MUSIC AS AN INTERVENTION STRATEGY TO ADDRESS READING DIFFICULTIES OF GRADE 2 LEARNERS

by

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PREFACE

To the many learners with learning problems, who have touched and inspired their educators with their hard work, courage and smiles. The following poem illustrates the problem for those trying to learn the language "T.S.W."(some say George Bernard Shaw) (Jones, 2008: 140).

"I take it you already know
Of tough and bough and cough
And dough?
Others may stumble, but not you
On hiccough, thorough, lough
And through.
Well done! And now you
Wish perhaps
To learn of less familiar traps?

Beware of heard, a dreadful word,
That looks like beard and sounds like bird.
And dead: it's said like bed, not bead.
For goodness sake don't
Call it "deed"!
Watch out for meat and great
And threat,
(they rhyme with suite and straight and debt).

A moth is not a moth in mother,
Nor both in bother, broth in brother,
And here is not a match for there,
Nor dear and fear for bear and pear,
And then there's dose and rose and lose-
Just look them up-and goose
And choose,
And cork and work and card
And ward.
And font and front and word
And sword,
And do and go and thwart and cart
Come,come, I've hardly made a strart!
A dreadful language? Man alive,
I'd mastered it when I was five!"

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TABLE OF CONTENTS

TABLE OF EXHIBITS

TABLE OF TABLES

SUMMARY

Reading is one of the most important skills (although a complex cognitive activity) a learner has to master during the early years of schooling. The reading process involves elements of a learner's psychological, physical, linguistic, cognitive, emotional and social worlds. Despite the fact that all learners have to be able to read, there is an increasing awareness among professionals of the developmental and educational implications of reading difficulties with school-going learners world wide.

Reading is a critical tool for the mastery of all other subjects a learner will meet and one of the best predictors of long-term learning achievement. Therefore, the need for support must be considered a priority area. After a thorough investigation and literary study, it is evident that the effective identification of learning difficulties needs a thorough understanding. Educators must realise that a given learner, who responds favourably to one instructional system, may respond very unfavourably to another, because learners are all unique individuals.

To be able to combine speech sounds in a way that recipients can understand the message, learners have to be ready to develop an understanding of phonology, morphology and syntax, therefore maturation must always precede learning and, in the context of this study, emergent literacy must precede reading. Maturation is characterised by a fixed order of progression wherein the pace may vary, but not the sequence. The creative use of language is entirely dependent on the ability to assemble simple building blocks of sound into the complex structure we call sentences.

It is widely accepted that music may be used to promote language development and the most crucial aspect in both music and language development is the perception of sound and the core in music and language are the ability to listen.

The aim of this study was to investigate the use of music and related activities as part of an intervention strategy to improve reading skills, such as phonics, of learners who have reading difficulties. The researcher proved that a well-planned intervention method and learning strategy through music activities may be used to develop the reading skills in learners who have reading difficulties.

Keywords: reading development, reading difficulties, spoken language, teaching reading, reading assessment, early intervention, music activities, phonemes, phonological awareness, phonics.

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CHAPTER 1

BACKGROUND, PROBLEM FORMULATION AND AIMS

1.1 Introduction

There is a worldwide concern about the increasing rate of learners exhibiting reading difficulties and therefore a fundamental effort toward improving reading skills has been initiated at both international and national levels (Bursuck & Damer, 2007: 2; Bernhard, Cummins, Campoy, Ada, Winstler & Bleiker, 2006: 2381; Jennings, Caldwell & Lerner, 2006: 4; Lessing & De Witt, 2005: 242; Artiles, Trent & Palmer, 2004: 718).

Jennings et al. (2006: 3) stated that there is an increasing awareness among professionals working with school-going learners of the developmental and educational implications of communication difficulties. Likewise, reading proficiency is of great concern to South African educators according to Hugo, Le Roux, Muller and Nel (2005: 211) as well as Lessing and De Witt (2005: 242). Too many learners struggle with learning to read (Goouch & Lambirth, 2007: 104). According to Mraz et al. (2008: xi) several studies have proved that reading failure has exacted a tremendous long-term consequence from learners developing self-confidence and motivation to learn, and is often reflected in their later school performance.

According to the results of several studies (http://web.up.ac.za), reading difficulties are of concern not only internationally but also nationally and the performance of South African learners is significantly worse than the rest of

the world according to the findings of the Progress in International Reading Literacy Study (PIRLS).

To confirm the current literacy levels in South Africa, the University of Pretoria (http://web.up.ac.za/default.asp?ipkCategroyID=2843&ArticleID=136), along with organizations from 39 other countries participated in the PIRLS. PIRLS is one of the largest reading literacy assessments of its kind in the world with 215 000 learners having been surveyed in 40 countries worldwide. Of this number, approximately 30 000 Grade 4 learners out of 400 schools throughout South Africa participated. The study showed that 78 per cent of South African Grade 5 learners have not developed the basic reading skills that are required for successful learning.

According to a press release (Beeld, 2003: 2) about 54 000 Grade 3 learners between nine and ten years old, from about 2 400 primary schools in South Africa were tested for their literacy skills during 2002. The average score for reading and writing was 43 per cent for English-speaking learners and 48 per cent for Afrikaans-speaking learners. According to Ms Pandor, the Minister of Education at that time, it is necessary for learners in the foundation phase to obtain proper reading skills in order to achieve success in the rest of their school careers as well as in their later economically active years (Beeld, 2003: 2). The education department distributed 2, 4 million story books in this period to encourage the enjoyment of reading. This would have been to no avail if the necessary reading skills were lacking.

Reading is a critical tool for the mastery of all subjects and one of the best predictors of long-term learning achievement therefore, reading must be considered a priority area. Landsberg, Krüger and Nel (2005: 144) confirm many researchers' opinion that the more learners read, the better they do at school in all the subjects.

1.2 Inclusive education in a South African context

For the purpose of this investigation the researcher agrees with Browne (2007: 117) and Landsberg et al. (2005: 144) that intervention in reading difficulties should be seen in the context of Inclusive Education where full participation of all learners is expected, that is, the upholding of the right to education.

Education in South Africa has undergone numerous and radical changes over the last fifteen years. Inclusion has come to mean different things to different people, to such an extent that authors such as Lomofsky and Lazarus (2001: 303) are of the opinion that inclusion is about all learners and means responding to all learners' individual needs. This is not as easy as it sounds; it demands that principals, educators and the school community possess knowledge and skills in educational change and reform.

The term "inclusion" has become a household word in virtually every educational system. Inclusion in a democratic society, according to Mittler (2000: 10) is based on a value system that supports a value system of diversity arising from gender, nationality, race, language, socio-economic background, cultural origins and the level of educational achievement or disability. The important factor is; to include everyone regardless of gender, ability, language or disability.

The inclusive education approach received its first major impetus at the world congress in Salamanca, Spain, (Salamanca Policy, 1994: 9-10) at which Special Needs in Education: Access and Quality was proposed as basis for an international education policy. As an outcome of this world congress, all stakeholders in education and research, international and national, who recognise the importance of and commit themselves to "Education for all", proclaim that:

- every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning;
- every child has unique characteristics, interests, abilities and learning needs;

- those with (special) educational needs must have access to regular schools, which should accommodate them within a child-centred pedagogy capable of meeting these needs; and
- regular schools with an inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and providing effective education for all.

Since the first democratic elections in April 1994 in South Africa, there is consensus about equal education to all learners in the mainstream. According to the National Commission on Special Needs in Education and Training (NCSNET) and National Committee for Education Support Services (NCESS) report all learners must have equal opportunities in a single education system where diversity among learners must be taken into account (Department of Education 2001).

The White Paper on Special Needs Education 6, Education Department in South Africa (2001: 17), heralded a new dispensation for learners in South Africa contending with different learning needs arising from a range of factors including physical, mental, sensory, neurological, and developmental impairments, psycho-social barriers, diverse intellectual ability, life experiences and socio-economic deprivation. Therefore in short, intrinsic difficulties to learning as well as difficulties attributed to external factors such as:

- negative attitudes;
- an inflexible curriculum;
- inappropriate language or language of learning and teaching;
- inadequate support services;
- no parental involvement; and
- inadequately trained educators.

Within the framework of the inclusive education policy it is the responsibility of schools to make adaptations to meet the educational needs of all their learners, instead of expecting the learner to adapt to the standards or style of

instruction of the school. According to studies by Landsberg et al. (2008: 3-18); Thomas and Loxley (2001: 118) as well as Mittler (2000: 10) inclusive education emphasises the acknowledgement that all learners can learn and that all learners who need support are entitled to it.

In the final document of Department of Education 2001: The Education White Paper 6 on Special Needs Education: "Building an Inclusive Education and Training System," a framework is provided for establishing an inclusive education and training system in South Africa which focuses on the changes and accommodation of all learners with learning needs. The Education White Paper 6 (2001: 17) focuses on principles, on acknowledging and respecting that all learners can learn, they all learn differently and have different learning needs, which are equally valued. Therefore, in the opinion of Landsberg et al. (2008: 18) as well as Prinsloo and Steyn (2004: 68) differences between learners, whether due to age, gender, difficulties in learning, etc, need to be acknowledged.

According to the Screening, Identification, Assessment and Support Strategy (SIAS) (Department of Education, 2008: 6) the process that had to be completed before an inclusive education system could become a reality, was to overhaul the current process of identifying, assessing and enrolling learners in special schools and replace it with structures that acknowledge the role of the educators and parents. The aim of SIAS is to provide programmes for all learners requiring additional support so as to enhance participation and inclusion. The SIAS process intended to assess the level and extent of support needed to maximise learners' participation in the learning process.

Important to realise is the fact that this SIAS outlines the process of identifying the individual learner needs in relation to the home and school context, and to establish the level of additional support that is needed. This research study focuses on individual assessment in reading and the necessary support planned to address the reading difficulties.

In a wider sense according to Thomas and Loxley (2001: 118), in a responsible inclusive education system, achieving the goals of their learners successfully may only be guaranteed by supporting the diverse learning needs of all learners. It is clear that some learners may require more intensive and specialised forms of support to be able to develop to their full potential. This notion will strengthen the researcher's decision on using a case study as research design rather than a quantitative research approach (Chapter 6).

1.2.1 Teaching in an inclusive education system

Learners enter school from diverse family backgrounds with the hope to receive equal and formal education. Inclusion must be seen as the practice to educate all learners with and without any difficulties in the same heterogeneous classroom setting. The policy makers all believe that all learners who experience difficulties can do well irrespective of their difficulties.

For inclusive education to be successful, it is clear, according to the view of the researcher, that all people involved, including the district support teams and the school-based support teams should refrain from lip-service. The success of inclusive education also depends on educators who are prepared to work collaboratively.

1.2.2 Professional development of educators

For educators to teach in an inclusive school, they need to acquire through pre-service and in-service experiences, common vision and conceptual framework instruction as well as technical skills to work with the needs of diverse learners.

There is a great deal of conviction and passion surrounding the inclusion movement according to Mercer and Mercer (2001: 21). Placing learners with and without difficulties together provides educators with the opportunities to

teach learners to understand and appreciate individual differences. As schools and the educators are challenged to effectively serve an increasingly diverse learners population, the concern is not whether to provide inclusive education, but how to implement inclusive education in ways that are both feasible and effective ensuring success for all learners, especially those with special needs like reading difficulties.

The researcher supports the notion and concern of Landsberg et al. (2008: 20) as well as Mercer and Mercer (2001: 21) that educators in mainstream schools lack the time and often the expertise to attend to special reading needs, including the needs of individuals. These factors have to be overcome by educators of reading, regardless, in order for each learner to achieve the difficult skill of reading. The more educators know about how the learner learns to read, the more likely they are to apply the correct instructional strategies that will result in successful learning (Moats & Foorman, 2003: 25). The necessary knowledge to enable the identification of reading difficulties successfully should lead to professional intervention. According to Spear-Swerling (2007: 301) and Levy, Gong, Hessels, Evans and Jared (2006: 63) reading is essential for success in our society and, therefore, teaching all learners to read should be every learning institution's priority.

Mercer and Mercer (2001: 40) noted that questions arise whether educators can meet the extraordinary demands of teaching in an inclusive education classroom when they are overburdened with overcrowded classes, persistent social problems, a diversity of learners and a lack of training to teach learners with various difficulties. According to the researcher, there is no clear evidence that inclusion is appropriate for all learners with difficulties and specially those with reading difficulties.

Schooling is important in all learners' lives to equip them with the necessary knowledge that will be of value to them in their future lives. Educators have to rely on one another by learning and applying new skills, methods and strategies and activities to make inclusion a success. For this study the reading difficulties of learners will be under investigation.

Spear-Swerling (2007: 303) is of the opinion that knowledge about reading development and the component abilities foundational to reading comprehension can inform educators' selection and interpretation of assessments. Also educators' capacity to address individual differences in their learners will make a difference in applying suitable procedures to attain in success.

Therefore questions can be asked: How should an inclusive education classroom function and are educators qualified enough to teach learners with different difficulties? In this study the researcher will concentrate more specifically on the learners with reading difficulties and how they may be empowered to cope in the inclusive education system.

1.2.3 Classroom practice

According to Mraz et al. (2008: xi) the complexity of teaching reading involves elements of a learner's psychological, physical, linguistic, cognitive, emotional, as well as social world. Therefore educators have a very important task in supporting learners with reading difficulties. The classroom must be a mirror of a learning environment and an open invitation for learning to read. Helping all learners to become effective, strategic readers who read and write enthusiastically and purposefully is one of the greatest challenges facing educators today (These challenges will be discussed in detail in Chapter 3).

According to the researcher, it is because of the enormous complexity of the reading task that many educators resorted to prepackaged reading programmes to provide the structure and sequence for their specific class and age group. Many of these programmes are available as business opportunities in South Africa. The problems with some of these reading programmes, although with the best of intentions, are that they are not sensitive to specific school cultures, the educators' instructional styles and the diversity of the South African learners. According to the personal experiences as a foundation phase teacher, the researcher comes to the conclusion that

some of these resulted in programmes that meet only the minimal needs of young readers.

1.3 Factors leading to reading readiness

In the past three decades research from several fields has greatly expanded our understanding of how children learn to read and it is widely accepted by researchers (Mraz et al., 2008: xii-xv; Dougherty Stahl & McKenna, 2006: 155; Lessing & De Witt, 2005: 243) that reading difficulties stem from early literacy development. Research studies confirm the fact that literacy begins early in childhood, well before school entry. According to Gillet and Temple (2000: 217) maturity is a factor and there are stages during which literacy develops but the stages might vary by age from learner to learner. There is no clear indication when learners are ready to read. Exposing learners to print and reading to them a great deal is of great value, but direct instruction is still needed to help many learners learn to read (Anthony, Williams, Francis & McDonald, 2007: 115).

Dougherty Stahl and Mckenna (2006: 50) interpret learning to read into various stages whereas word recognition progresses through three stages. The first stage of *word recognition* is the development of phonological awareness, the knowledge of the relationship between written language and spoken language. The understanding of a "word" in both written and spoken language is the relationship between letters and sounds and the understanding of phonemes. The second stage called *accuracy*, when learners learn to decode words. This stage is characterised by "phonetic cue reading" where a learner will concentrate on initial sounds and final sounds of words while decoding it; and the third stage is called the *accurate word reading* stage through to the *automatic word recognition* stage. This third stage lasts a number of years, from the end of first grade to the end of third grade.

(Goouch & Lambirth, 2007: 7; McIntosh, Crosbie, Holm & Dodd & Thomas, 2007: 268 and Kame'enui, Good & Harn, 2005: 69) postulate that it is not only the interplay of language, attention, word identification, vocabulary, comprehension, experience, phonology, intelligence, instruction, and fluency, (factors within the individual), but also other domains or skills have an impact on the development of reading like the social environment of the learner, cultural environment, factors in the school environment and cultural diversity.

Under normal conditions all learners learn to understand and speak their home language. Initially the young learner learns to understand words and their meanings by hearing them, in other words, firstly their phonological contents and later the semantic value. However, according to Levy et al. (2006: 63) for a young learner to learn to read, he/she must understand more than the phonological structure of the language and its grapheme-phoneme correspondences.

Le Roux (2002: 23) investigates the importance of sound discrimination, visual and auditory, memory when learning to read, concentration when listening to the sound of the word, eye movement when reading written text and cognitive development and is of opinion that, these form an integrated part of the reading process. Rhythm perceived in sounds of words, may play an important role when a learner starts learning to read (These will be discussed in detail in Chapter 2).

1.4 Importance of early intervention in reading difficulties

After a thorough investigation and literacy study on how a learner learns to read, the researcher came to the conclusion that the acquisition of reading skills is an intricate process. It is closely aligned to physical, intellectual, mental and general language development, and the effective identification of learning difficulties. It is clear that learning strategies used to support learners with reading difficulties need a thorough understanding.

The significant rate of learners who were identified as having reading difficulties is of concern to all stakeholders in the education of young learners worldwide (Bernhard et al., 2006: 2381; Artiles et al., 2004: 718;) as well as in South Africa (Hugo et al., 2005: 211; Lessing & De Witt, 2005: 242).

More recent research (Leonard, 2001: 158) indicates that reading difficulties is a heterogeneous disorder and requires an understanding of very complex neural processes. Oral and written language difficulties may be associated with aberrations in the neuroanatomy, that is the brain structure and the different neurobiological systems, which determine whether the reader has specific reading difficulties characterised by poor phonological awareness or oral language difficulties characterised by difficulties in listening comprehension.

Reading difficulties begin much earlier than formal reading instruction in schools. Literacy skills (reading) do not develop without the young learners having had the necessary opportunities in the home and/or pre-school environment. Therefore, according to the study by Norris and Hoffman (2002: 2), these skills are not genetically acquired, but develop when a learner is exposed to and opportunities are available to the learner to experiment with the newly acquired skills.

Catts and Kamhi (2005: 3) are of opinion that reading difficulties may begin in very young learners as an inability to manipulate individual phonemes. Kame'enui, Carnine, Dixon and Coyne (2002: 91) mentioned that the inability to recognise, distinguish and reproduce phonemes would certainly provide one possible reason for difficulty in primary reading skill and, presuming that these learners fall behind in their recognition of written letters and simple words, they would display significant learning difficulties. A detailed discussion follows in Chapter 2.

The researcher noticed that the readers with reading difficulties may rely on guessing unknown words, based on the first letter of the word, for example when the learner reads the word "*zip*", it results in "*zebra*". They also rely

heavily on sentence context to read words, for example when the learner reads the word "*bath*" it results in "*bat*" because there happens to be an illustration of a boy holding a cricket bat on the same page.

It is widely accepted that phonological awareness and vocabulary are synonymous with future success in reading (Turan & Gül, 2008: 279). Assisting literacy skills during the preschool period has great relevance in preventing problems associated with reading abilities in future years. According to several research studies (Browne, 2007: 53; Catts & Kamhi, 2005: 9; Kerins, 2006: 243), phonological awareness difficulty is mostly pointed out as an indicator of reading difficulties with learners at risk. Therefore, Sousa (2005: 121) stresses the fact that the intervention must focus on the strengths of the learner, for instance, visual imaging. Any one or more of the following; little or no phoneme sensitivity as well as poor letter knowledge, print awareness, vocabulary, reading comprehension and decoding may be pointed out as the cause of difficulties in reading.

Researchers such as Goswami (2002: 142), suggest that reading ability in good and poor readers is related to sensitivity to rhythm. Research studies show that in order to achieve phonological awareness, learners must be sensitive to the *rise* time of speech. Therefore, according to the researcher, it might be useful to investigate the point that rhythm ability might play a stronger role in relation to reading ability when the task involves decoding or word recognition rather than letter identification. This notion is supported by findings from research studies done by Anvari, Trainor, Woodside and Levy (2002: 112) that poor readers, compared with normal readers, were impaired in rhythm production, measured by the ability to replicate a set rhythm.

It is the opinion of Goldsworthy (2003: 73) on the other hand, that reading difficulties result essentially from environmental or physical factors or from a combination of both, whereas Sousa (2005: 120) is of opinion that reading difficulties are the result of environmental factors and limited exposure in the preschool years. Factors relating to reading difficulties according to Browne (2007: 28) and McIntosh, Crosbie, Holm, Dodd and Thomas (2007: 268) are

the society and the culture into which learners are born and within which they live. This aspect is discussed in Chapter 4.2.

Early intervention in a school career is more important in the early years of schooling than at a later stage according to Leung, Lindsay and Lo (2007: 327) therefore valid assessment tools are crucial for identifying those learners who may benefit from early intervention according to Rothenberger (2005: 805). Most young learners identified as having a risk of poor reading may be able to achieve average or above-average reading ability if they can receive help early (Turkington & Harris, 2002: 117) and it may help to prevent or overcome other problems that might affect learning as well (Lesaux & Siegel, 2003: 1005).

The result of reading difficulties may be a negative attitude towards their schoolwork and educators according to the researcher, as well as a life long condition that affects many aspects of that person's life. Therefore these learners need, not only learner support in their schoolwork, but also support to help them develop a positive attitude.

To provide highly effective intervention, which is crucial for learners with reading difficulties, requires careful attention to, a detailed instructional design, the organization or planning of the instruction, strategies for teaching and to respond to these learners' errors (Schuele & Boudreau, 2008: 10).

Questions arise from educators and therapists as to what is the minimum time of intervention necessary to establish a foundation of phonological awareness on which to build word decoding skills. Because so few studies have examined the actual duration and outcomes of reading intervention, not to mention a music intervention strategy, the answer to that must be viewed from a cost/benefit perspective: According to a research study done by Schuele and Boudreau (2008: 8) a typical intervention programme spread over seven to twelve weeks, 30 to 45 minute sessions, with about three to five sessions per week will benefit the struggling learner.

1.5 Motivation for the research

1.5.1 Reading research and findings: Status quo

The number of learners identified with reading difficulties is growing rapidly (Artiles et al., 2004: 716-735) and learners, who have difficulty in reading in their early years, will remain poor readers in their later years if intervention is not attended to early.

There has been an explosion of research in the area of reading the past decade (Zimmerman, Padak & Rasinski, 2008: xii; Goouch & Lamberth, 2007:1; Jennings, Caldwell & Lerner, 2006: 2, Sousa, 2005: 1; Bender & Larkin, 2003: 2; Mercer & Mercer, 2001: 4). Educators have been well aware of the difficulties involved in learning to read as stated by Dougherty Stahl and McKenna (2006: xiii) but are not always aware of the best way to teach beginning reading. They often lack the time and the expertise to attend to special reading needs individually.

According to evaluations done by the Department of Education in South Africa since 2001 at Grades 3 and 6, the reading abilities and performance of many young learners in Literacy and Numeracy are very poor. The literacy levels are below the required levels for the learner's age and grade.

It is because of these poor results that Me Naledi Pandor, Minister of Education, launched the Foundations for Learning Campaign, to improve learner performance in reading, writing and numeracy in all South African schools. This campaign was gazetted on 14 March 2008 and is part of a four-year plan to improve the literacy levels of all South African learners (Government Gazette, 2008:1).

The Foundations for Learning Campaign encourages everybody involved in the education of young learners, namely educators and parents to encourage young learners to become motivated readers. By 2011, the Education

Department wishes to raise the average performance levels of the learners in Grade 1 up to Grade 6 to no less than 50 per cent (Government Gazette, 2008). The question arises whether and how this goal is attainable.

According to the MEC of education, in the Western Cape, Mr Cameron Dugmore, a two-year intensive programme initiative in literacy showed impressive improvements in numerous schools. Literacy at schools in Waenhuiskrans, Bredasdorp and the south coast improved from 46,2 per cent to 81,8 per cent in two years according to the *Business Day* (Monday 15 September 2008).

It is generally recognised and also out of own experience as a foundation phase educator in education that resources in South Africa in the field of additional teaching services are scarce and cannot provide for the needs of the larger part of the population. The school clinics from the past have been replaced by Educational Support Centres. However, because of the shortage of trained professionals and an increasing number of learning difficulty learners, these Centres provide support only to educators, rather than individual help to those learners in need. The researcher supports the notion that in the new inclusive education system, according to Bouwer and Jordaan (2002: 198) a learner who lacks basic reading skills may be promoted to the next grade year after year and finds himself or herself in, for example, Grade 7, with the reading skills of a Grade 2 learner.

Another challenge in the inclusive school system, according to the researcher, is the increase in class size and the more liberal approach to discipline ethics in schools. The researcher has come to the conclusion, and personal experience, that learners with reading difficulties frequently pass unnoticed and/or unattended in the mainstream because of an apparently normal intelligence and successful participation in verbal activities. Unmanageable class sizes and the educational policy of restricted retentions lead to the promotion of learners regardless of their reading levels.

As a Grade 3 educator in a primary school, the researcher noted that most learners have difficulty in reading to such an extent that they totally lack comprehension in everyday exercises and tests. There are many reasons why a learner might have become a struggling reader; inadequate early literacy development, lack of learning opportunities, emotional trauma, and many more. In this study, the researcher focuses on reading problems in Grade 2 learners whose language of learning and teaching (LOLT) is their home language and on the provision of a possible solution to solve this problem.

1.5.2 Music as an intervention strategy

An awareness of the breadth and depth of resources and approaches to the relationship of music to brain function and development has been the purpose of this research of music as an intervention strategy.

There is a unique relationship between language and music. Language and music are the two predominant ways that humans communicate and express themselves through listening and producing sound. Language and music development both consist of communicative modes. Language and music are both aurally and orally transmitted, contain phonetic, syntactic and semantic components, develop early in life, are socially interactive and use tones and rhythm as media (Madaule, 2001:10).

Language and music both have a hierarchical structure, according to Mithen (2006: 12) and constituting acoustic elements (words or tones) that are combined into phrases (utterances or melodies). These may further be combined to produce language or musical events. They can both be described as combinatorial systems.

In the opinion of Strickland (2002: 102) and Pellitteri (2000: 385) one of the many ways that music as an intervention programme may support the education of learners with difficulties is in the areas of cognitive development.

Over the past decade there has been increasing speculation about the potential cognitive and academic benefits of music for the development of young learners according to Crncec et al. (2006: 579) and Pellitteri (2000: 382).

Musical intelligence can be defined as a talent for listening, recognition and remembering patterns (Patel, 2003: 678), which is also fundamental to learning to read. Therefore, to support academic tasks, music activities may be used to emphasise academic skills normally acquired in the classroom, to convey information or it may be used as a mnemonic device to aid memory.

Music has a positive relationship to brain development since musical experiences are displayed in the brain as multi-modal, involving auditory, visual, cognitive, affective and motor systems (Diamantes, Young & McBee, 2002: 114). This furthermore means both the right and left hemispheres of the brain are involved in processing music: speech is situated in the left brain, while music is situated in the right brain. Therefore, Strickland (2002: 100) states that the role of music in the young learners is to form connections (synapses) and the growth of branching extensions (dendrites) in the brain.

The special qualities of music extend beyond the written or spoken word. Those components of music such as rhythm, melody, harmony, dynamics, form and mood add qualities that can aid the educator in promoting language development and reading. According to the researcher, the functional use of music as intervention programme may be used to achieve inclusive education outcomes in reading.

