1981) and therefore reading comprehension ability should now be similar to listening comprehension. The scores are similar probably because the linguistic needs for listening and reading are similar by this stage. The two modes were expected to be similar as they have so much overlap - they are both receptive language, both need internal conceptualisation, both require memory and both need auditory skills. It would seem that the strategies overlap at this point to allow reading and listening to be similar. Because of the correlation between listening and reading, one would assume that improvement in the one mode would spill over into the other. So it seems that in the general population,

reading and listening comprehension are similar, and if reading is therefore still markedly below listening especially after standard 2, one may need to consider further intervention.

There is much support for a high correlation between reading and listening comprehension. Stothard and Hulme (1992) also found little difference between reading and listening in their group of poor comprehenders, thereby showing that comprehension difficulties are not restricted to reading but represent a general limitation of comprehension. However, research has also been carried out which refutes this position. It is important that we acknowledge individual differences and that the age at which this correlation occurs may vary according to the individual or the learning environment.

The SVT results, on the other hand, showed reading to be significantly weaker than listening in the whole group. This would suggest that the crossover of listening and reading skills has not yet occurred and that different strategies are still being used in the two modes. Therefore the hypothesis that scores for listening and reading comprehension would be similar by this stage was not supported by the second set of results. In other words, there seem to be conflicting results.

This brings us to some possible reasons for the difference between listening and reading found in the SVT.

An auditory learner may do better on the listening test even at a later stage of development. As discussed in chapter 2, there is much interaction between listening and reading developmentally. Sinatra (1990) suggests that once a word has

been recognised, the comprehension process for listening and reading is the same. It seems to be accepted that reading is firmly established by the standard 2 level (Aaron 1991), but there is some controversy about the exact stage at which the child's reading level is as firmly established as the listening level. Dole et al (1985) feel that this hypothesis needs further investigation. Royer et al (1986) proposes that the two modalities converge at the syntactic/conceptual level because processing at the lower levels are modality specific and reading still requires much visual input in the earlier stages.

Sticht and James (1984) maintain that performance in listening will exceed reading performance until reading skill is mastered and then listening skills should be a predictor of reading performance. However this may not strictly be true as some children may perform better on reading than listening even in early grades and children with pure reading disorders will be discriminated against, so we need to take care in regarding listening as a potential predictor but rather view it as a performance measurement. Aaron (1991) reported that at all levels, listening comprehension seems to be a better predictor of reading achievement than intelligence except of course in the child with reading difficulties.

The concept of the auditory sense used in listening and the auditory and visual senses used in reading is interesting. There appear to be 'auditory' and 'visual' learners (Johnson & Myklebust 1967) and perhaps these are distinguishing features which could highlight how to treat these children in terms of learning. The 'auditory' learners may be the children who are strong listeners and may in fact have the necessary basic skills

for strong reading abilities. However if they have weak visual skills, their reading may in turn be weak. There is also the concept of holistic versus analytic learners (Dunn 1985), which may affect the type of response and ability in different ways. A holistic learner may benefit from visual and auditory input from reading, whereas an analytic learner may analyse auditory or visual input separately especially in the earlier years. In an average class, one would expect that some children would be better auditorily and therefore better in listening and others would be better visually and therefore better in reading.

It is clear that the basic splinter skills of auditory and visual processing (Robeck & Wilson 1974, Goswami & Bryant 1992) need to be considered. Cognitive skills affect both areas, auditory skills affect reading and listening and visual skills affect reading. In the older child, these processing skills should be firmly established, and therefore should not affect the listening or reading performance. We can determine whether the level of breakdown in comprehension is auditory, visual or conceptual whereas if we tested reading only, we would not be able to establish the level of the disorder.

In reading many inferences need to be made which are not required orally, possibly because of the paralinguistic influences giving clues in listening tasks. Carlisle and Felbinger (1991) provide a number of reasons that can be postulated for these differences between reading and listening. First they suggest time constraints of listening and reading, that is, the reading rate is controlled by the reader while listening must be done at the rate of delivery of the speaker. Readers also have the option of rereading. So poor listeners may do better on reading because

they need a slower pace for comprehension and can reaccess the material if necessary. A second reason provided for this difference is that the listener may make what is heard, comprehensible by making it conform to that which the listener expects to hear. However I feel that readers can also do this by clozing written material.

So the general trend shows a complex relationship between listening and reading. This complexity is reflected in the different tests showing different results. There may be some influence of metalinguistic abilities of reading with reflection which may be different on different types of tests (Turner & Hoover 1992; Flood & Salus 1992).