Evidence supports the notion of a relationship between rhythm and reading. There is a range of music and related activity techniques, which can be used to achieve these, for example:

- instrument playing for cognitive development and memory;
- music listening for relaxation, development of listening skills and concentration;

- improvised music to develop phonemic and phonological awareness as well as phonic skills.

In learning the language of music (just as learning any language), the young learner should listen to the language and its sound patterns before it can be used. It seems that there is constant enthusiasm for exploring why and how music is meaningful to human beings and their development, not only physically but also cognitively (Schellenberg, 2005:320) and rightly so as will be shown in an in-depth study provided in Chapter 5.

Music is defined as organised sounds and silences in a flow of time (Pellitteri, 2000: 379). Music may be used as an effective tool in teaching reading. Music and reading go together because singing is a celebration of language and language naturally has rhythm and melody. Diamantes et al. (2002: 116) postulate that music intervention can address necessary skills for reading such as the left to right progression in reading, phrase reading, rhythmic eye movement and concrete understanding of terms such as high/low, loud/soft, short/long and quick/slow.

According to Le Roux (2002: 23) studies show that music may be applied in areas of difficulty in literacy development. Music as an intervention strategy relies on the use of the following natural abilities of the learner:

- sound discrimination;
- memory;
- concentration;
- eye movement; and
- cognitive development.

The researcher supports the notion of Blom (1993: 127) who argues that the appreciation of music, which consists of sounds, requires the ability to listen. Similarly learning to read requires the ability to listen to sounds. Auditory awareness, auditory discrimination and auditory sequencing are, among other, important components of listening skills that may be used to enhance the learner's reading ability. Because learners learn to discriminate between

sounds, they will be able to discriminate between letters that form the foundation for reading.

Le Roux (2002: 96) therefore states that auditory perception is the mental registration of a sensory stimulus and learning to read demands a subtle ability to hear similarities and differences between sounds in order to speak, understand and to read. Auditory discrimination is the ability to differentiate similarities and recognise differences between letters and words and which sound similar. To listen to music or participate in music activities also requires similarity differentiation and sound discrimination.

Diamantes et al. (2002: 117) revealed in their earlier research that memorisation is enhanced by rhythm if one considers the ease with which young learners can recite of "*Old McDonald had a farm"* long before they can recite the alphabet. They are also of the opinion that memory is also of crucial importance to humans: Music is one of the most effective mnemonic devices as it enables preliterate societies to retain information, not just facts but also the associated feelings.

Our traditional approach, involving learners in large group settings where they listen, play, sing and moves to heritage music materials, can no longer represent the sole mode of learning. Therefore the intervention programme must place priority on exploratory experiences and less emphasis on amassing a repertoire of song and game activities as the case is in our classroom environment according to the opinion of the researcher.

1.6 Problem statement

All teachers are challenged by the increasing diversity of their learners and they all need more effective ways to accommodate these differences.

The researcher finds in her daily task as educator, that most of the learners who struggle with reading have common problems, namely blending sounds

into words, isolating and sequencing sounds in words, poor memory skills, which result in poor spelling. Another problem was identified during observing learners, namely the lack of listening skills and the ability to concentrate or focus properly. These difficulties could be prevented if the necessary and correct teaching strategies were used earlier in their development.

Wright, Bowen and Zecker (2000: 533) postulate that the ability to hear and discriminate between sounds is of vital importance in learning to read and, if a learner has difficulty to hear differences in sound frequency, that learner needs support. This means that the learner will have difficulty discriminating between tone and pitch in speech. Because reading involves sounding out words in the auditory processing system, that the learner will experience difficulties in reading. Also the inability to detect tones because of interfering background noises indicates problems with reading related to the auditory functions, which play an important role in reading difficulties.

The inability to detect and discriminate sounds presented in rapid succession as well as to indicate the order of two sounds presented in rapid succession are commonly found in learners with reading difficulties. This problem is, however, directly related to distinguishing phonemes as part of phonological processing (Wright et al., 2000: 532). This means that the learner will find it difficult to discriminate between letters and words which sound similar when asked to write or spell a certain letter or word.

Many approaches to language difficulties have been developed and considerable research has been done in recent years on the role of music in the learning environment. The researcher found that music and related instrumental activities has not been used to date as a direct application in phonics in order to assist learners with reading difficulties. Furthermore, no Afrikaans intervention programme exists. Therefore, the researcher's aim was to investigate and developed a music-based intervention programme to assist Grade 2 home language learners with specific reading difficulties.

The possible links between music and language continue to intrigue researchers in these two domains and are discussed in Chapter 5. A thorough literature study did not reveal a specific intervention programme using music and related activities to address reading difficulties, although Strickland (2002: 103) suggests further research on the use of music to enhance the development of some school subjects. Whether a young child is mastering language or learning music, the emotion that ought to be experienced is enjoyment.

Based on this philosophy and motivated by the possibility that the use of music may be used as a tool to address the reading difficulties of Grade 2 home language learners, the following research question arises:

"How can a music-based programme be implemented as an intervention strategy in the language development process of learners with reading difficulties?"

In order to address this question adequately and to produce practicable guidelines for the music programme as an intervention strategy for specific learners in Grade 2, this study addresses the following implied questions:

1. Is it possible to compile exercises and guidelines for a music programme suitable for learners with reading difficulties in mainstream education?
2. Which guidelines and exercises should be included in the programme to enable the teacher to cater for the widest possible spectrum of developmental processess relating to reading?
3. How should the guidelines for the suggested programme be compiled so as to provide exercises for: rhyme, onset and rime, phonemes, sound discrimination, phonological awareness, phonics, listening skills, memory, concentration, eye movement, cognitive development and emotional development, in order to ensure an optimal intervention strategy?

4. How could such a programme accommodate each learner's uniqueness, for example:
    - problems causing adverse reading behaviour?
5. Is it possible to build a diagnostic and summative component into the programme to enable the teacher to identify the reading areas as well as the underlying factors causing reading difficulties in the learner?

1.6.1 Specific aim

The aim of this research is to investigate the use of music activities as part of an intervention strategy programme to improve reading skills, such as phonics, of learners who have reading difficulties in Grade 2. It envisaged that the researcher will address the reading skills of a group of Grade 2 Afrikaans learners by letting them participate in music activities. Such activities may be aimed at enhancing phoneme awareness through sound discrimination, phonics through rhyming words in poems and memory when learning new poems set to music and using non-melodic instrumental activities. Reading rhyming words, non-melodic instrument playing, concentration when listening to musical sounds, eye movement when reading rhyming words and the cognitive development, must not be underestimated. These skills are crucial for a youngster learning to read.

1.6.2 General aims of this research

Through this study the researcher aims to investigate:

- the transition from emergent literacy to beginning reading;
- teaching methods in reading;
- the assessing of reading difficulties and early intervention; and
- the use of music and related activities as an intervention strategy programme to address reading developmental processess. The aim of the educator is to utilise the intervention programme to assist these learners.

Many goals can be addressed by music as an intervention programme because of its wide range of application. Music crosses multiple modalities and thus may simultaneously address several needs. The researcher aims to prove through a pilot study, that a well-planned intervention method and learning strategy through music activities may be used to develop the reading skills in learners who have reading difficulties.

The general purpose of this study was to investigate reading developmental processes and issues related to reading difficulties. With this in mind and to aim at a solution to the problem, the researcher introduced a music programme as intervention strategy to Afrikaans home language learners in Grade 2.

1.7 Research method

1.7.1 Two approaches to research: Quantitative and qualitative

There are two well-known and recognised approaches to research, namely the qualitative- and quantitative research approaches. These two methodological approaches differ from each other according to De Vos, Strydom, Fouchè and Delport (2002: 77) who described it as follows:

The quantitative approach may be defined as an inquiry into social or human problem, based on testing a theory composed of variable, measured with numbers and analysed with statistical procedures in order determine whether the predictive generalisations of the theory hold true.

In contrast, the qualitative approach aims mainly to understand social life and the meaning that people attach to everyday life. In other words, qualitative approach is concerned with non-statistical methods and small samples often purposively selected.

McMillan and Schumacher (2001: 398) state in their study that the “qualitative research design is a method of experimentation studying human behaviour

and habits. Qualitative methods are used by researchers observing the world around them and give answers which explaine what they saw. Qualitative techniques are very useful when a subject is too complex to just answer with a yes-or-no hypothesis."

1.7.2 Qualitative research perspective

The researcher will use qualitative research as method of study. Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them.

Qualitative research involves the studied use and collection of a variety of empirical materials: Case studies, personal experience, introspective, interview, observational, historical, interactional and visual texts. The qualitative research method makes it possible to obtain first hand information (De Vos et al., 2002: 271).

In a case study, the data analysis focuses on a specific phenomenon, which the researcher wishes to investigate in depth (De Vos et al., 2002: 275, McMillan and Schumacher, 2001: 398).

A literature study consists of a critique on the status of knowledge of a carefully defined topic; in this case the use of music as part of a learning strategy to improve reading skills. The researcher gains further insight from the literature study.

The sources used in the literature study include professional journals, reports, government documents, dissertations, scholarly books and monographs. The literature review enables the researcher to achieve the following:

- gaining knowledge in order to acquire an in-depth understanding of the theme under investigation;

- setting criteria for the investigation of the relationship between the emergent literacy and reading skills and language-learning structures. The latter includes phonological and phonetic instruction, as well as assessment methods for identifying the problems; and
- investigating the effect of music and related activities towards addressing the reading skills of the home language learner with reading difficulties in Grade 2.

1.7.3 Data collection techniques

In this research the focus will be on data collected from 14 individuals forming the case study. The following *collection techniques* or instruments will be used in the research.

1.7.3.1 Interviews

Background information will be solicited from educators and individual *interviews* will be held to enhance discussion on reading skills, inclusion and collaboration.

The researcher decided to use semi-structured interviews to gather the background information of the individuals in the case study before the programme will start (De Vos et al., 2002: 298). Semi-structured interviews are defined as those organised around areas of particular interest, while still allowing considerable flexibility in scope and depth (Chapter 6.6).

Semi-structured questions will be asked in the interviews with the educators. Information needed to draw a background portfolio of each learner, will be carefully noted. After the research results are concluded, a few informal interviews will also be conducted with the class educators of the sample group to get first hand information about the reading outcomes of the intervention programme and reading abilities of the chosen Grade 2 learners. (See Annexure A for interview schedule).

1.7.3.2 Definition of a case study

This research makes use of a case study as a method to gain data for the empirical research. According to De Vos et al. (2002: 275) and McMillan and Schumacher (2001: 36; 398) the case study research design may be useful as a tool for investigating specific phenomena such as persons, behaviour, trends, processes, situations, institutions or social groups. The method of study is useful in the real world situation.

A case study (De Vos et al., 2002: 275) is an in-depth study of a particular situation or behaviour instead of a statistical survey. The case may be a programme, an event, an activity or a set of individuals bounded by time and place. The case study also tests theories and theoretical models in the real world. For psychologists, anthropologists and social scientists, case studies have been meaningful methods for many years now.

Some theorists argue that a case study shows only one narrow example. The results cannot answer an entire question. On the other hand, case studies provide more realistic responses than a purely statistical survey. According to McMillan and Schumacher (2001: 36) a case may be selected because of its uniqueness or the case may be used to illustrate an issue. The case study provides a detailed description of the case and the researcher's interpretations and these may be called "lessons learned" according to McMillan and Schumacher (2001: 37). In Strickland's view (2002: 103) there is no guarantee that group results will translate into individual results, whether it be individual learners, individual classrooms or individual school districts.

The researcher is of the opinion that a case study may be the most useful in this research because the outcomes can provide information on certain behaviour of learners with difficulties. This information may be useful when supporting struggling learners in their reading, by gaining deeper insight into the specific learner's situation and problems rather than pages of statistical calculations and no real behaviour to work with.

De Vos et al. (2002: 275) report that there is no prescribed method of gathering data because any method may be used to gain insight, discovery and interpretation as long as the case study is properly planned, designed thoroughly and note taking should be systematic.

McMillan and Schumacher (2001: 37) define the case study as a research method which may include a small group, an individual or a particular population. All the relevant information must be collected, focused and concise. In this study the researcher is not a passive observer but is directly involved in the setting and interacts with the learners. The researcher is the "instrument" and each learner will be treated individually. The specific phenomenon that will be investigated in this study will be difficulties in reading as manifested by a group of Afrikaans Grade 2 home language learners.

1.7.3.3 Ethical aspects

De Vos et al. (2002: 63) state that ethical guidelines are a set of moral principles that are suggested by an individual or group and widely accepted. Ethics serve as a standard and the basis on which each researcher conducts himself.

Harm can be done to experimental subjects or in this case the individual learners included in the case study in a physical or emotional manner (McMillan & Schumacher, 2001: 422). The obligation rests with the researcher to protect the learners from physical discomfort and emotional harm which is often more difficult to predict. The researcher is ethically obliged to not expose her learners to physical or emotional harm of which she may be aware. Informed consent ensures the full knowledge and cooperation of subjects, while also resolving, or at least relieving, any possible tensions, aggression, resistance or insecurity of the subjects (De Vos et al., 2002: 65).

The main focus is to gain accurate and complete information so that subjects (school, parents and learners) will fully comprehend the investigation and

consequently be able to make a voluntary, thoroughly-reasoned decision about their children's possible participation.

To be able to obtain access to the school, permission will be obtained from the school managers, the principal and head of department in the Foundation Phase.

The consent of the parents will be obtained by sending out a consent form to be completed and signed (see Annexure B) which sets out all possible information on the goal of the investigation.

Confidentiality implies that only the researcher and the class educators should know the identity of participants, and that the educators should also have made a commitment with regard to confidentiality (McMillan & Schumacher, 2001: 421). Pseudonyms will be used to ensure confidentiality and information obtained about participants will be treated confidentially.

Another reason why the researcher decided on a case study, as opposed to a research and control group as in a quantitative research method, was because of the unethical situation that would have been created: This would have meant that certain learners (control group) would have to withdraw from reading support programmes in which they already participated in order to make the research results meaningful.

1.7.3.4 Purposeful sampling

According to McMillan and Schumacher (2001: 401) "purposeful sampling requires that information be obtained about variations among the subunits before the sample is chosen. The researcher then searches for information-rich key informants. These samples are chosen because they are likely to be knowledgeable and informative about the phenomena the researcher is investigating."

A sample of about 14 Grade 2 learners with reading difficulties will be chosen.

The learners will be identified by their Grade 2 educators, from the five Grade 2 classes, and sent to the researcher for a final assessment through the ESSI-reading and spelling tests. The purpose and use of the ESSI-reading and spelling test was not primarily identification of learners with possible reading difficulties, but as a verification tool, and to have an objective assessment tool to determine the success of the intervention programme.

This reading and spelling test is a standardised test specifically for the South African learner, whether English or Afrikaans speaking (Esterhuyse, 1997: 1-16). The test will take the form of spelling words and reading test in Afrikaans (The test programme is also available in English).

The specific group of learners will be Afrikaans first language speakers, of the same age group, and residing in the same precinct. The sample group will participate in an intervention programme consisting of teaching music skills and related activities using non-melodic percussion instruments.

Sessions will be held weekly for 45 minutes per session and twice a week for a period of 19 sessions. The sessions will be held during the last school period, in a room scheduled from the normal hustle and bustle of a school.

After completion of the planned music intervention programme, base-line and summative assessments will be carried out. Information from each learner will be gathered from their class educators to discuss the outcomes of the programme in the class situation as well.

1.7.3.5 Qualitative design validity

Validity addresses these questions: Do researchers actually observe what they think they observe? Do researchers actually hear the meanings that they think they hear? In other words, validity of qualitative designs is the degree to which the interpretations and concepts have mutual meanings between the participants and the researcher (McMillan & Schumacher, 2001: 407).

1.8 Clarification of concepts

1.8.1 Reading

Reading skills are the basis for almost every subject area in human experience (Kame'enui, Carnine, Dixon, Simmons & Coyne, 2002: 11). Reading is a linguistic skill that, with rare exceptions, is learned only after learners have acquired considerable proficiency in oral language, in other words: speech sounds serve as the basis for reading.

Successful reading can only take place through the interaction between the decoding of words, comprehending the message and understanding the context of the message (Dougherty Stahl, 2006: xiii). Decoding means the phonemic awareness, which is the ability to manipulate individual sounds in spoken language. Comprehension therefore is the ability to recognise and understand the context of the information (Sousa, 2005: 96). Various comprehension types exist, such as listening comprehension, reading comprehension and picture comprehension (Turkington, 2002: 56).

Zimmerman, Padak and Ransinski (2008: 8) formulate fluency as part of a developmental process of building oral language and decoding skills that form a bridge to comprehension. For this study reading is defined as maturation which is characterised by a fixed order of progression.

This study concentrated on the developmental factors such as the learners' physical, intellectual (cognitive), perceptual (auditory and visually), language (phonological and phonics) and emotion (self-esteem) which are important for formal reading and form part of the music intervention programme.

In this study reading may be defined as a linguistic skill that is learnt after a learner has acquired considerable proficiency in oral language and the awareness of sounds, visually and auditory.

1.8.2 Reading difficulties

Over the years, research has consistently indicated that reading is the major problem area for learners who are learning disabled. The various types of reading difficulties have also been researched for many years by various researchers (Bender, 2004: 178; Bos, Mather, Silver-Pacuilla & Narr, 2000: 40). Learners with reading difficulties have severe word-recognition difficulties, which are related variously to shortcomings in phonological and visual processing. For this study reading difficulties might be characterised as follows and form the theme of the music intervention programme:

- over-dependency- learners with reading difficulties are over-dependent upon others for help and direction;
- failure to modify strategies- learners with reading difficulties fail to modify their strategies towards the different skills of reading different materials accordingly;
- memory problems- learners with reading difficulties demonstrate memory problems towards their reading material;
- difficulty mastering letter sounds and vocabulary: learners with reading difficulties find it much more difficult to learn letter sounds, combinations of sounds and vocabulary words; and
- difficulty in approaching a task positively- learners with reading difficulties display less than positive attitudes toward a challenging learning task, because of their reading difficulty and understanding the content of their reading material (Bender, 2004: 179).

1.8.3 Music

According to Birkenshaw (1982: xiii) the total involvement of the learner and the four elements of music such as melody, rhythm, movement and speech should be central to the learners' experiences. The basic elements that a learner should learn are: pitch (high, low, the same); dynamics (loud, soft); duration (long, short); tempo (fast, slow) and timber (how it differs from

another). These major elements of music are used in specific combinations at varying degrees of intensity to produce change in a young learner (Pellitteri, 2000: 381).

Music is a right-brain process and can facilitate language, which is a left-brain process. It is the intonations of melodic sounds that are the rudimentary elements for speech and through music the learner with learning difficulties may learn new words and articulating particular phonemes. The learning disabled learner also needs activities on which to concentrate. Through music and related activities a relaxing and stimulating atmosphere can be created as well as the very important skills of learning through memory (Pellitteri, 2000: 384).

Diamantes et al. (2002: 114) support the notion that learners' language has rhythm and melody by its nature. Music enriches the vocabulary and teaches articulation and pronunciation (Lodato & Urrows, 2005: 36). Music requires attention to detail, neatness, and at the later stage, precision in writing. Diamantes et al. (2002: 116) also define teaching skills necessary for reading such as left to right progression in reading and writing, phrase reading, rhythmic eye movement, concrete understanding of terms such as high/low, loud/soft, short/long and slow/fast.

According to various studies (David, Wade-Woolley, Kirby & Smithrim, 2007: 170) on the use of music for the development of language, it is clear that the two domains, normally singing and speaking, are indistinguishable during the early stages and only until later stages do they become more diversified.

For this study music is defined as a combinatorial system. Language and music have both a hierarchical structure and constitute acoustic elements (words or tones) that are combined into phrases (utterances or melodies), which can be further combined to make language or musical events.

1.8.4 Onset, rime and rhyme

The following explanation by Zimmerman et al. (2008: 24) is that by teaching learners that many words contain easily identifiable “chunks” or building blocks. This is also known as word families, rimes and phonograms which allow learners to understand words better. Onsets are the consonants that precede the vowels in words and syllables such as, *sn* in the word *snap,* or *st* in *stop.* Rime is the combination of a vowel and the consonants tht follow it in a syllable such as, *ock* in the word *lock* or *ick* int the word *kick.* Rimes are also referred to as phonograms or word families. Rimes consist of several letters.

1.8.5 Early intervention

Reading difficulties begin much earlier than formal reading instruction is provided in schools. Early intervention in the school career is more important in the early years of schooling than at a later stage according to Leung et al. (2007: 327). It is therefore important that valid assessment tools be used to identify learners who may benefit from early intervention (Rothenberger, 2005: 805). According to Turkington (2002: 117) most young learners identified as having a risk of poor reading may be able to achieve average or above-average reading ability if they receive help early.

This study makes use of a base-line assessment, observation, diagnostic and summative assessment to identify the learners with reading difficulties early enough to be able to support them in a proper way. The following assessment strategies form part of the intervention programme:

- assessment process (Chapter 4.2);
- assessment characteristics (Chapter 4.2.1);
- assessment methods (Chapter 4.2.2);
- assessment purpose (Chapter 4.2.3);
- assessment tools (Chapter 4.2.4); and

- assessment grid to make assessment in the inclusive education system easier for the class educator (Chapter 4.2.4.1).

Learners who are behind in reading in Grade 3 will be behind in later years as well. This is why early intervention is necessary between Grade R and Grade 3. Therefore, the need to identify reader difficulties as early as possible and provide them with the necessary intervention support will avert reading problems in the first place.

1.9 Plan of the study

Chapter 1 consists of an introduction to the study. It deals with a broad overview of reading difficulties of the home language learner in an inclusive education system, development of reading skills, music as an intervention strategy, the motivation of the research, the statement of the problem, the aim of the study, research methods, clarification of concepts and the plan of the study.

Chapter 2 comprises the transition from babbling stage to reading. It consists of an extensive literature overview with the aim of setting a theoretical framework for the music intervention strategy.

Chapter 3 provides an intensive literature overview of teaching methods in reading in an inclusive education system. This chapter serves as background research for the intervention programme.

Chapter 4 encapsulates the recognition of reading difficulties through assessment, language processing difficulties and early intervention in Grade 2. This literature study is important as background information as well as to set criteria for the identification and assessment of the participants of this research.

Chapter 5 deals with music theory as a support for an intervention strategy to address the reading difficulties of Grade 2 home language learners.

Chapter 6 comprises the methodology of the empirical data.

Chapter 7 deals with the implementation of music as an intervention programme.

Chapter 8 deals with the findings, conclusions and recommendations.

CHAPTER 2

FROM BABBLING TO READING: LITERATURE OVERVIEW

2.1 Introduction

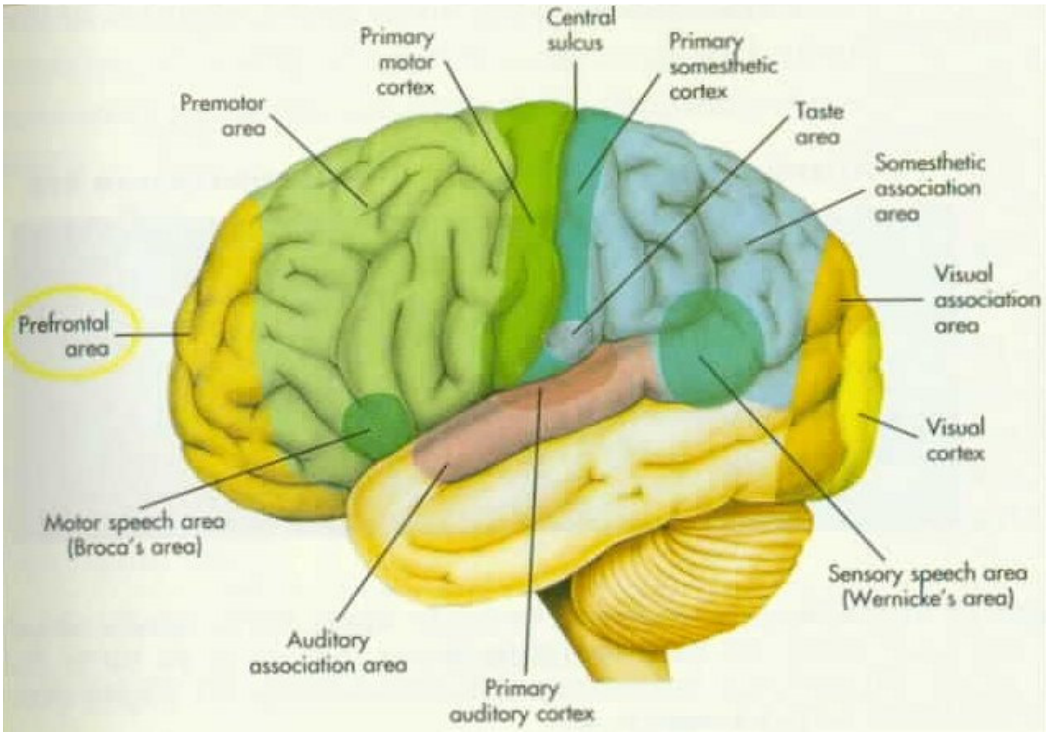
In the previous chapter an overview of and rationale for undertaking the study was given. This chapter attends to the processing of spoken language which forms the basis of reading ability and how the learner learns to read. To be able to interact socially with others, it is necessary to understand and produce language or to listen and speak.

Various theorists like Mraz et al. (2008: xii-xv), Bursuck and Damer (2007: 3); McIntosh, Crosbie, Holm, Dodd and Thomas (2007: 268); Catts and Kamhi (2005: 3); Muter, Hulme and Snowling (2004: 665) and Goldsworthy (2003: 2) have determined that research in several fields including cognitive psychology, medical, linguistics and education, has expanded our understanding and knowledge of how learners learn to read and why some learners experience difficulty in reading. It is now well established that the sound in spoken language processing is essential for the development of reading skills. Many questions may now be answered like, how the brain acquires and processes spoken words as well as how we may assess the reading potential of a learner.

2.2 Neural networks in spoken language

For most people the major components for the language processing system is located in their left hemispheres. In Exhibit 2.1 the four lobes are also identified.

Exhibit 2.1 Language system in the left hemisphere



Source: Carter (2009: 150)

It was in 1861 that a French neurologist Broca identified the area in front of the left motor strip, called the Broca's area that controls the muscles of the face, jaw, tongue and speech muscles and is responsible for the processing of vocabulary, how word order affects meaning (syntax) and the rules of grammar.

In 1874, the German neurologist Carl Wernicke identified the superior lateral surface of the left temporal lobe as the cortical area where the sense and meaning of language processes take place (called the Wernick's area) whereas the emotional part of language takes place in the right hemisphere. Studies by Dehaene-Lambertz (2000: 450) showed that the neural networks connection between Wernicke's and Broca's areas as well as right hemisphere activities, are important for the processing of syllables and tones in the auditory components of language.

According to Sousa (2005: 13) and Bender (2004: 91) in their research using scanners, it was found that spoken language production is a far more complex process than previously thought. When preparing to produce a spoken sentence, the brain uses not only Broca's and Wernicke's areas, but several other neural networks throughout the left hemisphere as well. Nouns are processed through one set of patterns while verbs are processed by another. The right hemisphere is also activated when more complex sentence structures are used. The left hemisphere is mostly responsible for the major part of the language processing system in most persons. Broca's area is a region of the left frontal lobe that is believed to be responsible for processing vocabulary, syntax (how word order affects meaning) and rules of grammar.