6.2.2 Developmental aspects of listening and reading

The scores obtained in the listening and reading tests show a definite increase in both abilities over the three age groups. So even when formal reading teaching no longer takes place, there still appears to be development in both modes. It was hypothesised that by the standard 2 stage, reading would be closer to or overtaking listening ability, but this was not borne out consistently. Carlisle (1989b) suggests that listening exceeds reading performances until the sixth grade (standard 4). The difficulty is that theoretically there is some confusion as to the exact point of convergence of the processing mechanisms of listening and reading (Carlisle 1989b).

When comparing reading and listening between the three groups on the HSRC test, a trend was seen that the reading scores were slightly lower than the listening scores in the standard 2 group

but slightly higher in the standard 3 and 4 groups as hypothesised. Although the results are not consistent, the SVT seems to reveal that listening is still dominant even up to standard 4. SVT reading scores were consistently lower in all three standards with a greater gap in standard 2. The SVT test may be useful in identifying the 'cross-over point' (Bedford-Feuell et al 1995) where a child's reading comprehension becomes greater than the listening comprehension without the benefit of rereading which is then more closely related to the listening method. Thus the SVT would provide useful intervention strategies for teachers and therapists. As each year goes by, the use of instructional reading increases and therefore, one expects reading comprehension to become better. Perhaps improvement in reading in later standards is imposed on the children due to school influence. One wonders whether this trend would prevail if reading was not the primary teaching tool. Sticht and James (1984) state that by standard 3 most children have developed the ability to understand texts comparably in listening and reading. It is interesting to note that by standard 4, there is no longer a significant difference. Moreover the HSRC results show hardly any difference, so we cannot confirm that reading is better than listening.

There are also differences between silent reading ability and reading aloud. Reading aloud is an easier task for the younger or poorer reader. Miller and Smith (1990) found that on similar age groups poor readers coped better on listening and oral reading and worse on silent reading. Average readers found listening and silent reading superior to oral reading. Good readers were better on silent and oral reading than listening. They point out that in previous studies listening comprehension

was superior to silent reading for all except the most competent readers. But the relationship between oral and silent reading is less well researched. What has been found shows that oral and silent reading abilities do not develop in parallel, with oral reading developing before silent reading. So, oral reading comprehension and listening is superior to silent reading comprehension in poorer readers but the relationship is less certain in average readers. This is evidenced here. Perhaps self-monitoring skills are highlighted in the oral reading and this may help the younger child, linking the modes of listening and reading.

6.2.3 Comparison of HSRC and SVT tests

Assessments of listening and reading comprehension of passages can provide valuable information about comprehension ability. The assessment procedure is difficult to carry out effectively and the need for effective test materials is important. The two tests used have shown some promise in their diagnostic value, but there are differences in the tests and the diagnostic value needs to be investigated further in order to learn more about the processes and strategies used in listening and reading comprehension.

When comparing the HSRC and SVT tests across the whole group of subjects, the listening comprehension scores were similar in both HSRC and SVT tests, whereas subjects scored better on the HSRC test than the SVT test in reading comprehension.

A number of issues will be highlighted in discussing the possible reasons for these differences:

- Test and passage length: The fact that the SVT reading scores are generally lower than the HSRC scores may relate to test length. The HSRC test is considerably longer than the SVT, as mentioned in Chapter 5, and may give a better view as it shows a longer sample of behaviour. On the other hand, the SVT passage is longer than most of the HSRC passages. This may be more difficult for the subjects to retain in memory.
- Response type: Difficulty may be reflected in the type of response of the SVT. It is felt that because the SVT gives a binary choice, the probability of guessing producing the correct answer is higher than with the HSRC four option responses. Carlisle (1991) acknowledges the methodological flaw in the SVT in that the forced-choice response type may allow for guessing. But she feels that the benefits of the SVT outweigh this negative aspect. There are similar problems with multiple choice responses where the answering benefits the subjects by the opportunity to eliminate certain options and therefore improve the chances of choosing the correct answer. However, if that were the case, listening comprehension should then have been equally affected by response type, since listening and reading response types are the same. Of course in a group setting, one cannot select a response type to suit each child.
- Type of passage: Rasool and Royer (1986) explain that the student should cope with both narrative and factual material in third grade, that is before standard 2. In this research, the passages were of narrative type, which is what Carlisle (1991) recommends for children at least up to

third grade, rather than expository text. Therefore this should not be a contributing factor to the differences found, even on a cognitive level. It is also important to investigate the level of difficulty of a passage. Royer et al (1990) found that a similar age group of subjects performed better on reading than listening on easier passages but that listening was better than reading on more difficult passages. The same test was applied to the three age groups and therefore this pattern might have been expected with the passages being more difficult for the standard 2s and easier for the std 4s. Indeed the difficult passages did reveal a better performance on the listening tests in the standard 2 group. Carlisle and Felbinger (1991) points that SVT tests measure not just sentence comprehension, but passage comprehension. This is not felt to differ considerably from the HSRC measurement.