The more recent research, using PET and fMRI scans (those that look at how the brain functions) as well as MRI and CAT scans (those that look at the structure of the brain) confirms that the brain uses Broca's and Wernicke's areas as well as several other neural networks found throughout the left hemisphere (Sousa, 2005: 13).

Another neural study shows that the brain and speech development is the conversion by the brain of processed sounds into words. Wernicke's area is instrumental in attaching meaning to words, a much more complex process than only learning new words. Cortical development in all learners regardless of gender, colour or race seems to be similar; their first words are likely to be similarly based phonemically. It is noted in other languages such as Russian, Swedish and Japanese, that mothers instinctively help their infants to recognise sounds of language by speaking to them in higher pitch, special intonation, rhythm and feeling (Patel, 2008: 358; Burnham, Kitamura & Vollmer-Conna, 2002: 1435).

The close relationship between brain structure and function and the development of language is important for understanding the development of reading in young learners.

2.3 Decoding sound patterns

To be able to understand the inter-relationship of the different components in spoken language and the sound decoding pattern, Sousa (2005: 28) investigates the word "*cat"* as the model. After the spoken word "*cat"* enters the ear canal, the listener has to decode the sound pattern. In the word form area of the brain, acoustic analysis separates the relevant word sounds from the back-ground noise, decodes the phonemes of the word, *cuh/ /a /te/* and translates them into a phonological code that can be recognised by the mental lexicon. The lexicon will then select the best and closest representation it has in store to activate the syntactic and semantic networks, which work together to form the mental image of a furry animal that purrs. This takes place in a fraction of a second and contributes to the extensive network of neural pathways that were established during the early years of speaking and listening.

2.4 Gender differences

Another discovery recently made by neuroscientists, according to Randall (2006: 1) is that there are differences in the way male and female brains process language and strengthens earlier studies that girls have more object names in their early vocabulary than boys. Male brains tend to process language in the left hemisphere, while female brains process language in both hemispheres. The reason why young girls generally acquire spoken language easier and more quickly than young boys is because of the combination of dual-hemisphere language processing and efficient inter-hemisphere communication (Sousa, 2005: 13).

Landsberg et al. (2008: 130) also dermine that boys' physical and cognitive development is often slower than that of girls and are less interested in schoolwork in their early school careers. Studies undertaken by Landsberg et al. (2008: 130); Kelly (2006: 59) and Sousa (2005: 30) reveal that girls' brain development may be in advance by one or two years compared to boys of the

same age and therefore, while suited to the girls' level of development, (too) early reading instruction may cause reading problems in boys. When educators are unaware of these differences, they may misdiagnose "normal" boys as having learning difficulties and conduct disorders or difficulties.

2.5 Maturation

Davin and Van Staden (2004: 82); Oats and Grayson (2004: 87) and Goldsworthy (2003: 23) postulate that maturation is characterised by a fixed order of progression wherein the pace may vary, but not the sequence - the stages at which an infant may learn to sit, and walk are, therefore, influenced by maturation. There are factors in the environment that may change any developmental characteristics through learning.

Davin and van Staden (2004: 82) state that developmental factors such as the child's physical, intellectual, perceptual, language and emotion affect the learning process and are important for formal reading. Sousa (2001: 78) finds in his study on language and learning that certain behaviour patterns emerge over time and form the building blocks to continued language growth and development. Early language development occurs in context with other skills, such as cognition, gross and fine motor coordination, social interaction and taking care of one self. Most of these skills have to develop during the pre-school years of the child and before formal learning can take place.

Anthony, Williams, Francis and McDonald (2007: 115) as well as the studies of Gillet and Temple (2000: 217) show that maturation must always precede learning and, in the context of this study, emergent literacy must precede reading. Therefore, Goldsworthy (2003: 23) explaines that understanding the relationship between oral and written language has influenced the educational shift from a traditional "reading readiness" paradigm to the "emergent literacy" process and has resulted in an appreciation for language knowledge a learner brings to formal reading instruction. However, Goldsworthy stresses the fact

that young children, since birth, are in a developmental process. Therefore, there is no single point where literacy begins.

Oats and Grayson (2004: 87) find speech that centres in the cortex and, therefore, the necessary sensory and motor tracts in the central and peripheral nervous systems, have to reach a certain level of maturity for the young child to be able to produce words. No matter what kind of stimulation or how skilled the teaching is, it will not be possible for an infant to talk at the age of six months or even at 12 months of age. Sounds appear at a certain time of the developmental process because the beginning of speech is regulated by maturational development of certain physiological and perceptual capacities. The end of this developmental stage, where the phonetic repertoire is complete, is normally between the age of five and seven years.

2.6 Listening: Fundamental prerequisite for language and reading

The results of a number of earlier studies as well as more recent ones (Landsberg et al., 2008: 256; Le Roux, 2002: 23; Madaule, 2001: 10; Yopp & Yopp, 2000: 5) provide support for the opinion that listening is not only a linguistic skill but is recognised as a cognitive and social skill involving non-linguistic judgments by the listener. To be able to hear is not the same as to be able to listen.

Madaule (2001: 10) differentiates between hearing and listening when he observed that people are born with the ability to hear and are the normal functioning of the three parts of the ear – outer, middle and inner – as well as the nerve fibres extending from the inner ear to the central nervous system. He says that listening is a skill that has to be learned and Davin and VanStaden (2004: 84) mention that listening is the ability to hear and interpret what has been heard.

Landsberg et al. (2008: 257) point out that the ear plays a central role in language because it is the control organ for both spoken language as well as

reading, and through listening, according to Le Roux (2002: 22), we can discriminate between sounds we want to hear and sounds we leave aside. According to the studies of Madaule (2001: 10) as well as Landsberg et al. (2008: 257) the left lobe in combination with the right ear is language dominant and therefore sensitive to receiving and processing language sounds, whereas the right lobe and the left ear are more sensitive to music, especially melody and rhythm.

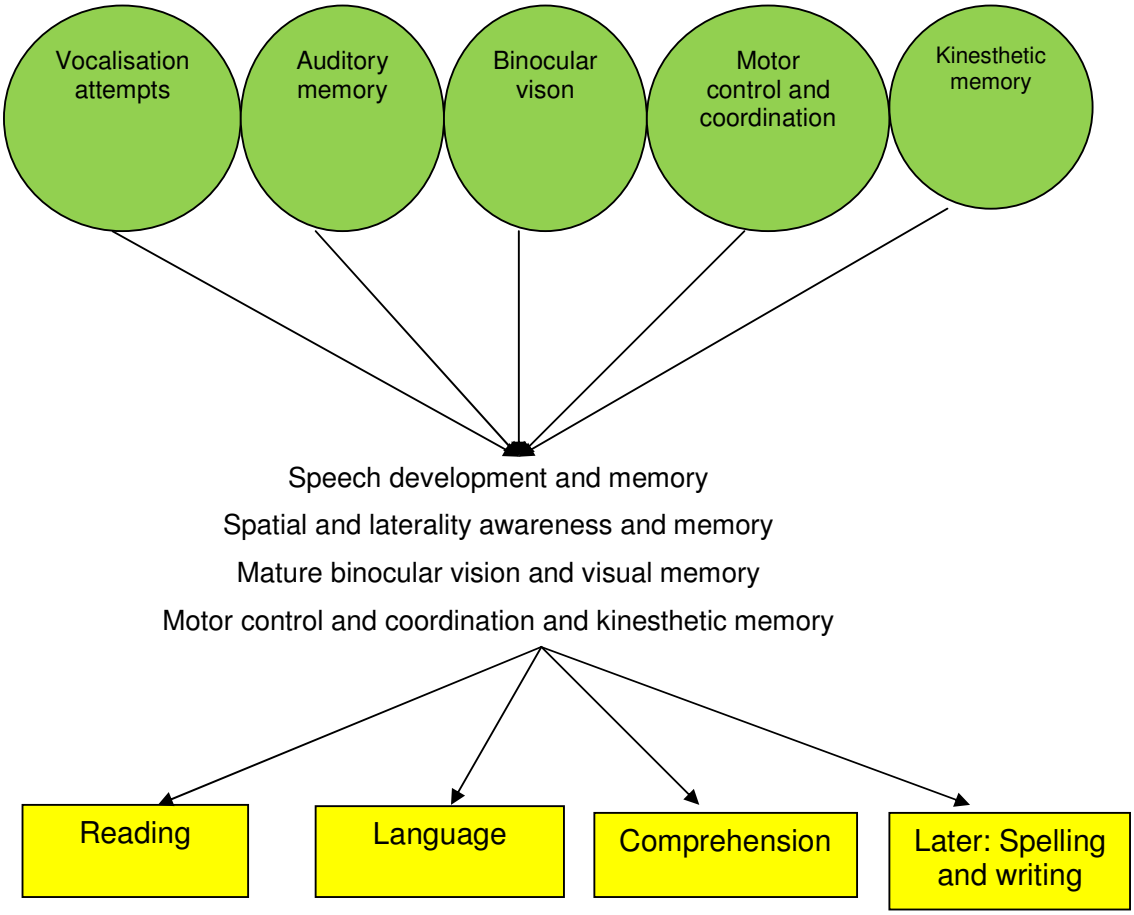
Yopp and Yopp (2000: 5) argue that the young child has to listen to spoken language and its sound patterns to be able to learn to speak and ultimately, to read. To which Landsberg et al. (2005: 371) and Le Roux (2002: 22): add that, through the following listening skills, the young learner will gain increasing control of learning to read:

- auditory awareness of the presence of sound;
- auditory discrimination or the ability to distinguish between certain sounds; and
- auditory sequence and memory or the ability to remember sounds in the correct sequence and to reproduce these sounds.

Listening is the ability to concentrate on sounds in general and on speech in particular. It may now be said with certainty that the development of listening skills through the hearing ability during infancy, are important developmental stages which may later develop into reading skills. To summarise listening skills, the researcher concludes the following:

- the child must concentrate: this will depend on the degree of interest;
- the child must understand what he/she is listening to: the child needs help in the initial recognition of the sound and building up an accurate memory bank for sounds that are near or far away, high or low, long or short, and
- the child must learn to remember what he has heard: discrimination, comparison and sorting are difficult with sounds because they easily fade away. Exhibit 2.2 shows the development of hearing and listening skills as follows:

Exhibit 2.2 Development of hearing and listening



Source: Wisbey (1980:11).

- vocalisation and auditory memory are the two important skills with which a child develops spoken language;
- binocular vision and visual memory develop into the ability to read in the later years; and
- whereas motor control, gross and fine motor development together with kinesthetic memory are pre-requisites for reading, spelling and, later, writing.

According to various research studies (Le Roux, 2002: 22; Madaule, 2001: 10) on verbal communication, listening is crucial to the acquisition of speech and language, and defective listening may lead to reading difficulties. Through listening, young learners' attention or concentration will develop to assure successful learning and reading (Madaule, 2001: 10).

However, according to Sousa (2005: 27) speaking and understanding language develops out of various stages of sound interpretation. It begins with auditory input and ends with the formation of a mental concept represented by the word or words.

2.7 Spoken language development as prerequisite for reading

One of the most exceptional features of the brain is its ability to acquire spoken language and recent research indicates the complexity of spoken language production. Spoken (oral) language may be identified as listening and speaking which constitute the first two dimensions of acquiring a language. Landsberg et al. (2008: 120) as well as Rost (2001: 34) stipulate that the process involved in listening and reading, are similar. Critical criteria of speech decoding are pitch, loudness and duration, as these are the primary building blocks of words.

To acquire language normally, Oats and Grayson (2004: 167) state that the learner must learn to hear and discriminate different phonetic sounds and to recognise auditory speech cues that occur in a temporal sequence. The learner must also master the motor skills of articulation and motor-speech expression and finally, must build up the store of linguistic knowledge that eventually forms the bases for both the production and reception of speech.

The creative use of language is entirely dependent on the ability to assemble simple building blocks of sound into the complex structure we call sentences. To be able to combine speech sounds in a way that recipients can understand the message, learners have to develop an understanding of phonology, morphology and syntax.

A summary of the early literacy skills to be acquired is presented in Table 2.1. Learners progress in different time frames. Because of the uniqueness of every learner, some learners progress slower than others. Therefore the table should serve only as a guide to the progression of skills acquired during the

process (Sousa, 2005: 12; Bender & Larken, 2003: 8) and shows the growth of the mental lexicon of the learner's early literacy skills before birth up to school-going age (Oats & Grayson, 2004: 78, 166 and Morris, Bloodgood, Lomax & Perney, 2003: 305). Table 2.1 presents a general chart for young learners' first nine years of spoken language and literacy development.

Table 2.1 Spoken and literacy development

Age	Language Development	Link to emergent literacy
Before birth	Before birth Prosody	Identifying speech sounds Identify a word from the speech stream.
Birth to 6 months		Using consonants like *k* and *g* and high vowels like *i* and *u*
6 mths to 11 mnths	Early Babbling (word comprehension)	Phoneme discrimination in environment Using consonants and vowels together like: *ma* and *da* and *ta.* Link the word with some consistent event eg. An object or action
12 mnths 12 mnths to 17 mnths	Late Babbling phase One word phase Two word phase	Says first words. Comprehend words:-own name and *mummy* and *daddy* or objects like *teddy, woof, bottle* etc. Follows simple verbal directions. Words like *Mie* (as in Mary*)* for a sentence: *Where is Mary?*
18 mnths to 24 mnths	Ten to twenty words	Enjoys having a story read. Express themselves in: *Mummy eat* meaning *Mum must eat, Mum eat this* or *Mum sits and eat.* Pronouns such as *mine* First 50 words. 8-10 words per day
24 mnths to 36 mnths	Telegraphic phase	Phonological-most sounds of native language. Awareness of certain letters such as letters presented in advertising; i.e., *W* stands for *Wimpy* and *C* for *Coke*. Word meaning. Using more words now to express them selves. Words in correct order like: *Daddy play ball* meaning *Daddy must come and play with the ball.* Sentence length increases.
36 mnths to 48 mnths	Pre-alphabetic phase	Complex phoneme manipulation. Rhyming/Word play. Vocabulary/Semantic growth. Can tell a story. Becomes aware of the alphabetic

		code: letters stand for specific sounds. The learner remembers the meaning and pronunciation of words, by connecting visual cues in the word like the *z* in *zebra* and *c* in *cat.* Through memory, the learner will add new words which are visually similar such as: zip, cot, cut etc.
48 mnths to Grade 1	Partial alphabet phase Or sight-word reading	Begins to read first words. Processed words through letter-sound system. Reads word by joining beginning and ending letters eg *talk* (*t* and *k*). Book concepts, print concepts, letter recognition and naming, concept of letter-sound, text comprehension increases.
Grade 1	Full alphabetic phase	To read a specific word and by making accurate connections can now be made by letters seen in the word and the phonemes that are used in the pronunciation of the word eg: *trap =/tr/ /a/ /p/.* More accurate reading can take place with the phoneme-grapheme connections and the long-term memory. They have a vocabulary of about 3000 words. The total mental lexicon of the young learner is about 5000 words by time of entering school.
Grade 2	Consolidated alphabetic phase	Begins to comprehend longer texts. The long-term memory is used for connecting stored words with multi-letter sequences like; *ake* in *bake*, *make* and *lake* or the *–ent* in *rent*, *went*. The learner processes new words by using a beginning consonant with a chunk and not each letter separately anymore and makes it easier for them when reading multisyllable words.

Sources consulted to compile the above table are: Muter, Hulme, Snowling & Stevenson, 2004: 665; Oats & Grayson, 2004: 78, 166; Goldsworthy, 2003: 24; Morris, Bloodgood, Lomax & Perney, 2003: 305).

2.7.1 Prosodic developmental stage

Oats and Grayson (2004: 65) determine that in the first place the two most important skills that infants need in order to understand the meaning of words

are to recognise and remember speech sounds. Research has shown that infants can recognise and remember certain aspects of the speech they hear. They soon develop a response to speech sounds of their mothers.

The initial stage of infants' language occurs at birth, or even before birth according to some theories, and is called prosody. During this stage the rhythm, cadence and pitch of the mother's voice and not the meaning of words is the prime stimulus (Sousa, 2005: 16). Researchers such as Oats and Grayson (2004: 68) have found that infants recognise prosodic patterns in language because they use prosodic cues to segregate speech in order to determine where individual words begin and end in the following stages. They also use these cues to recognise voices and various languages.

Infants have to identify a word in the speech stream by detecting a consistent relationship between the occurrence of the word and some event that occurs at the same time. They also need to link a word with a particular object category. According to Oats and Grayson (2004: 87), it is commonly known that young children in their early language developmental stage undergo a period of learning names for things, a dominant strategy. Therefore, Goldsworthy (2003: 24) states that young children's first words grow directly out of their experience as a result of their social environment and is important for the beginning stage of their spoken language development.

Another language developmental stage studied by Sousa (2005: 160) and Oats and Grayson (2004: 81) reveal that most infants behave typically in the babbling stage. They also reveal that if the baby is not producing canonical babbling by ten months of age, there is reason enough to investigate a specific language problem which could lead to later reading difficulties.

2.7.2 Babbling stage

The babbling stage is when the young infant starts to distinguish a wide range of phonetic contrasts and develops over a period of 12 months. According to

Oats and Grayson (2004: 81) a number of stages may be recognised during this period and are as follows:

- the cooing stage- this stage is recognised by the number of different non speech-like sounds infants produce. This stage lasts until approximately the third month;
- the vocal play stage- this is the stage where the four month old infant begins to experiment with the loudness and pitch of their voices and the position of their tongues. One recognises the adult-like vowels and some adult-like consonants;
- the canonical-babbling stage- this stage will be recognised by the use of a consonant and vowel sound like in *da* and *ba*. This stage lasts up to about seven months and later, at about eight months, the replicated babbling stage may be recognised by the repeated sounds like in *ba-ba* or *da-da*; and
- variegated babbling stage- from about ten months up to the final stage, infants become capable of following one sound with another like in *ba-da* and *da-de* etc. (Sousa, 2005: 16).

The variegated babbling stage is mainly characterised by the auditory receptive language. The English language has more than 40 phonetic units for the infant to master, some relatively simple and others much more difficult. Sousa (2005:17) explains that infants' first utterances will include those phonetic sounds easiest to produce. These usually include *p,b,m,n,d,t* and the vowel *a* (as in sofa), although the infant may use only three of these at first. For example, one infant may say "mama" and "dada', during the babbling stage. Another infant may use the *p* and *a,* and say "papa".

To listen and speak enables us to interact socially with others. Language enables us to communicate with others by conveying and receiving meanings. With the speed and apparent ease with which most young children learn to listen and speak, it is not surprising how much they accomplish in a very short space of time.

2.7.3 One word phase

Oats and Grayson (2004: 91) are of the opinion that by the time that the infant is about 12 months of age, the neural networks focus on the sounds of the language being spoken and are representative of the young learner's environment. There is a close relationship between infants' use of first words and their experiences of hearing words by adults in conversations with them. Early words arise from situations where infants hear the same words being used in a consistent way to describe particular objects and events. At the age of about 30 months, according to Kamhi and Catts (1999: 20), babies acquire approximately 400 expressive words.

2.7.4 Two-word phase

The young 18 to 24 months old infant who has not yet mastered the difficult phonetic sounds will adapt his or her speech to the use of the simpler sounds he can master. Browne (2007: 21) gives the following examples: Janet becomes "Dan-dan", Stephen becomes "Dee-dee' and Maria becomes "Mil-la". Regardless of race or culture, their first words of infants are likely to be similarly based phonetically. The reason for these speech patterns is that the cortex development seems to be similar in all children.

According to Oats and Grayson (2004: 91) data evidence shows that infants' comprehension at 16 months range from 100 to 270 words, whereas their production vocabulary at the same age ranges from 0 to 130 words. From between the ages of 18 and 20 months until about 36 months, the infant discovers some regularities in language structure; syntax, morphology, phonology and pragmatics.

2.7.5 Telegraphic phase

From the age of 24 months up to 36 months, the normal language development may be characterised as the visual receptive language (reading)

stage. By the time the child needs to go to school, he/she must learn to acquire an auditory-graphic match between what he knows auditorially and the printed or written representation of speech. This demands a cross-modal integration.

2.7.6 Pre-alphabetic phase

During three to four years of age the stage identifies itself with the child becoming aware of the alphabetic code and is able to tell a story. The child uses sentences of four to five words in length and has a vocabulary of about a 1000 words. The hearer will be able to understand much of the speaker's sentences. By this stage the child may name at least one colour and understands the concept "yesterday'. The child will be able to know several nursery rhymes.

2.7.7 Partial alphabetic phase until full alphabetic phase

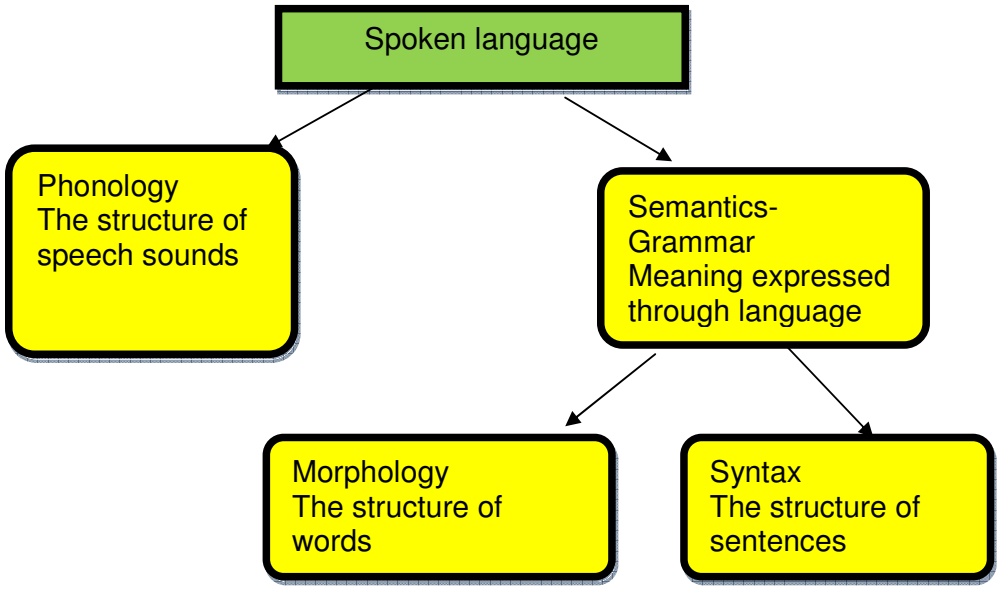
The stage during four to six years of age involves the ability to use sentences of six to eight words and has a vocabulary of about 2000 words according to a study by Sousa (2001: 81). By this time, the child will be able to tell time sequences as in first, second and recognise common opposites like big/little and same/different. The young child will also ask questions now and be able to distinguish between left and right. The child uses complex sentences and imagination to create his own stories

By the age of six years the child may be ready for formal schooling. This stage may also identify the ability to count objects up to ten and to ask questions for information.

2.8 Dimensions of language

When children learn to combine sounds in a way others can understand, they develop the understanding of phonology, morphology and syntax. Language consists of three dimensions namely form, content and function. A person uses all three dimensions when speaking (Landsberg et al., 2008: 120). Exhibit 2.3 represents the language structure children develop in spoken language (Oats & Grayson, 2004:166).

Exhibit 2.3 The language structure



Source: Oats and Grayson (2004: 166)

2.8.1 Phonology

Phonology is the sound system of language according to Landsberg et al. (2008: 121) whereby a phoneme on its own has no meaning. Phonemes are the smallest units of speech and a phoneme alone, such as /s/ and /d/ does not convey meaning but combined with other sounds form words (Bursuck & Damer, 2007: 5; Mercer & Mercer, 2001: 238).

Although each language has its own unique set of phonemes all languages comprise only about 150 phonemes (Sousa, 2005: 15). Gaddes (1994: 305) emphasises that in English the learner has to master more than 40 phonetic units, some relatively easy because of the earlier cortical and neuromuscular maturational changes. More difficult phonemic units may be mastered later presumably because of development in the human brain and central nervous system.

Mraz et al. (2008: 3) explain that to form syllables and words, phonemes need to be combined. For example, in English the consonant /t/ and the vowel sound /o/ are both phonemes that combine to form the morpheme (syllable) /*to/-*, as in *tomato*. Phonemes do not necessarily correspond to the number of letters in a word. Only the morphemes that are repeated get attention, although the infant's brain can perceive the entire range of phonemes, because the neurons reacting to the unique sound patterns are continually stimulated and reinforced. Oats and Grayson (2004: 168) refer to the biggest concern in the young learner's first year of language development, namely mastering the mechanics of speech production or in other words, succeed in understanding or interpreting (deciphering) the sound patterns of the language that dominate the infant's acoustic environment. Mraz et al. (2008: 4) observe that children do not automatically or instinctively acquire phonemic awareness, but rather that phonemic awareness emerges through experience and the interaction with others.

Goouch and Lambirth (2007: 124) state that languages like Korean, Hindi, Chinese and Japanese do not use the same alphabetic orthography as in most Western European languages. Chinese and Japanese use character-based scripts. All these languages share one core feature: they can be recoded into sound.

Goouch and Lambirth (2007: 124) also indicate that phonics methods are not universal across languages. Chinese characters, called *Kanji*, represent whole words, Japanese characters called *Kana*, represent individual syllables and in the case of Western languages, letters represent phonemes, which are

the smallest unit of speech. These similarities and differences in languages are important for making decisions about how to teach phonics to beginning readers.

2.8.2 Phonemic awareness versus phonological awareness

Although phonemic awareness is related to phonological awareness and phonics, it differs from both of these concepts. Numerous correlational studies and the study of Flanigan (2006: 38) have established a relationship between early reading ability and phonological awareness. Although a spoken word can be conceived as a sequence of sounds: (big) = /b/ /i/ /g, phonological awareness does not come naturally or easily for all children.

Phonemic awareness, according to Strickland and Schickedanz (2005: 6), is the understanding that words are build up with individual sounds (phonemes) and that these sounds can be manipulated to create new words. Phonemic awareness involves the auditory and oral manipulation of sounds.

Schuele and Boudreau (2008: 6) support the fact that phonological awareness is the understanding of larger units of sounds in spoken language such as syllables, onsets, and rimes in addition to phonemes. Phonological awareness includes an awareness of sound units such as words within sentences, syllables within words and phonemes within syllables and words but excludes the written word.

According to Hart and Risley (2003: 4), test results show that the rate of early vocabulary growth is a strong predictor of scores at ages; nine to ten on tests of vocabulary, listening, speaking, syntax and semantics. This study points out how important the early years are in developing a learner's literacy and how difficult it is to predict learners' preschool language experience. Early intervention by building the young learners' vocabulary and exposure to enriched language before entering school must be a priority of every parent

with young learners. Ultimately this will mean fewer learning disabled learners, fewer grade retentions and less special-needs education.

2.8.3 Morphology

Morphology is the term used to refer to the knowledge a speaker possesses regarding the manner in which new words can be created from existing words (Landsberg et al., 2008: 121). The opinion of Oats and Grayson (2004: 168) is that morphology also helps young learners learn and create new words and can help them spell and pronounce words correctly. Morphological awareness could also help in a number of reading tasks to refer to morphemic boundaries like the "*ea"* in a single word "*reading"* and the word "*react".* The morpheme is a unit of speech that has a role of its own. There are four different types of morphemes, namely:

- *free morphemes* are single-root words and, when combined together, they form a new word for example; *time* and *table* may be combined to form the new word *timetable*;
- *bound morphemes* are meaningful when a prefix or affix is combined with a free morpheme like in *un-* and *do*. Young learners learn that prefixes and suffixes alter the meaning of words in certain ways and that common roots often have common meaning like *electricity,* which is made up of two morphemes: the root *electric* and the suffix *–ity*; and
- a *grammatical or inflexion morpheme* is a unit of speech that modifies the meaning of the word to which it is added; adding *–ding* (tense) to *nod (*noun*)* changes it to *nodding* (verb). Inflexion morphemes also indicate time: *–ed* added at the end of the word *kick* (present tense) creates the new word *kicked* (past tense). Likewise with *soft*, by adding *–er* becomes *softer* to indicate degree of comparison (Landsberg et al., 2008: 121; Deacon & Kirby, 2004: 224).

2.8.4 Syntax

Each language has its own rules of syntax (Oats & Grayson, 2004: 170). The rules of syntax prohibit the random arrangement of words in sentences. Words follow a typical sequence such as subject-verb-object format, for example "She kisses the doll." Young learners detect patterns of word order – person, action, object – so they readily say, "I want sweets."

Morphemes are linked to form words, which in turn are strung together in correct order (syntax) to form phrase and sentences with meaning. The difference in meaning (semantics) between the sentences "The man chased the cat" and "The cat chased the man" results from a different word order. The young learner's language development reaches a stage where recognition of shifting words in sentences changes the meaning (Sousa, 2005: 18). Sentences must follow a sequence common to many languages, namely the subject-verb-object format as in "She plays the piano." In the more complex sentences, syntax imposes a stringent structure on word order to provide clarity and reduce ambiguity.

In order to communicate effectively, according to Oats and Grayson (2004: 170), it means words must be arranged in a sequence that makes sense. According to the rules to which the listener may become accustomed, the arrangement of words is important to convey correct meaning to the listener. Re-arranging the word order changes the meaning of a sentence completely as in the following example "*There is butter on the bread*" and "*There is bread on the butter*". Words may be re-arranged according to certain rules to convey the same meaning as follows: "*The boy hit the ball*" (active speech) has the same meaning as "*The ball was hit by the boy* "(passive speech).

As the learner's syntactic and semantic networks develop, context plays an important role in determining meaning. When the learner hears the sentence "*The old man has a walking stick*" the learner interprets and pictures a man holding a stick to help him to walk (Sousa, 2005: 25).

2.8.5 Content-semantics

In order to understand what the speaker wants to say, the mind needs to arrange and compose phonemes into morphemes, morphemes into words and words into phrases. Meanwhile, the listener's language areas must distinguish speech sounds from other background noise and interpret the speaker's meaning. This interaction between the components of language and the mind in search of meaning is referred to as semantics (Sousa, 2005: 22).

According to Landsberg et al. (2008: 122) semantics can be divided into three categories: objects: *pen, tree* or *table,* actions: *write, walk, run*, and relations between objects: *pen and write*, *knife and fork*. There are four forms of semantics:

- lexical semantics- the literal meaning of a word in a sentence: *The white snow* meaning *The snow is white;*
- sentence semantics- the whole sentence is important for understanding the meaning and not only individual words: *The late Mr Carter died of cancer or The late Mr Carter missed the bus;*
- semantic relations- each word in a sentence has its own function that expresses the ideas in the sentence: *She takes off her warm clothes before leaving home* meaning *It is hot outside; and*
- interpretive semantics- the same thought may be expressed in various ways like: *The boy is naughty* and *The boy is impossible* (to control).

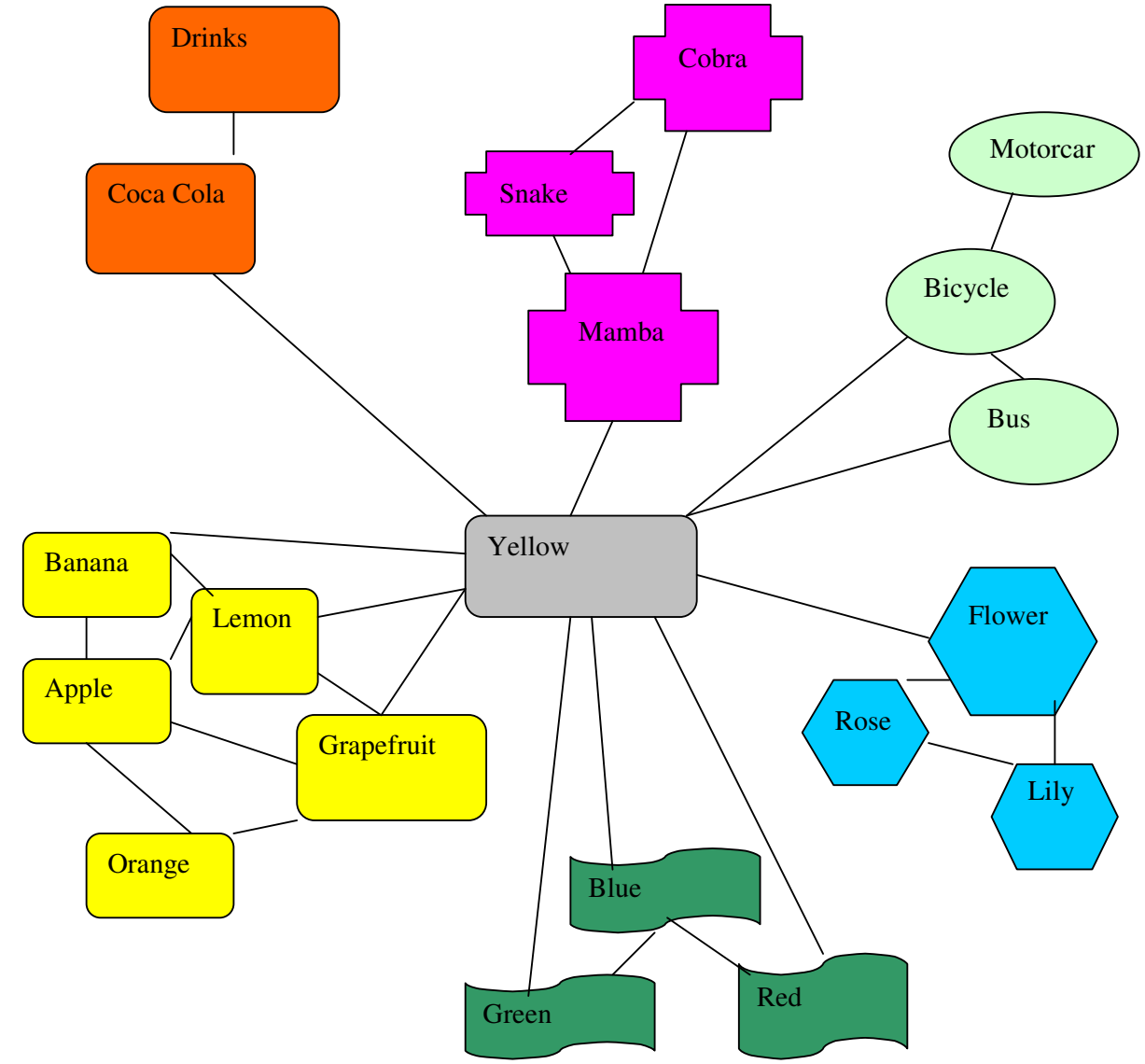
Additional evidence from studies by Sousa (2005: 25) indicates that adults recognise the lack of sense immediately, while young learners encountering spoken language that does not make sense are stymied. The young learner may encounter correct English words in the proper syntactic sequence, but may not necessarily comprehend the meaning. The sentence "*kicking hot potato's sleeps quickly through the wetland*" illustrates that morphology and syntax may be preserved even in a sentence that lacks semantics.

Although linguistic researchers differ on the exact nature of the cerebral networks and processes involved, to account for such speed and accuracy, most agree that the mental lexicon is organised according to meaningful relationships between words.

From more recent studies, it is clear that the related words, that is words being closer to each other at neuron level, may be stored together in specific cerebral regions, for example; *flower-lily* instead of *snake-flower*. Additional evidence for this idea that the brain stores related words together has come from imaging studies using PET scans (Gazzaniga, Ivry & Mangun, 2002: 37).

Pinker (1999: 25) confirms, as illustrated in Exhibit 2.4, that naming items in the same category activates similar areas of the brain. Because the brain processes sentences and information in patterns, the young learner's brain can determine the meaning of a spoken word in about one-fifth of a second. Pinker also emphasises that in reading, the meaning of the printed word is registered in as little as one-eighth of a second. Exhibit 2.4 below shows the connection between words that are related to each other.

Exhibit 2.4 Semantic network representation



Source: Sousa (2005: 24)

The semantic relationship between the words may be seen in the distance between the words and the grouping of words that belong together. According to the example, it is clear that the word "*Coca Cola"* is close to the word "*drinks"* but is distant from the word "*mamba"*. "*Coca Cola"* has a strong connection with "*drinks"* but no connection with "*mamba"*. These words are connected to each other to show the interconnection between different networks (Sousa, 2005: 24).

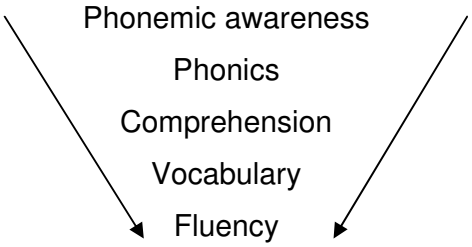
2.9 Beginning stages of learning to read

The past several decades represent a watershed period in research on the beginning stages of learning to read. Reading is not a natural capability like speaking which is a genetic capability. The linking of the sounds of the language to the letters of the alphabet is not the only way to master reading; multiple approaches to reading words may lead to reading successfully through direct instruction (Harn, Stoolmiller & Chard, 2008: 145; Muter, Hulme, Stevenson & Snowling, 2004: 665).

According to several studies by Muter et al. (2004: 665) reading is a linguistic skill that is learned only after learners have acquired considerable proficiency in oral language. Measuring and understanding reading development requires recognising the multidimensional and dynamic nature of this critical accumulation of skills.

There are five key areas in becoming a proficient reader and these are illustrated from the beginning stages up to the proficient level in Exhibit 2.5 below.

Exhibit 2.5 Five key areas in reading



Various research studies (Carroll & Snowling, 2004: 914; Lytinen, Eklund, Erskine, Guttorm, Laakso, Leppanen, 2004: 186; Catts, Fey, Zhang & Tomblin, 2001: 40) show a good indication of future success in reading relies on letter knowledge, phonological awareness, short-term memory, rapid automatic

naming speed (RAN's), and, according to Allor (2002: 49), pseudoword repetition and expressive vocabulary.

Researchers are sure of the fact that intelligence generally does not play a critical role in learning to read and according to Shaywitz (2003: 25) most learners who have difficulty in learning to read have above-average IQ's. According to Goouch and Lambirth (2007: 2) only about 50 per cent of learners who have to make the transition from spoken language to reading find it relatively easy at the stage they get exposed to formal instruction. Out of the remaining 50 per cent, about 20-30 per cent will have reading difficulty and will find reading the most difficult cognitive task they will ever encounter.

According to Mraz et al. (2008: 3) a compelling research base exists to support the relationship between the ability to read and the spoken language. This relationship depends on the word forms that the young learner learned during the development of the spoken language where listening and pronunciation in conversations took place. This becomes evident when the learner starts to read and the material contains words already familiar to him.

The awareness of individual sounds (phonemes) and the recognition of written symbols which represents those sounds (the alphabetic principle) is the most important developmental stage for the learner who starts learning to read. The manipulation of the phonemes of spoken language according to Bender and Larken (2003: 181) and Kame'euni et al. (2002: 70) is the basic principle when the learner starts forming new words and rhymes. Sousa (2005: 33) says that beginning readers' differences have parallels in activities like playing a musical instrument or partaking in sport. This view will be discussed in depth in Chapter 5.

Additional evidence from the study of Patel (2008: 359) shows that learners' early progression in learning to read depends on their oral language skills. The ability to acquire one's native language must include the semantic structure (word meaning) syntactic structure (grammatical rules and how words are related) and phonological structure. The vocabulary of infants

depends strongly on their parental vocabulary, which is closely associated with their socio-economic status and supporting this, Goldsworthy (2003: 23) notes that infants learning to vocalise and say words, are facilitated by socially cognitive operations. It is important to know how the spoken language process works, because the process of reading words shares several steps with this model of spoken language processing (Spear-Swerling, 2007: 303).

As the spoken language develops, the brain begins to recognise the beginning of a language hierarchy (Landsberg et al., 2008: 124; Sousa, 2005: 19).

2.10 Phonological awareness and phonemic awareness in reading

Phonological awareness according to Kerins (2006: 244) is the individual's awareness of sound structure of spoken language and an important ability for success in reading. Phonological awareness or processing is the beginning stage and the ability to understand that sentences may be divided into smaller parts: words, syllables and individual phonemes, in other words, to decode. For example the word "*candy"* contains two syllables, "*can-dy"* which is composed of three and two phonemes, "*c-a-n"* and "*d-y*" respectively. This awareness includes the understanding of alliteration, rhyming, syllabification and intonation (Goouch & Lambirth, 2007: 125).

A review of the literature by Turan and Gül (2008: 280) and Ben-Shachar, Dougherty, Deutsch, Brian and Wandell (2007: 1396) demonstrate the importance of phonological awareness, phonemic awareness and phonics in the process of learning to read.

According to Strickland and Schickedanz (2005: 6), Sousa (2005: 33) as well as Gillet and Temple (2000: 233) phonemic awareness may be divided into three levels:

- rhyming and recognising rhymes;

- segmenting the beginning sound (onset) from the remainder of the syllable (rime) as in /b/ -ack; and
- completely segmenting the phonemes in spoken words as /b/ /a/ /k/ and manipulating them into new words like *back, buck, duck*.

Phonemic awareness is the understanding of words that are made up of individual sounds (phonemes) and, with the manipulation of these sounds, the beginner is able to group new words, culminating in the spoken language (Otto, 2006: 21; Phelps, 2003: 34). Phonemes may be isolated from the rest of the word into sections such as first, middle or last, for example the word "*dog"* which has three phonemes, namely *d/ô/g*. A phoneme (sound) is the smallest unit of language and may differ in different languages and dialects (Turkington & Harris, 2002: 176).

Learners who understand phonemic awareness know that there are three phonemes in the word "*dad"* and that the same phoneme *–d* appears in the words "*mud"* and "*sad"* (Yopp & Yopp, 2000: 136). Learners who have phonological awareness do not necessarily develop phonemic awareness easily, which is important for success in reading (Mraz et al., 2008: 3).

Yopp and Yopp (2000: 136) state that there is a difference between phonemic awareness and phonics although they are closely related. The auditory and oral manipulation of sounds, are known as the phonemic awareness and a learner who demonstrates phonemic awareness is able to recognise all the sounds in the word "*cat".* On the other hand, Spear-Swerling (2007: 301) argues that phonics is the instructional approach of the alphabetic principle and the learner has to recognise letters and their associated sounds with visual symbols, which is written language. This means the learner has to be able to tell which letter is needed to change the word "*dad"* to "*dam".* However, phonics instruction does not necessarily lead to phonemic awareness.

The ability to recognise separate words and individual phonemes, and to reorder and blend them into other words makes it possible for a learner to

associate letters with sounds in order to read and build words. Shaywitz (2003: 35) and Muter et al. (2004: 665) have found that to strengthen phonological awareness the early letter-sound association in reading makes it possible to develop phonemic awareness, which in turn strengthens success in reading. Reading is the ability to extract meaning from words on the written page.

On the other hand, Strickland and Schickedanz (2004: 2) support the idea of early concepts of print to be a key predictor of later reading success. Concepts of print refer to the knowledge of the functions of print and whether the child comprehends print. It is a prerequisite to understand that letters have unique shapes, names, they form words, and are written in a specific direction on the page and that words are composed of letters and separated by spaces. However, the child needs to integrate early literacy skills to become a successful reader.

2.10.1 Decoding- phonemes to graphemes

It is now well established through research (Mraz et al., 2008: xix; Goouch & Lambirth, 2007: 130) that learning to read depends heavily on linguistic abilities. An essential ability for successful reading is phonemic awareness or manipulation of sounds (phonemes) in spoken words. Languages throughout the world make practical and effective use of 90 phonemes and out of these only 44 are used in the English language.

For the learner to be successful in fluent word reading in English requires success in phonological tasks to manipulate sub-syllabic units such as onset (first sound in a word) and rime (end of the syllable) for example: "*cat"= /k/ /at/* or phonemes for example: "*cat"= /k/ /a/ /t/* (Savage & Stuart, 2006: 33) and in the Afrikaans language, the onset or rime for the word "*nat"=/n/ at/* and phonemes for *"vis"=/v/ /i/ /s/.*

For a young learner according to Goouch and Lambirth (2007: 130) to be able to read, the brain must memorise a set of alphabetical symbols, called graphemes, and put them together with the sounds (phonemes) already stored in the mental lexicon. The rules of spelling in language are called orthography.

In the English language there is a difference in how words with a common phoneme are pronounced like "*dad"* and "*far".* The same symbol "*a"* has a different sound in the two words and in Afrikaans the phoneme "*e"* has different sounds as in: "*se*" and "*ek*". There are words, furthermore, which have the same last four letters in the same sequence in the same langauge that are pronounced differently like "*bough ", cough", "dough"* and *"rough"*.

In Afrikaans there are also sound-to-letter differences like in: "*ei*" and "*y*". They are not written the same but been sounded the same as in the month of "*Mei*" (May) and "*My* skoen is swart" (My shoe is black). The sound-to-letter correspondence of certain of these words makes it difficult for a learner to grasp spelling rules and to comprehend and therefore makes it difficult for the brain to recognise patterns in the language.

The learner must grasp that the different sounds of these vowels in words are associated with other vowels in juxtaposition to them like *e,* being pronounced differently in words like "*dead",* and *"deed" (*Bender, 2004: 187). Consonants on the other hand, represent a single speech sound such as the two-letter combination, "*ch", "sh"*, and "*ph"* (digraphs) as well as the three-letter combination *tch* and *thr (*trigraphs) in words like "*catch"* and "*through".* Through correct and sufficient practice and instruction, the learner will eventually understand that there is a difference in the pronunciation of words like *"cough"* and "*through"* although the spelling of the last sound of each word, –*ough,* is the same.

Sousa (2001: 17) states that the only way that the brain will make the sound-to-letter connections, is through correct instruction because research shows that learners are not born with the insight into reading or reading skills.

Research studies by Oats and Grayson (2004: 135) reveal that reading success may be attributed to growing up in a literate environment.

2.10.2 Decoding- from letters to words

Phonemic awareness is important for learning to decode according to Spear-Swerling (2007: 302). This means to be able to use letter-sound relationships (phonics) to read unfamiliar printed words. Phonemic awareness involves spoken language whereas phonics involves written words.

Decoding (Vaughn, Bos & Schumm, 2003: 75) is the phonological awareness process by which the learner learns to link the spoken word to the printed word. It enables the learner to understand that the printed word represents the spoken word through a system of letter sequences (graphemes) that form phonemes and, by blending of the phonemes, to pronounce the words. The learner needs to listen and concentrate to be able to decode words when speaking, reading and ultimately when writing.

According to a research study by Levin, Shatil-Carmon and Asif-Rave (2006: 142) researchers debate whether the learning of the alphabet should be by letter names like: *ay, bee, cee, dee*, etc or by the letter sounds like: *ah, beh, cuh, duh*, etc. Strickland and Schickedanz (2005: 8) are of opinion that knowledge of letter sounds may help children to decode words. Others on the other hand claim that teaching letter names rather than letter sounds prior to reading does not lead to success. Knowledge of letter names in addition to knowledge of their sounds however, is accepted as a predictor of reading or spelling.

The use of an alphabetical system makes it easy for the learner to understand how spoken words are constructed namely that words consist of phonemes and that these phonemes may be represented by written text (letters). This may be evident from the use of only four letters and their phonemes to make

four different words like: /*a, /l, /p, and /s* and they make: *pal, lap, slap, laps and pals* (Bender, 2004: 89).

Phonemes are speech sounds as opposed to printed letters, which are associated with a particular letter or combination of letters of the alphabet. One may use the example of the word "*cat"* which consists of three phonemes while on the other hand the word "*come"* also consists of three phonemes. This means that not every phoneme is coded with a unique letter (Mraz et al., 2008: 125). There are more than a dozen vowel sounds, but only five letters are used to represent them, ie: *a, e, i, o* and *u.*

Young learners will immediately recognise the "Wimpy" sign by the first letter-sound of the word because the "W" has become iconified. The young learner may associate environmental print reading with familiar and, especially, desireable objects, yet they may not be able to read the word out of context in the early stages of decoding. Young learners may, for example, recognise the first letter sound "W" because it has become iconified in the brand name "Wimpy" or "KFC" for Kentucky Fried Chicken.

2.11 Phonological awareness connections in learning to read

Although different researchers identify slightly different types of phonemic manipulation skills (McIntosh et al., 2008: 300; Mraz et al., 2008: 6; Cheung, 2007: 135; Wright & Jacobs, 2006: 50; Bender & Larkin, 2003: 9; Witruk, Frederici & Lachmann, 2002: 258) a specified number of skills, listed here, are types of phonemic awareness skills, related to each other, a young child should learn in order to read:

- the ability to generate and recognise rhyming words like: *heat* and *seat;*
- detecting rhyming sounds as in *g/*ood and *g/*old;
- recognising the same beginning sound in words as in *bat* and *bit*;
- isolating beginning sounds: The first sound in *book;* the child should recognise */b/;*

- categorising the onset (first sound in a word) and the rime (the rhyming sound forming the end of the syllable) such as: *cat = /k/ /at/* or phonemes: *cat=/k/ /a/ /t/;*
- isolating middle and ending sounds: The middle sound in *hat;* the child should recognise */a/*;
- blending sounds into words as in /k/ /a/ /t/ = cat;
- segmenting or dividing sounds in words: How many sounds in *chop?* The child should recognise three */ch/ /o/ /p/;* and
- phoneme substitution or manipulation: What is *fall* with */c/* instead of */f/?* The child should recognise "*call".*

2.12 Sound discrimination

The importance of sound discrimination in the process of learning to read should not be underestimated. Learners should perceive words as having sound components (phonemes) and they should be able to pay attention to parts of words so that they are able to identify beginning, middle and end sounds (Vaughn et al., 2003: 57-67). Letter-sound knowledge is important as a prerequisite for learning to read according to the study of De Jong (2007: 131).

2.13 Onset, rime and syllables

According to the investigation of Turan and Gül (2008: 281) aswell as Savage and Stuart (2006: 33) rhyming and alliteration skills are as important as the knowledge of beginning sounds, ending sounds and middle sounds regarding phonological skills in reading. These are among the many skills important for successful reading. Therefore, learners who are familiar with rhymes from preschool are more successful in learning to read.

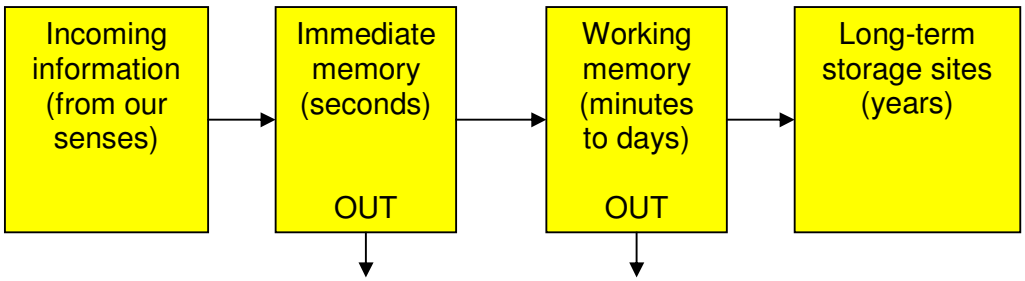
The young child's awareness of onset, rime and syllables as described by Jennings, Caldwell and Lerner (2006: 190) develop before an awareness of phonemes. The learner may later realise that letters work in teams: that the

word "*reach*" can be approached as a combination of *r* + *each*. Onset is the initial consonant that changes the meaning of a one syllable word; rime is the vowel-consonant combination that stays constant in a series. The learner may also realise, later, that the beginning sound *r* can be substituted by *t, b, p* to make other words. Rimes, or according to Jennings, Caldwell and Lerner (2006: 191) phonograms, which are also called *word families*, may only be successful in learning to read if learners already acquired the emergent literacy skills of rhyming.

2.14 Memory in learning to read

Data evidence, according to Bender (2004: 81) and Sousa (2005: 46) show that the human brain has two temporary memories that perform different tasks. Cognitive neuroscientists believe that short-term memory includes two stages of temporary memory, namely, immediate memory and working memory. The following Exhibit 2.6 illustrates the stages of temporary and permanent memory.

Exhibit 2.6 Stages of temporary and permanent memory



Source: Sousa (2005: 47)

The diagram illustrates the theory that information gathered from our senses lasts only for a few seconds in immediate memory. Information in the working memory, may usually last for several minutes and, if necessary, several days, whereas the long-term memory, also called permanent memory, may store information for years. Historically, memory has been differentiated into two

levels: short-term memory and long-term memory but for this study immediate memory and working memory will be used.

2.14.1 Immediate memory

Sousa (2005: 47) states that information in the immediate memory is stored just long enough until it is not needed anymore. This information may last for about 30 seconds but this period may vary from person to person. An example is when one looks up a telephone number and shortly after it has been dialed, the number is forgotten.

2.14.2 Working memory

Working memory may be described as a matrix with limited capacity (Goldberg, 2001: 29). Researchers revealed through scanners that working memory activities mostly occur in the frontal lobe but other parts of the brain may sometimes be active as needed. Kerins (2006: 245) supports the outcome that working memory is the temporary storage system for the coding of phonological information prior to storage in the long-term memory.

The capacity of working memory according to Sousa (2005: 47) is determined by the number of items that can be handled during a limited time. Working memory capacity increases with age. The young learner at preschool age can deal with two items of information at once and from thereafter three to seven items and later, at the adolescent stage, five to nine items. This limited capacity of the young learner explains the ability to memorise songs and poems through repetition. The lines of the poem are memorised word by word and by a similar process, line by line.

According to Sousa (2005: 48) spoken language uses memory systems for meaning. When oral tasks are given to learners, working memory makes it possible for learners to understand a series of instructions like: “read through

the story, underline the words with the “ee” sound, write them on the given lines and make a sentence of your own with three of the words.”

In reading, phonology relies on memory to retain and recall bits of verbal information. In other words, when the learner reads a word, the decoding process breaks the word into segments (phonemes), while it is retained in the working memory, after which these phonemes are blended using stored criteria to form words that the reader can recognise.

To be a skilled reader according to the opinions of Zimmerman et al. (2008: 4) and Howes, Bigler, Burlingame and Lawson (2003: 235) the learner must retain verbal bits of information (phonemes) in the working memory. Recent studies show that poor readers lack the ability to retain a string of phonemes to make a word or to hold a sequence of words to generate a sentence.