Butler and Wallach (1984: p 364) conclude with this thought from the Red Queen (in Lewis Carroll's *Alice in Wonderland*):

'That's just what I complain of! You should have meant! What do you suppose is the use of a child without any meaning? Even a joke should have some meaning and a child's more important than a joke, I hope...'

So, 'cognition and language intersect, and comprehension and production emerge as significant concomitants.... A child *with* meaning - surely this is the goal...'

6.3 LIMITATIONS OF THE STUDY

It is acknowledged that the study had certain limitations which must be considered in the interpretations of the results.

- Generally the scores were high and this may be related to the fact that the subjects came from a middle class private school setting, where home literacy is high and children come from generally well stimulated homes. Subjects were taken from one school in one area, which limits interpretations.
- The number of subjects was limited and a larger group always strengthens the results.
- SVT type responses are not commonly used in South Africa.

6.4 IMPLICATIONS FOR CLINICAL PRACTICE

The study gave rise to a number of important considerations for diagnostic and therapeutic practice.

- The need to assess both listening and reading is vital. Omitting to test listening comprehension weakens the overall pattern obtained of a child's abilities. Without assessing listening, we cannot say whether a reading comprehension problem is a result of decoding difficulties or general language comprehension difficulties. This is vital for designing appropriate remediation or teaching of individual children. A listening-reading gap indicates a need for specific therapy to improve one skill, whereas

overall weakness may indicate general language deficiency or lower general ability. It is important to understand listening ability in order to understand the underlying reading comprehension. It is clear that certain children with reading difficulties need to improve the underlying listening comprehension difficulties.

- A love of reading in children should be instilled in all children. It seems that good listening skills are a necessary base, because in general, children who do well in reading are also good listening comprehenders. Therefore working on listening skills prior to reading or in conjunction with reading would improve overall ability. As the results between listening and reading are similar, surely we should be improving listening comprehension in the earlier years to stimulate and improve reading comprehension for the later years.
- The listening comprehension problems in disabled readers may be due to working memory or may be related to deficits in syntactic or semantic knowledge. Lynch (1988) found that elementary school students who differed in working memory capacity also differed in SVT reading comprehension ability. It is clear that the only way to distinguish the type of reading disorder is to carry out both reading and listening subtests and then to assess the individual pattern of responses and to attempt some form of rudimentary classification. Of course poor readers may in turn become weaker in general language comprehension at a later stage because of the resultant limited exposure and practise of comprehension tasks in relation to their peers

(Dymock 1993). It is particularly important to compare listening and reading scores in the reading disabled population to determine the cause of such a disability.

- If it is the case with an average group of readers that reading is poorer than listening, we must expect a lower score on reading to be that much more marked with a group of children with a specific reading disability. In certain studies, groups of reading-disabled students have been shown to have deficits in both listening and reading comprehension. However, other studies have shown that reading-disabled students have better listening than reading skills.
- We need to investigate each individual pattern or profile in order to aid in diagnosis and treatment procedures. If one evaluates listening and reading ability one can suggest on an individual basis the reasons for individual deficits. Thus the diagnostic value of individual patterns must be emphasised. The average population may not show any consistency and may need to be individually assessed because individual differences may be lost in an average curve. Carlisle (1989b) states that group averages can certainly disguise each individual's pattern of strengths and weaknesses in comprehension. The value of group scores however is that one can determine whether the individual is lagging behind in comparison to the group. Then one can evaluate whether the child finds difficulty with reading (word recognition skills) or with both reading and listening (more general language-processing problem) or has a cognitive deficit. Carlisle (1989a) cautions against

ignoring the child whose listening lags behind the reading score, as this could suggest deficits in attention, motivation, auditory processing or memory.