2.14.2.1 Working memory in reading comprehension

Sousa (2005: 48) is of opinion that spoken language uses memory systems for meaning. A large number of behavioural studies done by Witruk et al. (2002: 12) show, that working memory have been identified as a main factor determining reading comprehension. While reading sentences, the visual and memory systems of the brain must decode and then retain the words at the beginning of a sentence for a period of time while the reader’s eyes move to the end of the sentence. It is no problem when reading a short sentence like: “*I can sing a song*”, because the time-span required of the memory is minimal. More memory time will be required when a reader reads more complex sentences like “*Thandi was so busy watching them that she fell into the circus ring, and was almost knocked over by a clown riding on a unicycle.*”

Alloway and Gathercole (2005: 272) state that to be able to understand the sentence the reader has to pay attention to syntax and context. Therefore with a sentence recall task, it involves the integration of semantic information with structural aspects of a sentence such as the word order and inflectional markers. It furthermore involves both short-term and long-term memory.

Bender (2004: 81-83) reveals in his study that beginner readers will find long sentences with complex syntax difficult to understand and may not comprehend this meaning, because of the limited capacity of their working memory. Factors that influence a learner's ability to store words in the working memory will be the learner's age, experience and language proficiency. For the ability to use and develop working memory and to be able to store representations of written words, phonological coding skills are necessary. With fully developed phonological decoding skills, the development of working memory skills enables the reader to comprehend not only the sentence, but also the whole paragraph or even the chapter.

For the reader to be able to understand the sentences in a paragraph and ultimately, a series of paragraphs, the working memory must be able to link paragraphs as well. It is also possible for working memory to loose read information. This may happen when a reader gets interrupted in mid sentence; when the reader returns to the text, the previously read part has faded from memory and the reader has to start the sentence again.

According to the researcher, there is a danger in that some learners do not refine the perceptual skills and concepts that are needed for reading. They may learn to read by relying on memory alone and they may eventually struggle. Sometimes these learners do well in Grade 1 and Grade 2 but then reach a barrier because they are being exposed to so many different words that they can no longer rely on their memories.

2.14.2.2 Working memory and schemata

Research studies (Driscoll, 1994: 27) show how memory and reading pace affects comprehension. Readers do not spend enough time on detail in the paragraph and as a result find it difficult to recall all the other information. It is also important to realise that reading which evokes emotion is more committed to memory than factual text information. Another way of helping to comprehend text is through schemata, which is the ability to interpret the cause and affect or to compare and contrast information. It is of no use

comprehending text when a reader cannot associate with the information because it does not fit in the schemata of the reader even if the reader understands the meaning of words in the text.

The researcher is of the same opinion as Sousa (2005: 52) that schemata influence learners' reading comprehension because in South Africa the reading material is not always part of their cultural background for example a word like *sofa*, which is not part of South African learners' schemata.

2.15 Eye movement during reading

According to Witruk et al. (2002: 123) a page of text in a book, may give the subjective impression of being amorphous rather than individual words and sentences. Although we see multiple lines of text during normal reading comprehension, we can actually only extract a small amount of text at a time.

As observed by Witruk et al. (2002: 124) during reading, the eyes make rapid movements across the page and stop only for certain periods of time. This is called fixations. It takes the eyes of the reader about 200 to 250 milliseconds to acquire the information from the text. It takes the eyes 20 to 40 milliseconds to move from one fixation point to another. The distance is about nine letter spaces. The skilled reader may reread text while moving his eyes backwards about 10 to 15 per cent of the time. The reader, who finds comprehension of text difficult, may use this regression method to aid comprehension.

Recent research (Roy-Charland, Saint-Aubin & Evans, 2007: 910) on eye movement during reading shows that novice readers and skilled readers process written information differently. The beginning reader will fixate on every word in a text and will often fixate on the same word several times. This fixation points are only about three letter spaces apart and fixation periods are between 300 to 400 milliseconds. Their eye movements are therefore merely regressions occurring about once every two seconds. The following Exhibit

2.7 by Sousa (2005: 11) shows the eye movements of novice and skilled readers.

Exhibit 2.7 Eye movements of novice and skilled readers

Reading skill Level	Fixation time (milliseconds)	Fixation span (in letter spaces)	Percentage in Regression
Novice	300 to 400	3	Up to 50
Skilled	200 to 250	9	10 to 15

2.16 Reading comprehension

One area on which experts agree is that reading comprehension is the ultimate goal of reading instruction. Reading may be defined as the extraction of meaning from words on the written page. The opinions of Landsberg et al. (2008: 124) and Bursuck and Damer (2007: 9) are that comprehension of reading material occurs when the learner derives meaning out of reading material by ordering individual words into the structure and context of the sentence. It is well-documented that comprehension of language, whether written or spoken, is a complex task that involves many different cognitive skills and processes. Most researchers agree in their definition that reading is an interactive and social process. According to Cain and Oakhill (2007: 3); Sousa (2005: 90) and Bender (2004: 180) reading comprehension relies strictly on spoken language comprehension and proficiency, and has an influence on how well the learner learns to read.

There are three different types of comprehension, namely, listening, reading and picture comprehension. Learners may perform differently in the various comprehension areas. In this study, the researcher will concentrate on the reading comprehension because this is the whole reason for reading.

When young learners start to read, they already have a good sense of syntax because of their ability to listen and speak. Sentence structures in reading become more complex as the learner progresses. The following three syntactic structures need to be analysed in more detail:

- simple- a simple sentence containing one main clause: “The girl kicked the ball”;
- compound- in this sentence, two or more main clauses are joined with connecting words: “The girl kicked the ball while her brother watched”; and
- complex- in the complex sentence a main clause and one or more dependent or relative clauses are found: “The girl who kicked the ball laughed at her father.”

For the novice reader, reading is difficult because the meaning of sentences changes completely with syntactic changes. The formation of visual word forms (orthographic coding) relies strongly on the ability to generate auditory word forms (phonologic coding) (Sousa, 2005: 60; Muter et al., 2004: 666).

Rayner, Foorman, Perfetti, Pesetsky and Seidenberg (2001: 33) show the importance of practice because for most learners, reading will improve with practice. Reading ability of learners in Grade 1 is a strong predictor of learners’ reading ability in Grade 11.

The next stage in the development of language is visual expressive language, which is the spelling and writing stage but this stage is not under investigation in this research. Where reading is the receptive process, writing is a productive process. The receptive process is where the learner recognises letters and words and attaches auditory meaning to them (Gaddes & Edgell, 1994: 308). This is very important for the reason that successful reading and comprehending may lead to successful spelling and writing which is the last phase in a learner’s school career.

2.17 Synthesis

From the above literature study, it is evident that learning to read depends on spoken language proficiency. There are variations in the rate at which young learners go through the stages of language development but, although the age at which learners acquire vocabulary and aspects of grammar varies slightly, the stages are always the same. It is reasonable to assume that maturation is a function of the appropriate timing of reading instruction.

The learner must learn how to use language, especially reading, and how to think logically. Many aspects of a knowledge system can be learned informally, by observation and imitation. However, learning experiences offered by formal education are real keys to unlocking and realising full human potential. One may learn many life skills; speaking, counting, running and jumping, drawing and singing through informal means, but it takes systematic development to become proficient in one or more skills. Contemporary psychologists like Browne (2007: 20) and Gillet and Temple (2000: 215) see a role for both maturation and stimulation – hereditary and environmentally. Educators and policymakers agree that a strong foundation in early literacy is critical.

According to several researchers (Sousa, 2005: 11; Bender, 2004: 90; Bender & Larken, 2003: 28) we as human beings are born with a natural capacity to distinguish the distinct sounds (phonemes) regardless of the language to which we are born. We express our thoughts and emotions through these sounds and, eventually, with the written word. The level of development of spoken language in the young learner has a great influence on how quickly and successfully the learner learns to read.

CHAPTER 3

TEACHING READING TO GRADE 2 LEARNERS

3.1 Introduction

In the previous chapter an overview was given of the developmental aspects of spoken language and through that how the young child learns to read. As indicated, certain areas of development have direct links to learners' success in early reading and learning readiness in a formal school setting (paragraph 2.1). In this chapter teaching methods and reading instruction will be examined. These will then be linked to the factors that might have an influence on reading ability and early intervention (Chapter 4).

Castle and Coltheart (2004: 79) stipulate that the topic of reading instruction has in the past three decades generated much discussion among educators, researchers and policy makers. Studies by Sousa (2005: 13) and Bender (2004: 91) show that learning to read is not a natural ability for the human brain. It has already been mentioned in Chapter 2 that spoken language and written language are different and require different approaches and skills.

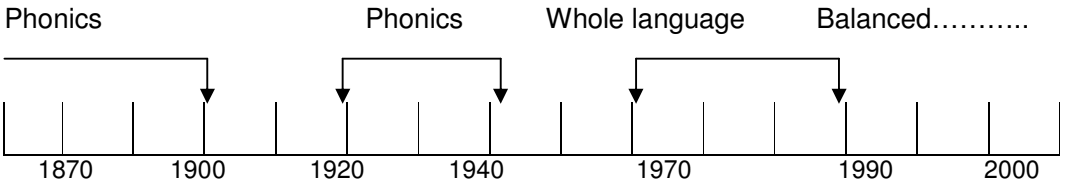
3.2 Teaching of reading: An overview

An overview of the history of reading is important for educators to know where the learner comes from and where to go to in terms of reading instruction. According to Sousa (2005: 63) and Bender (2004: 6) reading instruction over the past 130 years has involved three basic methods:

- an analytical method called the phonics approach;
- a global method called the *whole-word* or *whole-language* approach; and
- balanced approach.

The following timeline shows the development of the reading instruction over time (Sousa, 2005: 64).

Exhibit 3.1 Timeline of reading instruction over decades



Analytical Approach

Phonics instruction was the earliest method for teaching reading by which learners were taught the letter names and simple syllables and then constructed words. Bits of words were used to build syllables, then words and meaningful phrases in this analytical approach.

However, according to Rayner et al. (2001: 51) the irregularities in the pronunciation of common words such as *pint* violates the pattern of *hint* and *mint* as well as *have* that violates the pattern of *cake* and *save* meant that the letter-to-phoneme was not reliable and therefore the shift to another approach, the whole language. The phonics approach was under investigation by several studies because the opinion was that phonics must not be taught separately because it is tiresome and evokes no joy in learning to read. The struggle to get the perfect reading approach continued until the 1990s. Later in the twentieth century, a shift towards a more balanced approach was implemented (Sousa, 2005: 63).

3.2.1 Phonics as basic instruction

According to the investigation by Swaab, Baynes and Knight (2002: 100) the brain contains two separate stores for semantics (meaning), one for verbally-based information and the other one for image-based information. Phonics

refers to the relationship between printed letters and sounds in language as discussed in Chapter 2.

To be able to read, the learner must recognise the words that are written on the page and the meaning of the word. Learning to read is a lengthy and complex process and takes several years to master successfully.

A compelling research base by Shaywitz (2003: 23) supports the idea that an indication of whether a learner will learn to read successfully in the first two years of school is based on a solid foundation of phonemic awareness and letter knowledge. A review of the literature demonstrates that phonological awareness skills, that begin to develop at preschool ages, support reading skills during school ages (Turan & Gul, 2008: 280). Phonological awareness skills have positive effects on the reading process as well as fluent reading and are the indicators of future reading abilities (Blachman, 2000: 485).

According to the study of Dougherty Stahl and McKenna (2006: 160-164) learners cannot read fluently until they read accurately. The beginning stage of reading is the ability to read single words accurately and fluently and almost all learners with reading difficulties have difficulty in blending sounds from letters to make words. On the other hand, good readers have no problem in blending sounds from letters.

Dougherty Stahl and McKenna (2006: 379) are of opinion that it is necessary to teach learners to be aware of spoken sounds in words because phonemic awareness does not develop automatically within every learner. One of the very enjoyable teaching strategies by Goldsworthy (2003: 26) is the teaching of nursery rhymes printed on cards and tongue twisters as in *P-eter, p-iper, p-icked, a p-eck of p-ickled p-eppers.* Another strategy is by using the deletion technique like deleting the /h/ as in "*hear"* or adding the sound */c/* to /*ake*/ or substitute a */b/* or */l/* for */c/* and which word is heard? Another technique to use is the stretching out of sounds in words to emphasise or identify the different phonemes like: /*dog/* is sounded "*d-d-d-o-g-g-g*".

Although Strickland and Schickedanz (2004: 5) have different ideas on the success of phonics instruction for reading, phonics instruction helps learners through a certain system to remember the spelling of words and also to remember how to read certain words. The decoding of familiar words and the recognition of words through phonics instruction make reading more attainable for the young learner.

Dougherty Stahl and McKenna (2006: 157) indicate that through phonics instruction, the learner's memory recognises correct spelling like; *water* rather than *woter.* There is evidence, according to Mercer and Mercer (2001: 323) that certain approaches may be successful in teaching phonics:

- the synthetic phonics approach is where the learner has to sound out and blend letters to form words;
- the analytic approach is where the learner has to break words into letter-sound segments; and
- the spelling-based approach is where the learner has to sort words by spelling patterns.

Phonics instruction, described by Jennings et al. (2006: 189), can be taught in multiple ways, but what will lead to successful reading, is the instruction which will be delivered systematically. A recent review of the findings according to Zimmerman et al. (2008: 30) and Ehri, Nunes, Stahl and Willows (2001: 396) indicate that systematic phonics instruction will be more powerful when introduced or instructed early in the learner's school career.

Systematic programmes in phonics introduce the learner to different letter-sound pairings, starting with the simplest and most frequent combinations and then progressing to more complex and unusual ones (Truxler & O'Keefe, 2007: 165). Educators must always be aware of not using only one approach in an inclusive education system where learners are learning to read at different tempos. Researchers (Goouch & Lambirth, 2007: 130; Jennings et al., 2006: 189; Dougherty Stahl, 2006: 161; Sousa 2005: 75; Gillet & Temple, 2000: 26) support the same theories on ways of teaching phonics like:

- the one-to-one letter-sound relationship: Teaching the letter-sound relationships of both consonants and vowels directly:
- single consonant: They are dependent on sound and they are; b, d, f, h, j, k, l, m, n, p, r, s, t, v, w, x, y, and z. The letter c and g have two common sounds like c= city (soft sound) and cut (hard sound)
  g= general (soft sound) and gold (hard sound);
- consonant blends. Beginning blends are; st, gr, cl, sp, pl, tr, br, dr, bl, fr, fl, pr, cr, sl, sw, gl, str. Ending blends are; nd, nk, nt, lk, ld, rt, nk, rm, rd, rn, mp, ft, lt, ct, pt, lm;
- continue with vowel sounds: Single vowels are a, e, i, o, u. These vowels are divided in long and short vowels;
- teaching letter-sound pairings as a starting point, from the simplest to more complex ones as follows:
  a. the one-to-one letter-sound relationships as in: m, t, s, f, d and r and then ending with k, v, w,, j, p, and y;
  b. by identifying long vowels that pronounce their name like: */a/* in *fade*, */e/* in *me*, the */i/* in *fine* the */o/* in *mow* and the */u/* in *used* and short vowels that do not pronounce their names like: *mad, fell, kid, pop, sun; and*
  c. the more complex letter-sound combinations like the digraphs, which have two consonants, and when together, make a single sound such as *sh-* in *shell*, *ch-* in *chip*, *th- thin* and *wh-* in *what, and ck- in chuck*. After learning the common blends the learners can be introduced to the more complex phonetic combinations such as: *-tch* in *watch*, *-dge* as in *fridge* and *–ough* as in *dough*.
- the teaching of phonics should also include stories that contain words using the letter-sound combinations for that stage of the lesson;
- lessons with phonics as instruction should be reinforced during the day in different activities such as writing, reading, sounding and spelling; and
- teaching strategies to help the learner in spelling correctly through sound-to-letter instruction, will also help the learner in learning to read, which is the letter-to-sound reinforcement.

According to the research of Turan and Gul (2008: 279) and Ben-Shachar et al. (2007: 1396) phonological processing abilities are the most essential part of developing reading skills but not necessarily the only instructional approach. Dougherty Stahl and McKenna (2006: 156) recommend early phonics and direct educator instruction instead of using worksheets, to let the learners get the necessary knowledge and first-hand experience of using letters and letter-sound associations.

Various researchers (Mraz et al., 2008: 5; Zimmerman et al., 2008: 4-7; Bald, 2007: 1; Goouch & Lambirth, 2007: 124; Dougherty Stahl & McKenna, 2006: 160-164; Sousa, 2005: 120; Bender & Larkin, 2003: 191) are of the same opinion, based on their findings on the foundations for phonics instruction and give an overview of certain aspects of importance which are:

Phonics instruction helps educators to instruct the learners on how to relate sounds and letters, how to break words into sounds and how to blend sounds to form words. Therefore, the use of worksheets as activities in phonics may be enjoyable, but such practices do not lend themselves to critical application of phonics during real reading. The reason is because it concentrates on the visual development of the learner and not the auditory development which is crucial in learning the sounds of words. Worksheets used occasionally can provide independent practice of the phonics patterns.

3.*2.2* The whole-language approach

Mercer and Mercer (2001: 329) explain the whole-language approach in reading as reading taught in a holistic, meaning-oriented activity and is treated as an integrated behaviour rather than broken down into separated skills. Thus, the emphasis is on real reading for meaning rather than exercises in reading in developing decoding skills.

Various theorists, (Spear-Swirling, 2007: 302; Bouwer & Jordaan, 2002: 200) support the basic foundations for whole-language instruction approach as follows:

- reading knowledge can be developed the same way as spoken language;
- learners can determine the meaning of an unfamiliar word by searching for semantic, syntactic and phonetic cues in the text;
- words in context leads to greater improvement in word reading than in words out of context;
- although phonics knowledge is important it should not be taught explicitly; and
- reading should be an enjoyable experience for the learner.

Some researchers (Mercer & Mercer, 2001: 329) advocate the whole-language approach instead of teaching phonics, in that learners initially start to read meaningful, predictable whole words and then use these familiar words to begin to learn new words and phrases.

Landsberg et al. (2008: 126) identify sight words as high-utility words appearing frequently in text and can be recognised instantly. They distinguish between two types of sight words:

- basic sight words- these words appear commonly in all texts in a specific language; the words are: he, she, it, and were. Learners may recognise these short words easily; and
- other sight words- these are words often used in certain topics of personal interest; these words become high frequency words for that person reading specific texts but not necessarily for other readers.

According to Bender (2004: 186) the debate over the use of sight words or phonics is of interest to researchers. The use of only sight words as reading instruction involves learners memorising words by sight. The sight-word approach is based on the meaning of the whole word and learned before the letter sounds are introduced. The use of a sight word is introduced according to the shape of the word and highlighted by boxes drawn around each letter.

Another way of teaching sight words is to use tape recorders and letting the learners hear the words.

It may be of concern, according to studies by Bender (2004: 187) that learners score lower on word-recognition tests who were only taught by the sight-word approach. Gillet and Temple (2000: 27) reinforce the notion that skilled reading requires rapid and accurate decoding as well as recognition of whole words as this is a more balanced approach.

The following guidelines are recommended for implementing whole-language programmes with learners who have difficulties in reading:

- read aloud to these learners regularly;
- silent reading for a few minutes per day;
- the introduction of patterned stories and predictable patterned books;
- provide meaningful printed materials in the instructional setting;
- communicate with other educators in the use of a holistic approach in working with learners with reading difficulties.

Researchers and educators, according to investigation by Puolakanaho, Ahonen, Aro and Eklund (2008: 353); Ben-Shachar et al. (2007: 1396) and Dougherty Stahl and McKenna (2006: 155) are convinced that, utilising only a single method of reading instruction will be unsuccessful and therefore a balanced approach that includes a phonics component as well as enriched text should be adopted. The following instruction methods should make it clear why a balanced instruction approach will be more successful to a diversity of learners.

3.2.3 A balanced approach

Research studies done by Sousa (2005: 87) show that reading achievement for learners in the balanced approach programmes improved more than the learners in the whole-language approach programmes or the phonetic approach. The programmes with the phonological-awareness instruction

(including phonemic awareness) and supplemented by a wide variety of experiences with the printed and written word, prove to be the key to success in teaching learners to read.

Therefore, according to several studies on instruction techniques (Mraz et al., 2008: xi; Sousa, 2005: 65 and Goldsworthy, 2003: 26) and despite the passion of supporters for either phonics or whole-language approaches, the diversity of learners in the inclusive school system must be taken into account. Several instructional techniques or formal programmes must be investigated as stated in the following:

- learners need to develop phonemic awareness in order to learn to read successfully;
- although phonics is important it should not be taught as a separate method and through drill and rote memorisation;
- phonics should be taught to develop spelling and word skills;
- learning to read for meaning; and
- enriched literature gives meaning to text and the ability to think critically and with imagination.

Educators need to adopt a certain reading approach to support the diversity of learners and especially the learners with reading difficulties. Landsberg et al. (2008: 140) and Mercer and Mercer (2001: 342) support the following reading approaches:

Bottom-up approach: This approach teaches learners the letter-sound relations and then to sound and say the words. Comprehension should then develop automatically. To solve comprehension problems educators use the top-down approach.

Top-down approach: This is in contrast to the above approach, where learners had to identify whole words and read sentences without sounding out the words. With this approach, the learners become aware of phonemes and the letter-sound relations while they are reading.

Interactive approach: This approach becomes more popular because it accommodates both word identification and comprehension while learners learn to read. According to Landsberg et al. (2008: 140) this approach is adapted by other reading approaches such as the holistic and language experience approach. These approaches include word identification as well as word decoding and only the order and strategies differ from each other.

Developmental reading approaches in the Foundation Phase as stated in the Revised National Curriculum Statement (RNCS) (Department of Education, 2002: 22) emphasise daily, sequential instruction. A well-developed programme provides supplementary materials such as workbooks, skill-packs, wall charts, related activities, learning games, etc. To teach learners with reading difficulties, it is often necessary to adapt developmental programmes and approaches and modifying the input-output arrangements of selected tasks.

3.3 Reading outcomes: A critical overview

Because educators face greater challenges teaching learners who are at risk to read, they need effective teaching techniques and a curriculum that has a proven track record of success with these learners. Bursuck and Damer (2007: 2) state that, not only learners who are at risk of reading failure, but all learners require a carefully coordinated curriculum and skill instruction.

According to the RNCS (Department of Education, 2002: 22) the current curriculum uses a balanced approach to literacy development. This approach begins with emergent literacy which involves reading books and writing for practical purposes and gives attention to phonics. (These are important skills learners need to acquire, as discussed in Chapter 2 in order to learn to read and write successfully). The RNCS states, however, that this means deviating from the “reading readiness approach”, which maintains that learners are not ready to start learning to read and write until they are able to master sub-skills such as auditory and visual discrimination as well as having developed their

fine and gross motor skills to a particular level. It also states that, with a balanced approach, these skills do not have to be in place before a learner can start to read and write, but also states that these skills can and should be developed during the learners' early learning experience in Grade R, clearly a contradiction.

The literature research in this study holds the opposite view on learning to read, as discussed in detail in Chapter 2, namely that, not only auditory discrimination, visual discrimination and fine and gross motor skills are important skills for the ability to read effectively, but a combination of these skills together with emotional and social development is required. Emergent literacy and maturation as determined by Davin and van Staden (2004: 82) reveal that the child's physical, intellectual, perceptual, language and emotions affects the learning process and are important for formal reading. Mercer and Mercer (2001: 292) are of the opinion that early experience with print and language relates to later success in learning to read. For example, letter knowledge, phoneme discrimination (auditory skill) and the understanding that words consist of discrete units are strong predictors of later success in learning to read.

The researcher is of the opinion that the contradiction by the South African school curriculum with the mentioned research studies may be the reason for reading difficulties of many learners in South African schools. It is with this realisation and the experience of the researcher that research on this topic was embarked on.

3.3.1 Instructional strategies

Formal reading instruction commences in Grade 1, therefore when learners progress to Grade 2, most of the learners are supposed to be able to read their home language fairly competently and they are supposed to have an adequate knowledge of letters and sounds and what these represent in the

home language. A Grade 2 home language learner will typically be between 8 and 9 years of age.

As mentioned in Chapter 1, according to Catts (2005: 25) and Mraz et al. (2008: xi) the reading process involves elements of a learner's psychological, physical, linguistic, cognitive, emotional and social world and, therefore, according to Kame'enui et al. (2002: 29) reading is one of the most important skills and complex cognitive activities a learner can master during the early years of schooling.

As an educator, the researcher is aware of the fact that classrooms are a particular type of setting where learners have to learn to cope with social interactions and to communicate with peers and educators alike. In the classroom, language is the main and primary medium between educator and learner. Language also supports the interactions that integrate and enrich learners' thinking. According to Oats and Grayson (2004: 322) the educator will guide the learner along a preconceived path and may facilitate the learners' discourse and cognitive processes in order to develop and support new understandings.

Educators have the important task in the identification and support of learners with reading difficulties. The classroom must be a mirror of a learning environment according to Cunningham, Cunningham, Moore and Moore (2004: 33) and an open invitation for learning to read. Therefore, according to Duffy (2002: 29), educators need a strong repertoire of instructional strategies in helping all learners to become effective, strategic readers who read and write enthusiastically and purposefully and is one of the greatest challenges facing educators today. Dougherty Stahl (2006: 161) states in her study that it is important for the success in reading that learners grow up in literate environments, where reading forms part of their daily activities.

For an educator to make instructional decisions that are best suited to the needs of diverse learners, it is important to understand the reading process. As stated before (see paragraph 1.4) and according to Goldsworthy (2003: 34)

reading is an interactive process and the act of reading calls on various cognitive abilities spread across perceptual, cognitive and linguistic domains. This interactive base makes effective use of exposure to reading instruction.

The evidence is clear according to several studies (Bursuck and Damer, 2007: 9 and Mercer & Mercer, 2001: 151) on teaching reading, that not only learners who struggle with reading, but all learners benefit from reading instruction that is clear, direct teaching of reading skills and strategies that include:

- clear instructional outcomes (what the educator wants the learner to do with the information taught);
- clear purpose for learning;
- clear and understandable directions and explanations; and
- corrective feedback on the learners' success and errors.

Bursuck and Damer (2007: 10) postulate that systematic instruction is the teaching of carefully selected and useful sets of skills and then organising those skills into a logical sequence of instruction.

When educators have to support learners who demonstrate reading difficulties, Bursuck and Damer (2007: 32) as well as Bald (2007: 24-29) postulate that they should consider phoneme-based instruction and the following guidelines may be of help to educators:
Consider the hierarchy of phonemic skills to the specific learner problem. Treat every learner as an individual because some learners may experience different onsets but cannot blend sounds and need assistance in segmentation of words.

Select the skills to teach. It may help to teach only one or two skills because mastery of those skills may improve the learners, work on the other skills as well. The educator must be aware not to drill, but to let the learners have fun when activities are used in support of the reading problems.

Consider the appropriate level to emphasise. Some learners require specific work on phoneme detection and initial onset sounds while others require

support in phonemes in combination with phonics. Educators must realise that phonemic manipulation is a pre requisite for reading. Avoid using letter names instead of sounds for the instruction of phonemes (learning the alphabet).