- Group testing is valuable and because the SVT is shorter it lends itself to this purpose. We can also adapt any material appropriate to our population for use with the SVT test. It can be predictive and preventative. Perhaps the SVT could be used as a screening device, as used initially by Carlisle (1989a).
- Because of the better performance in the listening mode in earlier years, it is recommended that reading instruction continue in standard 2 to ensure stability in this mode and an equal ability in both modes. Sinatra (1990) points out that even skilled decoders need to consolidate skills such as outlining, analysing paragraph structure, and following styles of argument.
- The fact that the reading and listening scores seem to change over time implies different remediation or instruction for different age groups and ability levels. Methods for remediation need to address underlying language difficulties and not only reading problems.
- In-service training programmes for therapists in the educational setting is important, as well as for the therapist acting as a language consultant to the teacher. This approach may be more practical and effective in large populations than individual therapy and needs to be researched.

- The use of the SVT on computer-based assessments should be investigated, as used effectively by some researchers (Walczyk & Royer 1989, Sinatra & Royer 1993).

6.5 FUTURE RESEARCH

Many recommendations can be made following this research in order to further broaden our knowledge of listening and reading comprehension and its assessment procedures. Some of these are highlighted here.

- There is a need to investigate these procedures on different population groups: an older group who has acquired reading competence and no longer receives reading training; the younger child still receiving formal reading training and still developing reading competence, in order to maximise their potential; English second language students, since comprehension is of particular value in our multilingual society; and a learning disabled population.
- These tests should be used to identify those weak in specific areas and to determine whether those with different weaknesses have different error patterns. It would also be useful to investigate further why the error patterns found in this study varied from those in other studies.
- The testing could be repeated giving the subjects the opportunity to reread the SVT reading passage to determine whether the difference between the two tests would alter.

- The relationship between listening, oral and silent reading also needs to be investigated in these different age groups and perhaps also in the different ability groups.
- Perhaps those children found to have reading or listening difficulties related to working memory problems (which seems to be an individually determined aspect) should be assessed in further depth. Stothard and Hulme (1992) argue that in their group of poor comprehenders working memory was not a major cause of comprehension difficulty.
- In South Africa with its limited resources for education, we need to address the important issue of what function the assessment is serving and the best and most viable means of assessment. Certainly, in terms of time and ease of administration, the SVT is a valuable tool and although the results were not always similar to those obtained on the HSRC test, it is still felt to be a realistic tool in this environment.
- The use of other recognised comprehension assessment tools in conjunction with the SVT tests could provide yet another view of the usefulness of the SVT. Royer and Carlo (1991) suggest from their research with second language pupils that SVT tests can be developed effectively in any language. This may be useful in our multi-lingual population.

6.6 SUMMARY OF CHAPTER SIX

Chapter six deals with the integration, conclusions and implications of the study. It highlights the comparison between listening and reading and the differences between the HSRC and SVT tests. Developmental trends are discussed. Finally, some limitations of the study are pointed out as well as clinical and research implications.

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APPENDIX A: EXAMPLE OF HSRC READING TEST - INSTRUCTIONS, PRACTICE PASSAGE AND RESPONSE.

INSTRUCTIONS

1. Each question has **four possible answers** marked **A, B, C, D**.
2. **Circle the letter** that you consider matches the **correct answer**.
3. There is **only one correct answer** to each question.

EXAMPLES

READ THE FOLLOWING PASSAGE AND ANSWER QUESTION 1.

JULY

- 1 Not long after the death of the Roman ruler Julius Caesar, the Roman Senate honoured him.
- 2 They changed the name of the month of his birth to **Julius**. In English, it became **July**.

QUESTION 1

1. Complete the following.

The Romans honoured Julius Caesar by naming a after him.

- A. season
- B. month
- C. day
- D. holiday

The correct answer is “**B**”. Put a circle around “**B**”. Do not put any other marks on the sheet.

NOW ANSWER THE NEXT TWO QUESTIONS ON YOUR OWN.

READ THE FOLLOWING INSTRUCTIONS AND ANSWER PRACTICE QUESTIONS 2 AND 3.

TOPS

- 1 Tops are easy to make. And they're good toys, both indoors and out. You can make all kinds
- 2 of tops with spools, jar lids, or any other round object in which you can punch a hole.
- 3 i. Cut out a circle from stiff cardboard and poke a hole in the centre.
- 4 ii. Push a stick, pencil or nail through the hole.
- 5 iii. To hold the stick in place, wind rubber bands around it above and below the cardboard.

QUESTIONS 2 - 3

2. To carry out **step one** you will need ...

- A. a button.
- B. cardboard.
- C. a cork.
- D. glue.