3.3.2 Structure and concepts

According to the RNCS-Grades R-3 (Department of Education, 2002: 7) in the inclusive classroom where the learning outcomes and assessment standards are the requirements and expectations of learners by grade, the Foundation Phase focuses on the primary skills, knowledge and values to ensure the development of further learning. This should not be all that is taught but is an indication of the progression through the system.

3.3.2.1 Learning outcomes

According to the RNCS (Department of Education, 2002: 7) of the Department of Education, learning outcome is derived from the critical and developmental outcomes. It is a description of what kinds of knowledge, skills and values learners should know, to be able to demonstrate and be able to do at the end of the General Education and Training band. Learning outcomes do not prescribe content or method. There are six Learning Outcomes (LO) for Grade 2 in the language learning area:

- listening;
- speaking;
- reading and viewing;
- writing;
- thinking and reasoning; and
- language structure and use.

For this study, the researcher will only use the first three LO's which must be integrated into all the learning areas.

3.3.2.2 Assessment standard

An assessment standard describes the level at which learners should demonstrate their achievement of the learning outcomes and ways of demonstrating their achievements. Assessment will be discussed in detail in Chapter 4. For the Grade 2 home language learners the RNCS (Department of Education, 2002: 27) stipulates the following learning outcomes, as in reading development, with its assessment standard.

Learning outcome 1-Listening
The learners will be able to listen for information and enjoyment, respond appropriately and critically in a wide range of situations:

Assessment standards: We know this when the learner
1. Listens attentively for a longer period (extended concentration span) and responds to an extended sequence of instructions.
2. Demonstrates appropriate listening behaviour by showing respect for the speaker, taking turns to speak, asking questions and commenting on what has been heard.
3. Listens with enjoyment to stories, poems, songs and other oral texts:
   - listens for the topic or main idea;
   - listens for detail;
   - predicts what will happen;
   - communicates back a sequence of events or ideas in oral text;
   - answers questions about the oral text;
   - expresses feelings about oral text and
   - works out cause and effect in oral text.
4. Listens, enjoys and responds appropriately to riddles and jokes.
5. Listens to a speaker the learners cannot see as on a telephone.

Learning outcome 2-Speaking
The learner will be able to communicate confidently and effectively in spoken language in a wide range of situations.

Assessment standards: We know this when the learner
1. Recounts personal experiences and more general news events.
2. Uses language imaginatively for fun and fantasy (telling jokes, riddles, taking part in word games and making up rhymes).
3. Creates and tells simple stories with a beginning, middle and ending.
4. Contributes to class and group discussions:
   - initiates topics in group discussions;
   - takes turns to ask questions;
   - suggests and elaborates on ideas;
   - shows sensitivity to the rights and feelings of others;
   - reports back on group's work;
   - asks questions for clarity and information;

- answers questions and give reasons;
- gives constructive feedback to others.

5. Suggests ways of solving problems.
6. Uses appropriate language for different purposes (apologies, invitations).
7. Uses appropriate volume and intonation (speaking quietly with a partner in class and more loudly with friends on the playground).

Learning outcome 3-Reading and viewing

The learner will be able to read and have a view for information and enjoyment, and respond critically to the aesthetic, cultural and emotional values in texts.

Assessment standards: We know this when the learner

1. Uses visual cues to make meaning:
   - predicts from the cover of a book what the story will be about;
   - in relation to images, print media and advertising;
   - interprets the main message;
   - identifies purposes, audience, and where it will be found; and
   - expresses personal responses to print and media images.
2. Makes meaning of written text:
   - reads a story on own or with educator;
   - describes the main idea;
   - identifies key details (main characters, sequence of events, setting);
   - identifies and discusses cultural values in the story;
   - indentifies cause-effect relations (why something is happening in a story);
   - draws conclusions;
   - expresses opinion whether the story was liked and why;
   - reads simple instructions in the classroom; and
   - reads text at a slightly more complex level (simple fiction and non-fiction books, simple instructions, invitations and greeting cards, word puzzles, etc).
3. Recognises and makes meaning of letters and words in longer texts;
   - reads with increasing speed and fluency;
   - reads aloud and uses correct pronunciation and appropriate stress;
   - uses phonic and other word recognition and comprehension skills such as phonics, context clues and making predictions in order to make sense of text; and
   - uses self-correcting strategies (such as re-reading, pausing, practising a word before saying it out loud).
4. Develops phonic awareness:
   - recognises vowel sounds spelled with two letters (vowel digraphs: ea, ee, ay, ai, ar, er, or, ir, ur, ou, oo, oi);
   - recognises two-letter and three-letter consonant blends at the beginnings and ends of words (bl, str, lp, nds);
   - recognises the first sounds (onset) and last syllable (rime) in more complex patterns (dr-eam, cr-eam, str-eam, scr-eam);
   - recognises more complex word families (dream, cream, stream, scream);
   - recognises known rhymes (fly, sky, dry);

- recognises some more complex suffixes (zz + es, ies, -ly); and
- recognises an increasing number of high frequency sight words.

5. Reads for information and enjoyment:
   - reads picture books and simple stories of own choice;
   - shows appreciation of stories from different cultures;
   - starts to use the dictionary to check spelling and meaning of words; and
   - reads a variety of texts such as magazines, comics, non-fiction books.

The principle that guides the teaching and learning of literacy in this curriculum, according to the RNCS (2002: 22), is that language development involves a gradual process of improving. It is also noted that a balanced approach is used because it begins with learners' emergent literacy in that it involves them in reading real books and writing for genuine purpose with the importance of phonics as the core. According to the curriculum learners must be:

- encouraged and supported to do wide reading;
- given the opportunity to write and develop their vocabulary and language use;
- discover strategies to unlock the "code" of the written word;
- develop various word recognition and comprehension skills such as phonemic awareness (sounds of language);
- able to develop knowledge of letter-sound correspondences (phonics); and
- able to develop knowledge of blending (putting together two or three letters to make a sound).

The main goal for the Grade 2 learner and, according to the learning outcomes of the curriculum as discussed above, is that the leaner must be able to read fluently and be able to comprehend what is read, all this accomplished with confidence.

3.4 Reading improvement

The opinion of the researcher is that in most classrooms, the predominant teaching approach, which is a visual-orientated teaching system, does not

favour the development of attention span, concentration and good listening skills as indicated in Assessment Standard 1. The main education idea in schools nowadays is for learners to be actively busy with their activities and group work according to the researcher's personal experience. The result is that the type of activities which require the learner to sit quietly and listen with concentration, to refrain from bothering others and to speak only when asked may only be displayed once other developmental milestones, like emotional development, have been reached.

Uhry (2002: 322) supports the idea of improving beginner readers' reading by the *finger-point reading instruction*. The educator uses a familiar text and shows the learner how to match spoken words with printed words. The use of rhymes, predictable patterned books and dictations are useful sources for this exercise. The educator stresses the first letter-sound in order to provide identification and the beginning-sound knowledge, for example the "s" sound in "SSSSS-sad!" which supports the Assessment Standard 3 of the RNCS (2002: 35).

Another way of improving reading according to Flanigan (2006: 44) is the *echo reading instruction* method where the educator reads the text aloud, pointing to each word while the reader echo-reads the same part while pointing at each word as well. With this method the learner uses memory support to identify difficult and unfamiliar words. This instruction method may start with one-two sentences at a time and eventually one-two pages at a time.

Mraz et al. (2008: 41) Goouch and Lambirth (2007: 132) postulate that phonemic awareness instruction should provide:

- instruction and practice with sound structures to strengthen phonemic awareness;
- sound-spelling and common spelling conventions to be able to identify written words;
- sight recognition of frequently used words; and
- independent reading and reading aloud as stated in the Assessment Standards 3 for the Grade 2 learner (RNCS, 2002: 34).

Educators must keep in mind, that successful reading is not only built on phonemic awareness instruction according to Mraz et al. (2008: 18), but is part of a *whole reading programme*. Paramount to the instruction programme is practicing what was taught immediately before, to ensure activation of the long-term memory. The following guidelines may help the educator in improving the reading instruction in the class:

- the educator must be careful not to teach several types of phoneme manipulations simultaneously but rather one or two types to assure long-term memory retention in learning to read. The learners can be taught to say a whole word aloud first followed by the individual phonemes as stated in the Assessment Standard 3 (NRCS, 2002: 34). After that the educator may write the word on the board as the learners sound out the individual phonemes;
- phonemic instruction is not only for a certain group of learners; every learner may benefit from phonemic instruction. This applies to the Foundation Phase learners as well as preschoolers;
- educators must be careful not to spend too much time on this activity as a well-planned phonemic awareness activity must not exceed 20 minutes per day; and
- it will be more productive if phonemic awareness activities are instructed to small groups because learners learn from others when listening to them and may, furthermore, concentrate better than in a large group. According to the researcher most young Grade 2 learners' concentration may fluctuate easily in large-group activity.

Gillet and Temple (2000: 323) mention that it might be thought that effective reading lies in instruction, and indeed, good instruction is an absolute requirement in helping learners grow as readers. In spite of all the instructional techniques we apply, however, there is another factor that is critical: To become a good reader, a learner must spend a lot of time reading.

3.5 Reading fluency strategies

Bender (2004: 191) describes fluency in reading as the ability to read with fluency and accuracy and the main purpose for the learner is to derive meaning from the text. Fluency develops gradually over a considerable period of time and through substantial practice. Therefore, the ability to read fluently is by practising reading and that can only happen with familiarity of the words. Readers must know how to divide sentences into chunks, which include phrases and clauses, to be able to read with expression. Reading with fluency, therefore, involves more than merely understanding syntax and sentences.

Two approaches studied by two researchers on teaching fluency in reading may be of value to educators as follows:

- guided repeated oral reading (Gillet & Temple, 2000: 287) is the reading of the passage aloud several times with the support of a educator. There is proof that this strategy of reading practice results in improved word recognition, speed, accuracy and fluency as well as comprehension; and
- according to Hart and Risley (2003: 5) independent silent reading is when the reader has to read silently on his own with little or no support from the educator. It is often helpful for learners to silent read while waiting between the end of one activity and the beginning of the next.

Researchers, such as Sousa (2005: 86) have found that silent reading does not improve fluent reading as such, but improves vocabulary and the enjoyment of reading. Therefore the positive outcome is that those learners who engage in independent reading for about 10 minutes per day, read over 600 000 words more per year than learners who do not read independently. Reading outside school must be encouraged at all times. This supports the statement according to the Learning Outcomes 3, Assessment Standard 2 (RNCS, 2002: 32) that the Grade 2 learner will be able to make meaning of written text by reading a story on his or her own.

Research in the past two decades has yielded a number of very effective instructional approaches for reading fluency (Browne, 2007: 69; Sousa, 2005: 86; Gillet & Temple, 2000: 287). Reading aloud every day to learners is important because a demonstration of fluent reading allows learners to listen how words are pronounced and voice changes to make sense of the story. The next step is then for learners to follow with read aloud so as to improve their reading fluency. Several methods may be used to develop and practice reading aloud:

- shared reading- this is where interactive reading exercises take place and the educator guides the learners while reading from a large textbook. As the learners read together the educator points at the words as they are read. Another way of shared reading according to Mercer and Mercer (2001: 323) is where the educator and learners take turns to read, improving their fluency as apposed to reading the story word by word;
- learner-educator reading- in this method of reading, the educator takes the lead followed by the learner. This is a one-on-one instruction method and learners have to practice their reading until they can read the text fluently;
- tape-assisted reading- Browne (2007: 69) supports tape-assisted reading because this is a reading instruction method where an audiotape is used with a fluent reader as guide. The learners read the text to themselves. The learners will then listen to the reader on the tape and silently follow by pointing to the words in the book. The learners may repeat this exercise several times until they manage the text independently;
- unison reading- learners may read, preferably a short text with the educator, the educator inviting learners to join in at words which are familiar to them. The aim is to get all the learners to read the text independently;
- choral-reading or oral reading variations- this method according to Mercer and Mercer (2001: 323) is when learners read aloud in unison. Choral reading with the educator's voice leading and providing the model is an excellent way of practicing oral reading;

- paired reading- fluent readers may be paired with less fluent readers. The fluent readers read first to model fluency and then the less fluent readers follow; and
- readers' theatre- using scripts to read out loud in the form of a play to classmates (Browne, 2007: 69) using text rich in dialogue. The learners must not memorise the text as this is to practice reading fluency and by cooperating, the whole class may enjoy this reading session.

Browne (2007: 53) supports the idea that learners will improve their reading by listening to a fluent reader and following this by reading aloud themselves. By reading text repeatedly with success, fluency will develop and they will understand and decode text with ease. The researcher supports this view of Browne (2007: 53) as well as that in RNCS (2002: 27) Learning Outcome 1, Assessment Standard 3, with the idea of a variety of reading material that may be used to develop independent reading and fluency such as poetry, prose, fiction, non-fiction and music. According to the researcher, poems contain rhyme, rhythm and meaning and is, therefore, an enjoyable way of practicing to read but is not adequately used in classrooms.

The researcher supports the idea that literate caregivers (parents) of learners may be used as models of fluent reading in the classroom. Using this strategy the learners' vocabulary, familiarity with the written word and their knowledge of the world around them will increase immensely. The more learners learn to pronounce words in their speech and reading, the better their linguistic knowledge will develop. They will understand the letter-sound combinations better and appreciate the use of adjectives, nouns, pronouns and verbs when using them in sentences.

As discussed, many reading approaches and instructional techniques are available for teaching learners with difficulties. Because each learner with reading difficulties is unique, a combination of approaches and various teaching strategies are needed to meet the needs of these learners.

The researcher acknowledges the findings of Mraz et al. (2008: xii) that because of the enormous complexity of the reading task it causes many educators to resort to prepackaged reading programmes to provide the structure and sequence for their specific classes and age groups. Many of these programmes are available as business opportunities in South Africa. According to the researcher, the problems with some of these reading programmes, although prepared with the best of intensions, are that they are not sensitive to specific school cultures, the educators' instructional styles and the diversity of South African learners. Most of the abovementioned programmes meet only the minimal needs of young readers with reading difficulties.

3.6 Comprehension

Gillet and Temple (2000: 242) provide a definition of comprehension as making meaning from text. A number of reading experts (Bursuck & Damer, 2007: 254) agree that comprehension should be the goal of all reading instruction at every level. Learners should begin with their first reading experience to expect to make sense of what they read. The process of comprehension involves three basic elements: prior knowledge, knowledge of text structure and an active search for information.

According to Sousa (2005: 52) schemata are important in helping to comprehend text. Young learners use their schemata to interpret cause and effect, to compare and contrast and to make inferences about the author's meaning.

It is also evident in the studies of Bursuck and Damer (2007: 254) as well as Gillet and Temple (2000: 34), that prior knowledge may be defined as the understanding of new information in the light of known information. This means trying to make sense of what is being read, namely, the reader's ability to decode text accurately and fluently enough to allow the reader to comprehend what is being read. Another element in becoming a good reader

requires that one must be familiar with the structure of the text and be able to use that structure to guide the learners' search for meaning. A further element is the active search for meaning which is not only contained in the words on the page, but also in the mind of the reader.

Catts and Kamhi (2005: 208) and Mercer and Mercer (2001: 262) suggest the following guidelines and strategies that may be of help to the educator in improving and increasing the readers' language comprehension skills:

- when a learner has difficulty following directions, establish eye contact and maintain attention prior to presenting information. Cue the learner to listen by using silent pauses or instructions to listen to or look at the educator. This will help to establish a mental set for listening;
- present new concepts in as many modalities as possible for example; auditory, visual and kinesthetic;
- the learners may act out sentences to increase understanding of the relationship between semantic role and word order like in; "Susan claps her hands", or manipulate objects and talk about their movement;
- teach specific memory strategies for example; visual imagery, clustering and grouping information as well as forming associations to help the learner organise, categorise and store new information for later retrieval;
- to enhance the learners' recall and memorisation of new vocabulary, use the keyword method in which familiar words are associated with each new concept or word;
- reading is more than remembering exact words from the text; it also involves reasoning and adding to their knowledge;
- self-questioning to establish what they do not know and what they want and need to know. By asking good questions helps the learners to make hypotheses, draw analogies from experience and set some purposes and guidelines;
- the learners have to integrate information across texts, add information by making inferences to build cohesion, and use structure to organise their comprehension;
- the learners have to monitor their reading; and

- the learners have to respond thoughtfully to what they read. They have to exhibit critical and analytic thinking.

Because language is interactive, the educator should be creative when implementing teaching methods, because an activity designed to focus on a particular skill also may be useful in other areas.

3.7 Synthesis

From the information gathered in this chapter it is clear that effective reading requires educators to be knowledgeable, informed professionals, capable of addressing learner needs. In designing a reading programme which may be successful to the beginner reader, educators faced with the difficult task of matching a multitude of commercial programmes, strategies and techniques with a diversity of learners with needs.

Educators must use teaching strategies which are motivating and appropriate to the needs of the learners. It is necessary for educators to use a range of methods suited to the visual, auditory and kinesthetic development of the learners.

CHAPTER 4

IDENTIFICATION OF READING DIFFICULTIES AND EARLY INTERVENTION IN GRADE 2

4.1 Introduction

As discussed in Chapters 2 and 3, it is clear that reading skills are built on a foundation of spoken language processing and a supportive educational system. According to Ehri et al. (2001: 13) a great deal has been written about the process of learning to read and how this may go wrong as the result of cognitive or experiential barriers. The focus in this chapter is on the purpose of assessment, nature of reading difficulties and the importance of early intervention.

There is mounting evidence from several research studies (McCardle, Mele-McCarthy, Cutting, Leos & D'Emilio, 2005: 1-5; Artiles et al., 2004: 717) of the significant rate of home language learners identified as having reading difficulties. A learner with an average or above average intellectual ability who performs well in general school work, but whose reading is unsatisfactory, should be considered for support in reading (see also paragraph 2.7).

Bursuck and Damer (2007: 143-145); Johnson (2006: 170) as well as Mercer and Mercer (2001: 132) postulate that for the educator to be able to assess a reader to the best of his or her ability, the educator must:

- understand how the reading process works;
- ensure that assessment is in line with the instruction process to benefit the struggling reader;
- realise that ongoing assessment determines the required instruction which will benefit the struggling reader;
- maintain running records which are powerful assessment tools;
- through regular conversation with the learner, narrow down the cause of comprehension difficulties; and

- apply flexibility while working with the struggling reader.

The result of the above is that assessment of individual learners should lead the educator to provide proper and explicit lessons for the whole class (Bursuck & Damer, 2007: 143-145; Mercer & Mercer, 2001: 132). When educators, after proper assessment has been done of a learner showing a possibility of reading difficulties, have sufficient evidence confirming the difficulty, quick intervention is most essential. The intervention strategy must be well planned and suitable for the specific reading difficulties that the learner may experience. The diversity of learners must be taken into account when planning the intervention strategy. For this study, the researcher plans to investigate music and related activities as an intervention strategy to mitigate reading difficulties of Grade 2 learners and this will be discussed in Chapter 5.

4.2 The assessment process

According to Johnson (2006: 169); Mercer and Mercer (2001: 99) and Gillet and Temple (2000: xii) the importance for all learners to become effective, strategic readers, stresses the current emphasis on authentic assessment that accurately represents what learners can do, challenging our thinking about the assessment process.

According to the SIAS Strategy (2008: 102), as discussed in Chapter 1, assessment is a process of identifying, gathering and interpreting valid and reliable information about the performance of the learner against clearly defined criteria using a variety of methods, tools and techniques which include the following four activities:

- gathering information about how learners are progressing towards the achievement of the outcomes;
- assessing this evidence against the outcomes;
- recording this information in a systematic way; and
- reporting on the level of performance of learners.

According to the studies of Johnson (2007: 155) as well as Mercer and Mercer (2001: 98) the assessment of the reading task exceeds the normal classroom instruction responsibilities of the educator. Grades, standardised tests, grade-level checklists for reading and writing behaviours, number of words read correctly on word lists or words spelled correctly on spelling lists all constitute assessment.

4.2.1 Assessment characteristics

The educator's task is to teach in order to help learners to satisfy the requirements of the Assessment Standards in the curriculum and set out in the SIAS Strategy (2008: 13-19). For learners to be able to reach their full potential, assessment should be:

- transparent and clearly focused;
- integrated with teaching and learning (Chapter 3);
- based on predetermined criteria or standards; (Chapter 3);
- varied in terms of methods and contexts (Chapters 2, 3); and
- valid, reliable, fair, learner-paced and flexible enough to allow for expanded opportunities (Department of Education, 2002: 89).

According to the RNCS (Department of Education, 2005: 58), assessment should provide indications of learner achievement in the most effective and efficient manner. According to Jennings et al. (2006: 78) the process of assessing reading involves more than giving tests, and postulates that educators, in order to be successful in their assessment, need to use only tests relating to background information and observation. Supporting educators in the assessment tasks, according to the Revised National Curriculum Statement of the foundation phase (Department of Education, 2005: 57), requires the use of continuous developmental assessment devices such as the following:

- portfolios of learners' work to be able to demonstrate and evaluate the learner's achievement;

- teaching and assessing reading using authentic literature and a wide variety of teaching methods;
- integrating reading and writing across all curricular areas; and
- helping all learners, regardless of their level of literacy.

4.2.2 Assessment methods

According to the Assessment Guideline Document of the foundation phase in Inclusive Education South Africa (Department of Education, 2001: 58) different methods and strategies of assessment must be used by educators for learners who are experiencing difficulties in learning. Studies by Zimmerman et al. (2008: 44) and Mercer and Mercer (2001: 122) indicate the same methods as from the assessment document, which may be used by the educator in the inclusive classroom.

Individual assessment: The educator uses the information gathered from the assessment to establish learners' current levels of performance, to plan lessons and to identify support for reading difficulties. This is when an educator needs more specific information about a specific learner's potential skills and this can be obtained from an individually administered diagnostic reading test or through informal assessment.

This may be through:

- diagnostic reading assessment- this is test-item related to specific reading skills. The educator determines out how the learner attempts to read and the ability in a specific skill area.
    - For example: oral reading, auditory comprehension, word recognition, phonetic analysis, visual auditory, word attack, reading rate, etc (Zimmerman et al., 2008: 52);
- informal reading assessment- examining a learner's daily work through day-to-day observation;
    - For example: During oral reading, does the learner read word by word or with fluency?

What is the attitude of the learner towards reading?
Does the learner have a good sight vocabulary?

Peer assessment: Learning from the mistakes or successes of one's peers, sharing skills and testing the system of values as well as developing critical thinking through criticism. This may be done by listening to one another's reading.

Self assessment: This helps the learner to develop realistic judgments of their own capabilities and needs. Self-criticism, self-evaluation and self-assessment are crucial in the development of self-regulating adulthood. This may be done through a self-assessment sheet which the learner has to complete after reading or through a 4-level picture face to be coloured according to the learner's own opinion of his reading. The sheet may reflect to following:

- today I raised my hand to ask a question;
- I answered a question; and
- my favourite part of the lesson.

Group assessment: Learners give their own opinion of their group's performance compared to the level they should have reached. Learners are involved in and not threatened by this method and they learn from this process. This may be done through a work performance grid for example:

- responsibility of a task allocated to the group such as who reads when;
- participation in discussion after reading a story;
- I understand all instructions such as which part to read; and
- I enjoyed reading and to play out the parts in the story.

Parent participation: This method of assessment provides the parents with information about their child's progress in reading tasks in the inclusive classroom and enables them to decide on what support and assistance to give. Parents can be a valuable source of information and through an

observation sheet the learner's reading ability may be assessed. For example my child:

- struggles to break words into syllables;
- overlooks parts of words while reading like; *tall* instead of *talk;*
- confuses longer words which have similar beginning or ending like; *comfort* and *compact;*
- reads very slowly, moving from sound to sound and cannot remember the sentences they have read;
- often do not remember irregular sounds; and
- cannot read familiar sight words.

Portfolios: This is a purposeful collection of learner's work. Selected samples of work are placed in the portfolio as evidence of learning achievement. The nature of the reading errors (miscues) is more important than the number of errors made. Examples of miscues may be classified in the following categories:

- semantic miscues are similar in meaning to the text word. Simple substitution like *mom* for *mother* is not important;
- syntactic miscues are the same part of speech as the text word. Some miscues show that the learner fails to comprehend the meaning but at least substitutes a word that makes grammatical sense; and
- graphic miscues are similar to the sound-symbol relationship for the initial, medial or final portion of the text word such as *rind* for *round.*

4.2.3 Assessment purpose

Jennings et al. (2006: 78) share the opinions expressed in the statements of the Assessment Guideline Document of the Foundation Phase in Inclusive Education South Africa (Department of Education, 2001: 48-51) that continuous assessment fulfils five main purposes of assessment, namely:

Baseline assessment: Used at the beginning of new learning activities to find out what the learner already knows and how lessons may be planned to provide a wide range of abilities amongst the learners.

Formative assessment: This assessment method is designed to monitor and support the learner. The weak and strong areas are assessed to be able to develop the learners and improve their performance over a period of time.

- Informal formative assessment:
  - oral questions to determine how much learners know and remember from previous lessons;
  - educators observing the learners when completing worksheets, assignments or activities;
  - educators checking exercise books; and
  - casual conversations with learners to determine progress.
- Formal formative assessment:
  - assessment of independent activities;
  - assessment of application of skills after completion of worksheets;
  - assessment of oral presentations/demonstrations; and
  - peer assessment or self-assessment can also be used.

Summative assessment: Summative assessment is usually applied as a final judgment of a learning programme, at the end of the term or at the end of the year. This method is the summing up of or to "summarise" all the results prior to assessments and it guides future planning for development, or placement. It is also a form of feedback and feed-forward for learners, their parents and educators. It also helps for support decision-making.

Summative assessments are usually conducted and recorded more formally than those of formative assessments. This provides evidence of at least one instance of learner performance.

Diagnostic assessment: Continuous formal and informal monitoring of learners to indicate the individual strengths and needs and to assist educators in providing enrichment or support where required. This is necessary for educators to plan and manage educational support for learners in need. Information from diagnostic assessment enables the educator to intervene by offering alternative learning strategies. According to Bursuck and Damer (2007: 142); Johnson (2006: 170) and Jennings et al. (2006: 78) the emphasis must be on:

- identification of learners' strengths and weaknesses;
- implementation of learning support; and
- provision for additional teaching and learning activities.

The result of the above should be that the learning experience may be individualised.

4.2.4 Assessment tools

Assessment tool, as suggested in Mercer and Mercer (2001: 296) as well as RNCS (Department of Education, 2005: 61), is any instrument that the educator uses when assessing and is appropriate to the method of assessment like the following:

- written assignments and worksheets- assignment worksheets should be assessed using a marking memorandum or set of criteria for example: used texts as in a story listened to, and answered in writing;
- tests- tests may be written but may not be used for placement. Tests may be used in phonics and spelling;
- portfolios- a purposeful collection of learner's work. Selected samples of work are placed in the portfolio as evidence of learning achievement- examples of spelling tests and answering sheets of comprehension tests may be useful to be placed in a portfolio;
- observation sheets- these are tools in which an educator records his/her observations as indicated with the observation chart below. These may be formal, planned and incidental; and

- rubrics and assessment grids- rubrics are valuable in assessing group dynamics, life skills, oral and practical presentations. Instead of using a class list, rubrics are easy to use as indicated in Table 4.1.