3. When **completed** the top will ...

- A. float.
- B. bounce.
- C. balance.
- D. spin.

The correct answer for question 2. is “**B**” and for question 3. is “**D**”. Circle the letter next to each correct answer.

THERE ARE MORE QUESTIONS WHICH MUST BE ANSWERED IN THE SAME WAY.

Begin with question 1 as soon as you are told to do so. Work quickly and carefully.

If you cannot answer a question, go on with the next one. If there is time left you may go back to the question or questions you have not answered. See to it that you mark the letter next to the answer you consider to be correct.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO

APPENDIX B: EXAMPLE OF SVT READING TEST - INSTRUCTIONS, PRACTICE PASSAGE AND RESPONSES.

INSTRUCTIONS AND A PRACTICE EXAMPLE

This is a test to see how well you understand the story that you read. You take the test by reading the story. Then you mark test sentences “YES” if they mean the same thing as a sentence in the story. You mark them “NO” if they have a different meaning than a sentence in the story.

Let’s try an example from a story about a family that owns a restaurant. Read the story below and then we will answer the test questions.

PRACTICE EXAMPLE 1

THE CORTINA’S RESTAURANT

Mr. and Mrs. Cortina had been asked to prepare the food for a big party. They own Cortina’s Kitchen, and everyone says Cortina’s Kitchen makes the best Mexican food in town. Mr and Mrs Cortina got up early to start preparing the food while their children, Ruby and Ricardo, ate breakfast. Ruby and Ricardo wished they could go to the party too.

When you have finished reading the story, turn the page and answer the test sentences.

PRACTICE EXAMPLE 1 TEST QUESTIONS

Mark each of the sentences below by circling “YES” or “NO”. Sentences that mean the same thing as a sentence in the story are to be marked “YES”. Sentences that have a different meaning than a sentence in the story are to be marked “NO”. Circle your answers on your answer sheet.

- Yes No 1. They own Cortina’s Kitchen, and everyone says Cortina’s Kitchen makes the best Mexican food in town.
- Yes No 2. Mr and Mrs Cortina had been asked to prepare the decorations for a big party.
- Yes No 3. Ruby and Ricardo had hoped they would also be able to attend the party.
- Yes No 4. The big party was going to be on Saturday night.

Now let’s check our answers. You should have marked the **first** question “YES” because it means the same thing as a sentence in the story. In fact, test sentence 1 is an exact copy of the second sentence in the story.

You should have marked test sentence 2 “NO” because it has a different meaning than a sentence in the story. The first sentence in the story says, “Mr and Mrs Cortina had been asked to prepare the *food* for a big party.” The test sentence says, “ Mr and Mrs Cortina had been asked to prepare the *decorations* for a big party.”



APPENDIX C: SAMPLE OF HSRC LISTENING OR READING DATA CAPTURE SHEET (SVT would have sixteen questions).

MRS M PALMER - Data capture sheet #1 - T95012 - CES9016 - LP341549

NAME:

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Respondent Number	<input type="text"/>	<input type="text"/>	Question 19	<input type="text"/>
Standard	<input type="text"/>		Question 20	<input type="text"/>
Test Number	<input type="text"/>		Question 21	<input type="text"/>
Question 1	<input type="text"/>		Question 22	<input type="text"/>
Question 2	<input type="text"/>		Question 23	<input type="text"/>
Question 3	<input type="text"/>		Question 24	<input type="text"/>
Question 4	<input type="text"/>		Question 25	<input type="text"/>
Question 5	<input type="text"/>		Question 26	<input type="text"/>
Question 6	<input type="text"/>		Question 27	<input type="text"/>
Question 7	<input type="text"/>		Question 28	<input type="text"/>
Question 8	<input type="text"/>		Question 29	<input type="text"/>
Question 9	<input type="text"/>		Question 30	<input type="text"/>
Question 10	<input type="text"/>		Question 31	<input type="text"/>
Question 11	<input type="text"/>		Question 32	<input type="text"/>
Question 12	<input type="text"/>		Question 33	<input type="text"/>
Question 13	<input type="text"/>		Question 34	<input type="text"/>
Question 14	<input type="text"/>		Question 35	<input type="text"/>
Question 15	<input type="text"/>		Question 36	<input type="text"/>
Question 16	<input type="text"/>		Question 37	<input type="text"/>
Question 17	<input type="text"/>		Question 38	<input type="text"/>
Question 18	<input type="text"/>		Question 39	<input type="text"/>
			Question 40	<input type="text"/>