Table 4.1 Observation sheet

Aspects – Learner's name	Rhyming	Phoneme identity	Knowledge of letter-sound	Blending/ Segmenting	Deleting/ Substituting

Source: Mraz et al. (2008: 42)

4.2.4.1 Word attack strategies and assessment grid

Johnson (2006: 67) and Gillet and Temple (2000: 104) note in their studies that miscues are manifestations of reading behaviour of struggling readers and to analyse the level of reading they compiled a few word attack strategies the learner used during oral reading:

- substitutions of real or nonsense words;
- insertion of extra words;
- omission of whole words or phrases;
- corrections made by the reader either at the time the miscue occurred or later during the reading;
- words provided by the educator;
- reversals of word order;
- long pauses and repetitions of words or phrases;

- the learner hesitates and stumbles, or reads too quickly;
- guess the entire word from the first letter; and
- finger pointing while reading.

The following rubric, Table 4.2 is consistent with the learner's age or cognitive ability (Sousa, 2005: 136).

Table 4.2 Rubric for reading fluency

Makes letter reversals, as *b* for *d* and *q* for *p*	Rarely	Sometimes	Often
Makes letter inversions, as *n* for *u* and *w* for *m*	Rarely	Sometimes	Often
Makes word reversals, as *pot* for *top*	Rarely	Sometimes	Often
Confuses small words, as *and* for *said* and *goes* for *does*	Rarely	Sometimes	Often
Has difficulty pronouncing long, unfamiliar words	Rarely	Sometimes	Often
Confuses words that look or sound alike, as *left* for *felt* or *ocean* for *motion*	Rarely	Sometimes	Often
Relies on guessing and context to decode new words rather than sounding them out	Rarely	Sometimes	Often
Omits parts of words when sounding them out, as *enjble* for *enjoyable*	Rarely	Sometimes	Often
Has difficulty breaking multisyllabic words into their component syllables	Rarely	Sometimes	Often
Avoids reading aloud	Rarely	Sometimes	Often
Pauses and hesitates during speech, lots of "ums"	Rarely	Sometimes	Often
Has difficulty responding orally when questioned	Rarely	Sometimes	Often
Relies heavily on memorising instead of comprehending	Rarely	Sometimes	Often
Has difficulty remembering facts	Rarely	Sometimes	Often
Transposes number sequences	Rarely	Sometimes	Often
Confuses arithmetic signs	Rarely	Sometimes	Often
Has difficulty finishing written tests on time	Rarely	Sometimes	Often
Has difficulty managing time and tasks	Rarely	Sometimes	Often
Has difficulty representing the complete sound of a word when spelling	Rarely	Sometimes	Often

Assessment rubric, Table 4.3, is compiled from several sources (Bursuck & Damer, 2007: 178; Shaywitz, 2003: 37) and may determine, by assessing, whether a learner needs additional support. According to Sousa (2005: 136) educators may use Table's 4.2 and 4.3 as checklists and as an indication whether the learner may be displaying difficulties in reading. This information must only be used to assess the degree of difficulty a learner may have in learning to read.

Table 4.3 Assessment rubric

Performance level: Reading abilities					
	1 Not achieved	**2 Partially achieved**	**3 Achieved**	**4 Outstanding**	**Observation and assessment**
Vocabulary Word knowledge					
Fluency (flowing)					
Reading comprehension (understanding)					
Communication (audible)					
Spelling (oral/written)					

4.3 Reading difficulties: Contributing factors

According to the study of Sousa (2005: 119) it is clear that factors such as environmental and social conditions may have an impact on the achievement of learners in formal schools. It is important to realise that for these learners,

educators should not be looking at what is wrong with them, but how they can alter instructions to make them more successful in learning to read.

4.3.1 Environmental and social factors

Research studies (Jennings et al., 2006: 24-27; Landsberg et al., 2005: 28) find that reading difficulties result essentially from either environmental or social factors, or a combination of both.

Environmental factors include limited exposure to language in the preschool years. Therefore learners have little phoneme sensitivity as well as poor letter knowledge, print awareness, vocabulary and reading comprehension. The opinions of Strickland and Schickedanz (2004: 15) on the other hand are that cultural factors profoundly influence learner's early development.

According to McIntosh et al. (2007: 267); Pan, Rowe, Singer and Snow (2005: 765) social disadvantage factors in learners from poor family backgrounds, may affect skills and knowledge of learners upon entering schools. Some of the learners may come from single-parent households, be living in poverty, have parents with little education and low literacy levels and may have poor nutrition. These social disadvantages may delay learners' development of both spoken language and literacy skills. Locke, Ginsborg and Peers (2002: 7) are of the opinion that the lack of informal experience of books and print in the early years, have a negative impact on literacy instruction in schools. Therefore, reading may be at risk because academic difficulties are associated with an early delay in language development as a result of the learner's background.

4.3.2 Emotional factors

Educators need to understand the relationship between emotions and cognition in learners who struggle to read. Learners who have reading

difficulties are particularly prone to experiencing emotional distress (Zambo & Brem, 2004: 189).

There may be several reasons for the emotional distress when a learner has to read like anxiety ("stage fright") or to read in the presence of the educator and peers. Educators who work with learners who have difficulty in reading must realise the importance of these phenomena, because reading is a cognitive process with an emotional component.

Learners may experience negative psychological and emotional reactions to reading (Zambo & Brem, 2004: 189). These learners may respond spontaneously to the urge to flee or have to go to the bathroom just to avoid reading out loud in class. Some learners who struggle with reading believe that no matter how hard they try, their efforts will only lead to failure. Fear of failing by such learners mostly results in a lack of motivation and ambition. Learners with negative self-schemas may totally loose their self-esteem and willingness to read.

4.3.3 Motor coordination and the cerebellum

The diversity and multidimensional nature of reading difficulties related to visual and auditory perception, memory and motor coordination and the possible treatment lead us to proper analyses of and support for learners who experience difficulties in reading (Sousa, 2005: 127).

Sousa (2005: 128) also postulates that the crucial developmental stages of young learners are sitting up, walking, babbling and speech, but if there is a delay in the development of the areas of the brain which control these processes, it may lead to reading, writing and spelling difficulties. Therefore, less motor coordination skills lead to less sensitivity to onset and rime and the phonemic structure of language.

4.3.4 Language difficulties

It is clear, according to many studies (Duffy, 2002: 29; Dougherty Stahl, 2006: 161; Kame'enui et al., 2002: 29 and Johnson, 2006: 15) on reading difficulties that difficulties associated with reading do not diminished with time. Therefore, the earlier educators and parents detect reading difficulties in young learners the earlier support may be given. Sousa (2005: 130) emphasises the notion that problems mostly reveal themselves first in spoken language and then later in learning to read.

The researcher noticed that the tendency in Afrikaans spoken language is the expressive use of English words and phrases. This may be because young learners imitate their parents' and peers' manner of speaking and perceive it to be the norm. This of course has its implications on their speech production and later in their spelling and writing. It will inevitably affect their reading as well because they are accustomed to the language spoken at home and therefore do not necessarily know the correct way of speaking.

4.4 Identification of reading difficulties

Gillet and Temple (2000: 35) postulate that the problems that learners experience in the beginning reading stage usually centres on word decoding, sight vocabulary and comprehension. Those learners who lack adequate phonological awareness, which should have been the outcome of the emergent literacy stage, will have difficulty decoding words. Learners have to be good at recognising words. Learners with reading difficulties at the beginning reading stage need help in learning to decode words and developing a sight vocabulary.

Sousa (2005: 130) states in his study that critical observation of a learner's progress in learning to speak and eventually in learning to read, remains the educator's and parent's most effective tool for identifying potential reading difficulties.

4.4.1 Early identification

Various researchers (Bursuck & Damer, 2007: 4; Kame'enui et al., 2002: 28 and Bos et al., 2000: 40) attempt to describe more specifically the types of reading difficulties observed in learners. Therefore, educators must be aware of the different components of the reading process to be able to assess those learners who are in need of help and to be able to give support to them.

Torgensen (2001: 57) notes in his study that educators can make a huge difference in elimination of reading difficulties of some learners, but only with the necessary scientifically based methods and knowledge. Educators and parents must be aware of the fact that when a learner shows one or more of the following spoken language difficulties, it may be an early indicator of reading problems:

- delay in speaking- delays in speaking may be an early indication of potential reading difficulties, because learning to read is closely linked to phonological skills in spoken language (McIntosh et al., 2007: 268);
- delay in consonant acquisition- according to Mercer and Mercer (2001: 239) problems in phonology appear as articulation disorders, which may be a delay in consonant acquisition (substitute one consonant for another) such as: "*wabbit*" for "*rabbit*";
- difficulties with pronunciation- by the age of five to six years, a learner should passed the stage of having difficulties in proper pronunciation of words. Difficulty in pronouncing words may be an indication of future difficulties in reading where the mixing of syllables might occur like *hosipital* instead of *hospital.* (Landsberg et al*.,* 2008: 131);
- recalling incorrect phonemes- these learners will use the words *things* and *stuff* to mask their inability to use or recall the correct words. The problem is not with the thinking of the learner but with the inability to express themselves through language and that means not to be able to recall a word on command;
- function of words- research results according to Flanigan (2006: 37) indicate that some beginner readers may be unsure of what the term word means- to a beginner reader words may only have a functional

meaning in primary oral communication. It seems that learners are not naturally prepared to treat words as individual units of meaning, not to mention the separate sounds that make a word;

- blending of sounds- Spear-Swerling (2007: 301) describes one way to assess phonemic awareness is by asking learners to blend orally presented sounds into spoken words, for example- "what is this word you hear? */d/,/i/,/sh/*" or to segment sounds in a spoken word like: "name the sounds that you hear in the word *dish?"* Educators and parents must be aware of the fact that occasionally young learners may exhibit language errors while speaking and that this is a normal occurrence;
- word construction difficulties- learners who do not understand word constructions and the use of wrong suffixes, prefixes or affixes as in "*I singed to my educator"* (Landsberg et al., 2008: 131);
- insensitivity to rhyme- young learners find it joyful and stimulating to play with rhyme. By using rhyming sounds, the learner recognises the separate segments in words and that different words may share the same sound. The learner becomes acquainted to rhyme by hearing and repeating rhyming words. Learners are ready for reading if they show good rhyming skills. However, if the learner shows little or no sensitivity to rhyming, this may indicate reading difficulties because of the inability to detect consonant sounds that changes the meaning of rhyming words; and
- genetics- studies show that if there is reading difficulties in the family, it may be an indication that the problem could be genetic. Studies also reveal that identical twins, whith the same genes, quite often will have reading difficulties. The reading success of these learners will depend on the different environments at home and at school (Shaywitz, 2003: 46).

4.4.2 Phonemic awareness and phonics

Zimmerman et al. (2008: 3) and Gray and McCutchen (2006: 326) note in their studies that phonemic awareness builds on a learner's ability to perceive and manipulate sounds in spoken words. Learners identified as having reading difficulties struggle to understand the manipulation of sounds. Phonemic awareness also includes being able to think of words that rhyme, perceiving that some words have the same or very similar sounds at the beginning, middle, and end, and being able to segment and blend sounds in spoken words. Struggling learners have difficulty to recognise rhyming words and in segmenting sounds.

Various literature studies highlight, that phonics instruction should not dominate reading instruction but should rather complement it. Gillet and Temple (2000: 296) note that learners have to master a complex sound-to-symbol coding system to be able to decode unknown words. Because of the complexity of the sound-to-symbol relationship, it may cause difficulties for the learner with reading difficulties. Learners with reading difficulties may lack the understanding of multiple-sound consonants (*g,c*), vowels (*a,e,i,o,u*) and consonant blends (*ch, pf*).

Eckert and Leonard (2000: 199) acknowledge the notion that readers with reading difficulties have poor phonological awareness or an oral language difficulty characterised by a difficulty with listening comprehension. Reading difficulties in this context refer to a specific difficulty in understanding the sound structure of language, that is, phonological awareness, which is representing or imaging phonemes and associating these images with letters (graphemes) (refer to Chapter 2).

A great deal of research (Holm, Farrier & Dodd, 2008: 304; Bender & Larkin, 2004: 90) has demonstrated that learners with reading difficulties have problems detecting and manipulating phonemes. If the learner has difficulty to detect differences in speech sounds, and manipulate these differences in sounds, that learner may experience problems in detecting different sounds

that are represented by different letters. The skills that serve as the basis for phonemic manipulation were discussed in Chapter 2.

The researcher supports the study of Holm et al. (2008: 304) and states that because of poor phonological skill development, the struggling learners' unsuccessful reading and comprehension leads to spelling and writing difficulties. Some examples for this statement according to the researcher's own experience in her class are as follows:

- for the Afrikaans word "*materiaal"* the learner writes "*tiemeriaal"*;
- for "*fabriek"* the learner writes "*vadek"*;
- "*dotel"* for "*bottel"*; and
- learners' sentence: "*Die dottel gan naa saprat toe of aner plake*" instead of "*Die bottels gaan na ander plekke toe".*

According to Sousa (2003: 146), the development of phonemic awareness is a continuum that begins with simple rhyming and ends with the manipulation of individual phonemes. De Jong (2007: 145) and Mann and Foy (2003: 79) explain that experimental studies show that learners who do not have the necessary phonological awareness skills, have difficulties in reading.

4.4.3 Problems with decoding

Catts and Kamhi (2005: 42) note that learners who are acquiring reading skills in an alphabetic orthography must learn to decode, which means to establish a system of mappings or correspondences between the letters or graphemes of printed words and the phonemes of spoken words.

There are several fundamental principles in early reading, as discussed in Chapter 2, which a learner has to master to result in effective reading skills, and failure to master these during the first couple of years of reading will result in reading difficulties (Spear-Swirling, 2007: 302; Gray & McCutchen, 2006: 325; Catts & Kamhi, 2005: 42). These fundamental principles can be summarised to include the following:

- the development of phonological awareness and manipulation;
- understanding the alphabetic principles, namely that phoneme sounds are represented by letters, and how to form that letter sound; and
- to be able to quickly produce the sounds represented by letters.

According to Turan and Gül (2008: 279) learners with reading difficulties have phonological problems to start off with. Moreover, according to Roth, Troia, Worthington and Handy (2006: 65), these problems may be related to discrimination of rhymes into smaller phonemic units.

However, some studies (Davin & van Staden, 2005: 3; Gillet & Temple, 2000: 217) identify "milestones" in addition to fundamental principles that may be considered stepping-stones or building blocks for effective readers during pre-school and in Grade 1.

Several studies on auditory skills (Landsberg et al., 2008: 132-133, Alloway & Gathercole, 2005: 272) show causes that may be linked to reading difficulties although some of these causes may be related to each other:

- differences in auditory and visual processing speeds;
- memory deficits; and
- sentence-recall difficulties.

4.5 Perceptual-skill difficulties

Research studies (Sousa, 2005: 126) and Madaule (2001: 21) discuss listening as one of most important skills a young learner needs to develop to be successful in speaking as well as learning to read.

Some learners with reading difficulties experience deficits in auditory and visual perception which are not related to linguistic systems. The possible causes to take into account when support is given to learners with reading difficulties are discussed below.

Previously, according to studies by Turkington (2002: 56), the conclusion by researchers was that reading problems occur through visual problems such as seeing letters or words "backwards".

More recent research results (Jennings et al., 2006: 172; Johnson, 2006: 67; Sousa, 2005: 123) show that for the beginner reader to be able to read successfully, the visual and auditory processing systems have to work together. The visual process is when the eyes scan the words on the page followed by sounding out the words mentally. It is essential for the learner to correlate the letter (grapheme) that he sees with the sound the learner hears (phoneme) internally. The visual and auditory systems must synchronise.

The educator needs to know when the beginner reader has control over the finger pointing stage of reading and when the learner needs their eyes to do the reading from thereon. Johnson (2006: 67) postulates that readers have to begin to combine words into meaningful phrases as their eyes move quickly across the page otherwise it may interfere with reading fluency.

However, if the learner has difficulty synchronising the auditory processing system with the visual processing system the learner's eyes are already scanning the letter "*g"* while, the phoneme */d/* or *duh* is still being processed in the auditory system. Therefore, the learner's brain incorrectly associates the letter "*g"* with the phoneme sound of */d/* or *duh*. Later when the learner has to recall or write the word *dog*, the learner hears the phoneme */d/* or *duh* but incorrectly recalls the letter "*g"*, and will eventually produce the word as *god*. To be able to support these learners with reading difficulties synchronising the visual processes with the auditory processes may alleviate the problem (Witruk et al., 2002: 124).

Sousa (2005: 39) states that educators must be aware of the correct pronunciation of sounds in isolation. The researcher observed that while explaining isolated sounds to learners the word "bed" is pronounced the following way: "*buh-eh-duh*", and more harm is done this way. Learners may

get confused because they see only three letters but they sound out five sounds: *be-e-de*.

The researcher states that the incorrect way of isolation of sounds of a word for example: "*d/o/g/",* may cause difficulties for some learners. In her experience, learners with reading difficulties may sound the word "*dog"* the following way: *duh/oh/guh,* which in writing looks like this: *de/o/ge.* In her opinion, it is of utmost importance that the sounding of words must be the correct way like: *d/o/g;* only the sound of the letter as it has been read.

4.5.1 Auditory discrimination

Wright, Bowen and Zecker (2000: 533) postulate that the ability to hear and discriminate between sounds, is of vital importance in learning to read and, if a learner has difficulty to hear differences in sound frequency, that learner needs support. This means that the learner will have difficulty discriminating between tone and pitch in speech. Because reading involves sounding out words in the auditory processing system, it means that the learner will experience difficulties in reading. Also the inability to detect tones because of interfering background noises indicates problems with reading related to the auditory functions, which plays an important role in reading difficulties.

The inability to detect and discriminate sounds presented in rapid succession as well as to indicate the order of two sounds presented in rapid succession are commonly found in learners with reading difficulties. This problem is, however, directly related to distinguishing phonemes as part of phonological processing (Wright et al., 2000: 532). This means that the learner will find it difficult to discriminate between letters and words which sound similar when asked to write or spell a certain letter or word for example; *cap/cat* or *pen/pin* as discussed in paragraph 5.4.3.

Mraz et al. (2008: 18); Bald (2007: 6), as well as Bursuck and Damer (2007: 33-49) demonstrate sound activities to be used in the reading-difficulty programme which matches the developmental stages of phonic awareness:

- sound matching- learners are asked to match a word or words with a given sound as in: beginning sound "s"; middle sound "u" or ending sound "d". Sound matching can also be in word families as in: match, hatch, latch, catch;
- sound isolation- learners are asked to determine the beginning, middle or ending sound in a word or words. The educator may say the following three words beginning with the same sound as in: "pat", "pool", "play" and the learners must tell the beginning sound they heard;
- sound blending- learners are asked to combine individual sounds to form a word. The educator may say: "I think of an animal with its name sounding like this /*c*/, /*a*/, /*t*/". The learners should respond with the word "*cat";*
- sound segmentation- the learners are asked to segment each individual sound in a word like "*mop"* and the response should be /m/, /o/, /p/. Or otherwise the learners may respond with the onset and rime in the word "*spot"* with /*sp*/ and /*ot*/; and
- sound substitution- this is where a learner must added, subtracted or substituted a sound from an existing word according to what the educator asks like in: "What word do you get when you take the "*s*" away from "*spark*?". The learner should reply with, "*park*". Or the educator may ask the learner to add an "*s"* to "*un*" and the learner should reply with "*sun*".

4.6 Manifestations of reading difficulties/fluency

Bursuck and Damer (2007: 8), Johnson (2006: 49) and Bender (2004: 191) define reading fluency as the quick recognition of individual words, oral reading and a learner's understanding of whole phrases and sentences. The appropriate use of expression and punctuation is of utmost importance.

Johnson (2006; 51) and Gillet and Temple (2000: 286) state that poor word recognition and slow word-by-word reading cause difficulty in comprehension which results in choppy and plodding oral reading. The researcher observed that learners may also read in monotone and pause at inappropriate places. The cause may be that some learners are not exposed to fluent adult reading models or to recite memorized books, which is a pre-reading experience. Another cause may be that poor readers are not given enough opportunities for reading to practice actual reading.

According to studies by Spear-Swerling (2007: 302) the more skilled the reader becomes, the better the word recognition, comprehension and the ability to read with change of tone and emphasis. When learners read aloud, there must be the necessary guidance and feedback from the educator to enable the learners to improve their fluency according to Gillet and Temple (2000: 288). Learners need fluency instruction when:

- their word recognition errors exceed 10 per cent of the text;
- the learner reads without any expression; and
- the learner has problems with comprehension after reading a text orally.

4.6.1 Comprehension difficulties

Solarsh (2002: 71) states that poor reading comprehension may be defined as learners who do not derive meaning from what they read. Answering questions about the text is an intrinsic part of the reading process, and unsuccessful readers may not have the ability to deal with the explicit as well as the implicit information. The ability to pronounce a word does not necessarily indicate an ability to understand a word's meaning. Therefore, understanding comprehension of words may involve more than recognition skills.

According to studies by Cain and Oakhill (2007: 41) for learners to become successful and independent readers, they need to develop two broad skills:

- to be able to recognise and decode individual words on the page; and

- to be able to comprehend the text.

By failing these two skills, they may become struggling readers who need support.

According to Gillet and Temple (2000: 242) the psychologist Jean Piaget describes comprehension as the understanding of new information in relation to old information. In short it may be described as using what we know to make sense of what we do not know. Wide reading and a habit of curiosity is important for every learner and more specific for the struggling reader.

4.6.2 Phonological skills in comprehension

Recent studies by Cain and Oakhill (2007: 42) and Savage and Stuart (2006: 33) reveal that comprehension involves a wide range of cognitive skills and processes (as discussed in paragraph 2.11). Their studies acknowledge previous studies on phonological skills, associated with the success with word-reading development but argues that there is little evidence of phonological processing deficits in poor comprehenders. According to Johnson (2006: 75) often when learners with comprehension difficulties read a passage, they encounter words that they either cannot read or do not understand the meaning of. They will fail in reading because of one word standing in their way of comprehending.

The studies of Nation and Snowling (2000: 231) postulate that poor comprehenders were less able to use sentence context to read irregular words. It is clear according to these studies that poor comprehenders struggle because of slower and less efficient word-processing skills.

4.6.3 Syntactic knowledge

Most learners with difficulties in comprehension, struggle with syntax. One of the most important aspects of reading which must be emphasised by the educators to learners is syntactic relationship. Syntax is the relationship

between words used in a sentence. For an example: *Mary played with Susan the whole day and she lived on the farm.* The pronoun *she* refers to Mary and not Susan.

Cain and Oakhill (2007: 46) support the notion that learners with poor discourse and text comprehension are struggling in their ability to correct sentences with incorrect word order or grammatical errors. They also reveal that poor comprehenders have poor declarative knowledge about the sorts of information provided by particular story features such as: story titles, beginnings and story endings.

4.6.4 Attention during reading to comprehend

Researchers such as Sousa (2005: 160) recognise that successful reading requires sustained attention and concentration. This is a complex process which takes place when the brain focuses, shifts, sustains and encodes relevant stimuli. Another important process is the visual attention process, where perception is linked to comprehension. Learners with attention deficits mostly have problems with reading.

4.6.5 Memory in reading comprehension

The working memory capacity (as discussed in Chapter 2) is correlated with young learners' reading and listening comprehension and impaired in learners with comprehension difficulty.

Many skills involved in successful comprehension such as integration and inference, use of context, monitoring of comprehension and structuring of stories are all dependent on the storage of the information in memory. Therefore, Cain, Oakhill and Bryant (2004: 35) state that there is a direct relationship between reading comprehension and word-reading ability as well as vocabulary knowledge (as discussed in Chapter 3).

Through personal experience, the researcher noted that learning poems as a weekly routine does not occur in some South African classrooms as was the case in earlier times. This is one of the most crucial exercises to develop the young learners' memory skills, and the question may be asked what other activities are there to support this activity?

4.6.5.1 Sentence recall in reading difficulty

Sentence recall is a task, stipulated by Alloway and Gathercole (2005: 273) that involves the integration of semantic information with structural aspects of a sentence such as the word order and inflectional markers and has been suggested that it taps both short-term and long-term memory, while the lexical or phonological component is associated with verbal short-term memory.

Conti-Ramsden, Botting and Faragher (2001: 743) find links between performance on sentence recall tasks and learners' abilities in learning to read. Researchers suggest that it is the contribution of long-term memory to sentence recall that plays a major role in differentiating learners with comprehension problems from those without such problems.

The researcher supports the research of Conti-Ramsden et al. (2001: 743) which indicates the contribution of sentence recall to learning, and that the storage component of sentence recall is associated with short-term memory and may be linked to difficulties in literacy and comprehension. An example of such long-term recalls is the learning of poems. The learner's who struggle with reading, may also struggle with memorising poems.

Learners who struggle with reading may rely on sentence context to read words, therefore they have to guess at unknown words based on the first letter of the word and then the meaning of the surrounding sentence.

According to various studies and those of Chard, Vaughn and Tyler (2002: 389) the researcher supports the opinion that fluent reading involves quick recognition of individual words, oral reading and the understanding of whole

phrases and sentences and reading with expression. Errors in oral reading by the learner with reading difficulties may include omission of words, mispronunciation, long hesitations while decoding words and the lack of comprehension. These may be identified earlier by using the rubric as in Table 4.2.

4.7 Early intervention strategies

Reading difficulties begin much earlier than that formal reading instruction takes place in schools. Literacy skills do not develop without the young learners having had the necessary opportunities in the home and/or pre-school environment. Therefore, according to studies by Norris and Hoffman (2002: 2), these skills are not genetically acquired, but develop when a learner is exposed to and opportunities are afforded the learner to experiment with the newly acquired skills.

Early intervention in the school career, as discussed in paragraph 1.4, is more important in the early years of schooling than at any later stage according to Leung et al. (2007: 327) and Gentry (2005: 109). It is therefore important that valid assessment tools are used to identify learners who may benefit from early intervention (Rothenberger, 2005: 805). According to Turkington (2002: 117) most young learners identified as having a risk of poor reading may be able to achieve average or above-average reading ability if they can receive help early. Lesaux and Siegel (2003: 1005) share this view and observe that it may help to prevent or overcome other problems that might affect learning as well.

Studies by Bursuck and Damer (2007: 4) reveal that once learners with reading difficulties are behind in the 4th grade, it will take an immense amount of expenditure and resources to have them catch up. This is why early intervention between Grade R and Grade 3 is vitally necessary. Therefore, the need to identify reader difficulties as early as possible and provide them with the necessary support will circumvent many if not all reading problems.

4.8 Synthesis

The main focus of schools and educators must be on eliminating the factors interfering with learning to read. Therefore the above factors should not be ignored.

Reading is a crucial area in every aspect, not only of school curricula but of life in general. Many learners exhibit problems and difficulties in reading because of basic problems in phonemic awareness and spoken language but also in other areas of their development. Reading skills are interdependent, for example problems like decoding causes difficulty in comprehension which must be seen as the end result of successful reading.

Therefore, early intervention, with proper planning, is an important task of the educator to be able to give the necessary support to those learners who experience reading difficulties. The reason for this study is to find an intervention strategy, enjoyable to the learners through music and related activities, early in their sojourn at school, which may be successfully introduced as early intervention is crucial.

CHAPTER 5

MUSIC AS AN INTERVENTION STRATEGY

5.1 Introduction

In the previous chapters, a literary overview on the reading concept and skills that manifest the teaching of reading and reading difficulties and the assessment thereof was discussed. The importance of early intervention was emphasised. In this chapter music and related activities as an intervention strategy will be discussed and will be used to address the reading difficulties of Grade 2 home language learners. Many approaches to language difficulties have been developed and considerable research has been done in recent years on the role of music and facilitating learning in other areas of the curriculum. Needless to say, music has not been used before as a direct phonics approach to assist learners with reading difficulties as such and no Afrikaans intervention programme exists.

The possible links between music and language continue to intrigue researchers of these two domains. Whether a young child is mastering language or learning music, the emotion that ought to be experienced is enjoyment. Based on this philosophy and motivated by the possibility that the use of music may be used as a tool to address the reading difficulties of Grade 2 home language learners, the researcher embarked on an in-depth literature study on music as a possible intervention strategy.

5.1.1 Understanding music

Music is a universal trait of humankind. It has played a significant role in people's lives throughout the ages and in every part of the globe. All humans possess some degree of musicality, because everyone responds in some way

to the music of his or her surrounding culture. To be totally a-musical would require massive, almost total brain damage (Madaule, 2001: 1).

The special qualities of music extend beyond the written or spoken word. Patel (2003: 674) states that music may be used to promote language development through rhythm, melody, harmony, dynamics, form and mood.

Human beings live in what we perceive to be a rhythmic environment, based on observation of periodicities. Our bodies, too, operate in line with rhythmic patterns. Mithen (2006: 13) formulates rhythm as the root of music and importantly keeps the melody together and prevents a song from falling apart. Rhythm such as heart- and breathing-rates as well as speech sounds, especially in reading, exists in much of our daily lives. Synonyms for rhythm are beat, meter, duration of sounds, rhythmic patterns and tempo.

Dunleavy (1992: 10) mentions that melody and harmony are the terms we give to the arrangement of different pitches of sound and these constitute music. The dynamics of music and speech are made up of the loudness and softness and gradual or sudden changes of these. Form and mood are the framework that gives meaning to the elements of music and is similar in song lyrics and words of poems and stories.

Patel (2003: 674) describes music as the most complex and structured type of sequence in our acoustic environment. However, in spite of its complexity, it readily captivates us, conveying much coherence and predictability. Sequence is rarely random rather it obeys certain rules as in language learning, specifically learning to read.

5.2 Music and language development

Music and language are two ways, according to Mithen (2006: 12) that humans communicate and express themselves through sound. Both music and language are found in all societies, although the context in which music is

used and the function it plays may vary. Language and music (Goodman, 2007: 24) have both a hierarchical structure and constitute acoustic elements (words or tones) that are combined into phrases (utterances or melodies), which can be further combined to make language or musical events. They may both be described as combinatorial systems.

Diamantes et al. (2002: 114) support the notion that learners' language has rhythm and melody by its nature. Music enriches the vocabulary and teaches articulation and pronunciation (Lodato & Urrows, 2005: 36). Music requires attention to detail, neatness, and at the later stage, precision in writing. Diamantes et al. (2002: 116) also define teaching skills necessary for reading such as left to right progression in reading and writing, phrase reading, rhythmic eye movement, concrete understanding of terms such as high/low, loud/soft, short/long and slow/fast.

According to various studies (David, Wade-Woolley, Kirby & Smithrim, 2007: 170) on the use of music for the development of language, it is clear that the two domains, normally singing and speaking, are indistinguishable during the early stages and only until later stages do they become more diversified.

5.2.1 Early perception of sound

The ear is the first sensory modality to develop. At five months in utero, the fetus is already completely formed and the auditory nerve is ready to transmit sound information to the brain. This primacy of the auditory system makes it the basic mechanism involved in communication, starting with speech and then progressing to written language, the graphic translation of the sounds of language as discussed in Chapter 2. Choksy (1991: 17) stated in earlier studies the usefulness of comparisons between the stages in the acquisition of song and the developmental stages of language.

David et al. (2007: 170) support the findings of earlier studies by Hodges (1999: 44) that rhythm is a critical factor in language acquisition and research

studies show that newborns' ability to discriminate languages, are based only on their rhythmic sense. Since birth, infants start to listen and produce sound without distinguishing between music and language, singing and speech. Anvari et al. (2002: 112) postulate that infants of as young as seven months segment words in continuous speech via a strong-weak pattern of stressed syllables in the English language. Thus the close relationship between music and language development in early childhood is evident.

David et al. (2007: 171) also stress that the first aspect crucial in both music and language development is the perception of sound. Human infants are all born into a world with two sound systems; a linguistic system, which consist of vowels, consonants and pitch contrasts of their native language and a musical sound system which includes timbres and pitches of their culture's music. Another study (Goswami, 2002: 145) states that the sensitivity to rhythm is related to reading ability in good and poor readers.

According to Anvari et al. (2002: 112) infants begin to notice the direction of sound and the differences between sounds based on frequency, intensity, duration and tempo. Infants respond much better to the inviting rhythm of musical speech while communicating verbally, as it consists of high pitch, slow tempo, repetition and changes in tone.

Earlier studies (Mills, 1995: 35) also reveal that infants begin to differentiate human voices from environmental sounds, to pick up emotional cues and to become conscious of intonation, pitch and rhythm. All of these are prerequisites, not only in language development, but also in music development. Research studies by Sousa (2005: 28) show that certain basic perceptual abilities in speech are innate, but experience is necessary to master language-specific contrasts and a detailed argument was developed in Chapter 2. Thus innate ability together with the listening experience from the environment, both play an important role in the early development of speech perception.

Research shows that infants have the ability to detect changes in melodic contour and rhythmic patterns as well as in pitch range of melodies (Scott, 2004: 2). According to various studies (Brown et al., 2006: 2791; Scott, 2004: 3; Patel, 2003: 674) such pitch discrimination in very young infants is not surprising because this skill is necessary for learners to acquire language, particularly the accent in their environment, which is a common developmental process that all learners have to go through in the early stages of their lives.

Speaking, singing and touching are the three primary modes of communicating with infants. The speech patterns of mothers communicating with their infants are called *motherese* and the musical aspects of *motherese* are critically important, not only for language development, but also for the communication of emotions (Hodges, 1999: 44). It is the pitch, timbral, dynamic and rhythmic aspects that infants respond to in the *motherese* speech patterns and not through the verbal content because their vocalisations are non-verbal.

The musical aspects of language which are most important in speech are melodic contour, timbre variations and rhythm. Infants learn to perceive and emit sound with both emotional and cognitive content (Brown, 2006: 2791).

5.2.2 Singsong speech

Early studies by Choksy (1991: 28) define singsong speech as a way of reducing “speech stresses” associated with various sounds, syllables, words, sentences and communication situations. This may be done by using variations of rhythm, pitch and accent to sustain the child’s attention and reducing the monotony of direct drill.

Memory is also of crucial importance to humans, and music is one of the most effective mnemonic devices, it enables preliterate societies to retain information not only of facts, but also of feelings associated with them. In

music, as in language, a listener is continually involved in building a structural interpretation of sequence.

Most reading selections have four main components: word recognition skills, comprehension, reading study skills and literary appreciation. These same components exist in song lyrics and can be readily observed in some folk songs. Maduale (1997: 4) postulates that the translation of a visual into auditory image is necessary for reading aloud and the reverse for writing. Therefore, phonological awareness is essential in reading and writing and requires a clear perception of the acoustic content of words.

According to research by Madaule (1997: 4) rhythm in music corresponds to the functioning of the vestibular system and melody is associated with the cochlear system. Rhythm plays a strong role in the decoding and/or word recognition rather than letter identification. Diamantes et al. (2002: 115) on the other hand have found a strong, positive relation between music and:

- vocal, visual and aural perception;
- physical coordination;
- sense of timing;
- power of concentration;
- ability to cope with stress;
- memory skills and
- cognitive development, which are all related to learning a language, particularly the reading phase (Chapter 3).

5.3 Music as an intervention strategy

Listening attentively (extending the concentration span) and responding to an extended sequence of instructions, is the key to learning. Through music and related activities, learning to read may be more successful because most learners enjoy music.

David et al. (2007: 171) investigate the role of rhythm in reading development as an early strategy. Renowned composers as well as educators such as Zoltan Kodaly and Carl Orff have long promoted the idea of music being closely related to language in education. Kodaly recommends the use of traditional folk music material in language teaching because it is identifiable with language and culture.

Music as an intervention strategy to multiple problems and difficulties is a multi-sensory support activity. Music seems to be processed globally in the brain. Strickland (2002: 102) provides the conclusion for music activities, which include movement, speech, rhythm and melody, activate both the right and left hemispheres of the brain and thus constitute an antidote for the exclusive emphasis on left brain, rational and verbal education so often found in our schools.

Earlier studies by Nye and Nye (1992: 32) stress the fact that the use of musical material, phonetic-rhythmic speech, metric rhythm, movement, melody (Greek melos) in speech and singing and the handling of music instruments are organised in such a way that it addresses all the senses. Therefore, unlimited potential exists for speech and reading development because of pitch awareness (high-low), dynamics (loud-soft), rhythm or tempo (fast- slow), and feeling for different meters (rocking, marching).

Because the sound ingredients of language are identified as pitch, tonal quality, duration and intensity, it is understandable that learning to sing or listening to music might be helpful to acquire skills while learning to read. Song and music selection is an important step because the lyrics form the focus for the beginning reading activities.

The researcher finds in her daily work as educator, that most of the learners who struggle with reading have the same problems in common, namely blending sounds into words, isolating and sequencing sounds in words, poor memory skills, result in poor spelling. Another problem was identified during observing learners, and that was the lack of listening skills and the ability to

concentrate or focus properly. These difficulties could be prevented if the necessary and correct teaching strategies were used earlier in their lives.

As a new approach, music could be used to assist with the support of learners with reading difficulties and, more specifically, to develop phonemic awareness and phonics to augment reading skills according to the researcher.

5.4 Development of listening and concentration skills

Listening is the ability to attune to the sounds we want to hear while filtering out the others. Madaule (2001: 2); Blom (1993: 6) and Choksy (1991: 71) share the same opinion that hearing and listening are two very distinct and necessary functions. Choksy (1991: 71) states that the mind tends to ignore sound that cannot be controlled and that has no implications for the "hearer". Madaule (2001: 2) states that not being able to listen, means not being able to focus on what we want to hear. It is of great concern to know to what extent people can "listen" and to what extent people can only "hear". McMullen and Saffran (2004: 289) define listening skills in the following ways:

- firstly, the learner must concentrate: This will depend on his interest and the length of time the learner is able to concentrate;
- secondly, the learner must understand what he/she is listening to: The educator has to guide the learner into the initial recognition and discrimination of the exercise; and
- thirdly, the learner must learn to remember what he/she has heard: This demands a great deal of practice because sounds fade away.

According to the researcher's own experience, we live in an age of sound pollution: the level of noise in and around the house as well as the family atmosphere can also affect the listening function. The television that is constantly turned on, parental disputes, noisy classrooms and street noises force the learners to withdraw into isolation and to cease listening. When attention is required in class the learner finds it difficult to listen effectively.

To be able to explain listening, Madaule (2001: 11) is of opinion that listening is to hearing what seeing is to looking. Both of them require the ability to focus, whether auditory or visually. The learner has to be able to discard irrelevant information and absorb only relevant information.

Music can only be understood if the ability to listen perceptively has been developed. De Kock (1989: 68) explains that the importance of music in developing discriminative listening, which is linked to achievement in language and reading, is therefore obvious. A learner must be actively listening, is the opinion of Jones (2005: 41) focusing on the sounds if his brain is to order itself alongside the music. Music played in the background, underneath the many other sounds of a classroom, becomes just superfluous noise, sounds that the brain and ear will filter out.

For learners to develop their listening skills, Mraz et al. (2008: 20) describe a few exercises where learners participate in listening actively and attentively. This is specifically for learners who have difficulty in phonemic awareness which is necessary for reading.

Another way to extend the exercise through sound memory is by producing sounds in a sequence which must be identified by the learners. The educator may employ the snipping of scissors or sharpening of a pencil. They have to listen with closed eyes and be able to identify the sounds in sequence. Other sounds that may be useful in this exercise are: tearing paper, closing a window, writing with chalk on a board, closing a book, tapping a pencil or foot, etc.

The researcher is of opinion that learners in our schools are seen most of the time as passive receivers of information. The system fails to acknowledge listening as an essential aspect of learning. Listening requires both attention span and interaction. Without concentration and attention span, which are both root skills, listening cannot take place and therefore learning fails. Jones (2005: 44) states that it is useful for a learner to listen to music with the same

stillness and attention with which the learner should listen to an educator reading a story.

It is clear that if learners cannot discriminate between sounds, it will be difficult for them to distinguish between words and later to differentiate between written symbols. One possible way to develop the listening skills of the learner in order to differentiate between sounds in reading is through music activities involving pitched sounds of varying volume and duration. One of the possibilities which will be investigated is auditory discrimination which is one of the key factors involved in basic literacy.

5.4.1 Dynamic levels in music listening skills

Dynamics is the musical term which describes the volume of sound: loudness and softness and gradual changes from one to the other.

One of the child's earliest perceptions is that of tone. The young child has to realise that in words some sounds or phonemes differ from each other and that they sometimes change the meaning as well. According to Choksy (1991: 153) learners begin to discover that a tone has:

Intensity: Some tones are louder and some tones are softer than others like in the sounds of words. The difference between a /*d*/ and /*t*/ is that the "*d*" sounds softer than the "*t*". Similarly in Afrikaans a soft "*d*" occurs in "*band*" and a loud "*t*" occurs in "*kant*". Intensity may be demonstrated with musical sound as follows. Loud/soft: when the drum plays loudly, the learners all clap hands, and when it plays softly, they all say "sh-sh, sh-sh" to the music.

Duration: Some tones are held longer that other tones. In language the learner has to remember that the phoneme /*o*/ sounds shorter than the sound /*oo*/ like in "rot" and "root". In Afrikaans the same rule is applied in: "bot" and "boot". The use of a musical sound to demonstrate duration may be through the use of a specific symbol.

Timbre or tone colour: This is the difference between the sounds of various instruments and that of human voices and each differs in quality or producing the same pitch.

Tempo: Tempo is not fastness or slowness but, rather, the relative fastness or slowness of the beat in music. They reflect tempo accurately, learners must be able first to distinguish the beat from surface rhythms and then to move or play accurately to the beat. Fast/slow. All walk briskly together to the beat of the drum.

Pitch: This is relative highness and lowness while some tones are higher or lower than others. Pitch may be demonstrated as follows:

- the educator asks three children to stand behind a screen and play different kinds of instruments simultaneously, for example; triangle, drum, rhythm sticks, bells and tambourines. One instrument stops playing and the learners tell which one they can no longer hear; and
- high/low- learners use their voices to create high and low sounds, e.g. mewing like a kitten and barking like a dog. High and low pitches may also be played on the piano or xylophone for the learners to listen to various pitches. Learners may play on various melodic percussion instruments so that they may listen to high and low pitches, even though the timbre is different for each instrument.

Madaule (2001: 12) states in his study that reading requires phonological awareness which means a clear, stable and precise perception of the acoustic content of words. Phonological awareness, the ability to develop the differences and similarities of sound, in words or in music, should be developed for the learners to read successfully.

5.5 Auditory skills addressing reading difficulties

Auditory awareness, auditory discrimination and auditory sequencing are three important components of listening that are enhanced through active, focused, and structured listening experiences. According to De Kock (1989: 62) questions may be used to help one to direct the learners' listening skills.
The inability to listen is at the root of many learning difficulties. The hearing mechanism is in mechanical working order but the learner is not deciphering and understanding the messages received. Sound exploration and learning to listen must play vital roles in the education of all learners and are indispensable for learners with reading difficulties.

These skills are important and are required by learners for phonic recognition and they would otherwise not be able to make the letter-sound associations which form the foundation of phonics. The speech sounds that letters or letter patterns represent, are called the phonic approach. To be able to read, the learner has to be able to discriminate between speech sounds, therefore the ability to discriminate between musical sounds must have an impact on their reading skills.

5.5.1 Auditory awareness

Auditory awareness is the ability to recognise the presence of sound (Blom, 1993: 127) and in order to practise the auditory awareness skill the educator may use the following as an exercise: What did you hear? The ability to discriminate between sounds may help the learner with reading difficulty, that is to discriminate between letters which are the core of reading and later writing and in music as an intervention strategy, it will furthermore be helpful if learners are able do differentiate between music and silence for example to play "Musical chairs". With this musical activity the learners must be able to act according to the music they hear and the instant silence.

Simple listening is sometimes a passive act according to Le Roux (2002: 93) but using listening as a means of play or games it becomes an activity of conscious involvement. Educators sometimes forget that learners have to be able to hear differences in sounds of words before they can produce them accurately in language and the same holds with the differences in music sounds.

David et al. (2007: 171) state that the ability to hear and interpret sounds correctly is indispensable for good speaking, understanding, reading and writing, according to the researcher. Imitating sounds and discussing the contents of poems or rhymes are useful for the learner with reading difficulties. By adding music to words, changing poems into songs, practising in both the language and music may be an enjoyable experience to the young learner, therefore the leaner would benefit from these activities.

The learner should be able to discriminate between different sounds in a sequence of sounds, as well as between the different spatial (graphic) patterns of letters in order to be able to read and write words.

5.5.2 Auditory perception

In most natural circumstances, acoustic elements reach the ear in a disordered mixture according to a study by Patel (2008: 192). Assigning each element to a particular sound source is a necessary part of auditory perception. Auditory perception means the interpretation of information after the extraction of meaning from data. In other words as Blom (1993: 6) concludes, is that the learner gets information through the ear and the brain interprets and gives meaning to what is heard.

5.5.3 Auditory discrimination

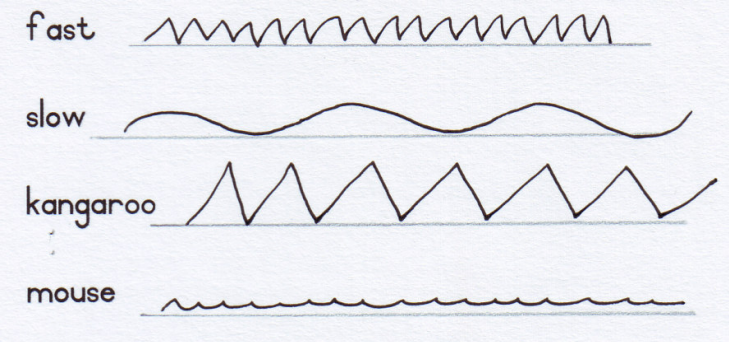
Auditory discrimination is the recognition of similarities and differences in sounds. “What different sounds do you hear?” When a learner lacks auditory

discriminatory skills according to Maduale (2001: 21) that learner will find it difficult to discriminate between letters and words which sound similar when asked to write or spell a certain letter or word.

Several studies reveal that auditory discrimination is one of the most crucial skills in phonics as it is in reading. An example of some difficulties that learners may experience in the English language is; *cap/cat*, *pen/pin*, moon/noon, pat/pack. Afrikaans learners also have difficulties with words such as *rand/rant*, *muil/myl*, *raak/raap* and so forth. A variety of techniques and exercises may be used to teach auditory discrimination together with visual discrimination, for example:

- match pictures with word sounds. Learners have to draw pictures of the sounds and movements with crayons or chalk such as:

Exhibit 5.1 Pictures with sounds



- identify similarities and differences in beginning and ending sounds in words. A musical example to develop this skill can be the following: The learners are issued with non-melodic instruments on which they have to play only on the beginning sounds or only on the end sounds in words like: rat, get, pip and mom; and

Exhibit 5.2 Beginning and end sounds

Instrument	First sound -play-	Middle sound -silence-	End sound -play-
Triangle	r	X	t
Tambourine	g	X	t
Sticks	p	X	p
Bells	m	X	m

- using a shaker, sand block, cup, a drum, triangle, bell or clapper separately and asking the learners: Which has the loudest sound? Which has the softest sound? Which has the highest/lowest sound? Which has the shortest/longest sound?

The researcher is of the opinion that learners who experience reading difficulties, specifically because of a poor phonological system where sound sequences make up syllables, may benefit from a music intervention strategy because learning to read makes use of sounding out letters to build words.

When a learner listens to a sentence, the learner is considerably dependent on tone or the inflection of the voice used in order to accurately understand what is being communicated. An example; "I am leaving," spoken with a falling minor 3rd interval (Wisby, 1980: 5) enables the listener to accept the statement as being somewhat complete. However, if the tone of voice or inflection rises on the last word of the sentence, the ears immediately prepare for something to follow.

Because of noise pollution learners find it in most cases difficult to concentrate on specific sounds or tasks. To be able to develop their skill on figure-ground perception, Birkenshaw-Fleming (1989: 116) suggests that in the following song, the educator may ask half of the learners to use "tick-tock" as speech ostinato while the others sing the song.

Tick-Tock

Tick Tock:

Tick, tock, tick, tock,

Happily sings the clock,

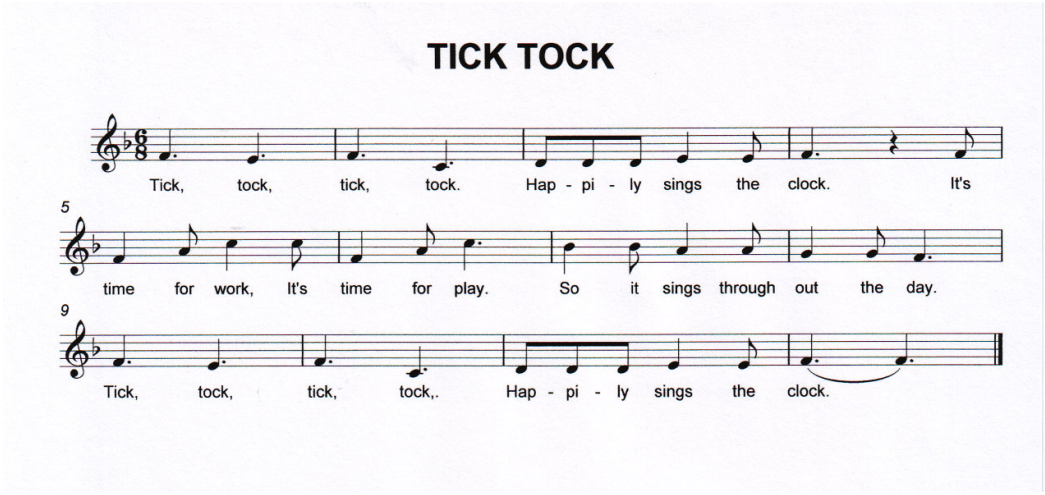
It's time for work it's time for play,

So it sings throughout the day.

Tick, tock, tick, tock,

Happily sings the clock.

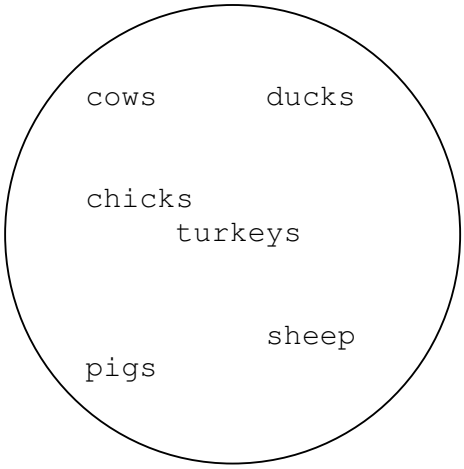
Exhibit 5.3 Speech ostinato



5.5.4 Auditory sequencing and memory

Auditory memory is the ability to remember sounds. What did you hear first? An example of an activity to use is "Old McDonald had a farm" where the learners place the animals, in the square with the A,B,C,D, and E, in the order they appear in the song (Le Roux, 2002: 95).

Exhibit 5.4 Sequence of sounds

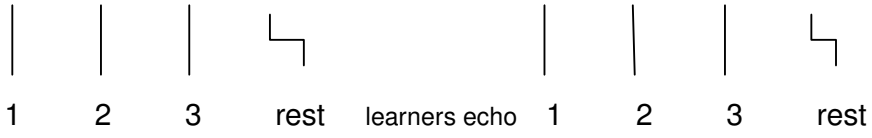


A
B
C
D
E

Birkenshaw (1994: 47) considers that clapping or playing non-melodic percussion instruments in a sequence of sounds or rhythmic patterns may be useful to enhance the sequencing of letter sounds in words, or words in a sentence. If the learners have difficulty in only repeating sounds, words may be added to make it more recognisable. Auditory sequencing is an important skill when learning to read, because of the order of phonetic sounds in forming words. An example to demonstrate the sequencing of sounds may be as follows:

The educator claps a simple four-beat rhythm pattern and the learners have to echo the same pattern.

Exhibit 5.5 Rhythmic pattern



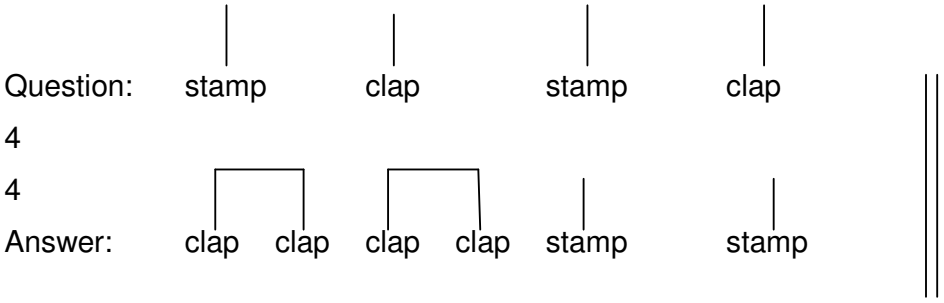
To enhance auditory memory and sound sequencing in learning to read, the following musical activities may be beneficial. Birkenshaw (1994: 250) is of

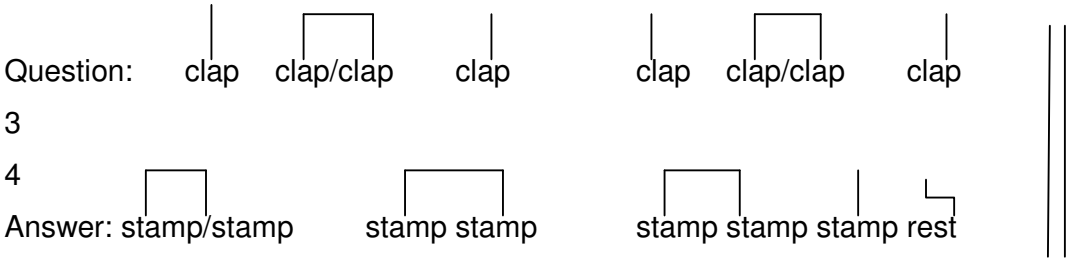
opinion that question and possible answer with body percussion or percussion instruments is the ideal exercise to practice auditory memory.

To help readers with difficulties, the use of the above-mentioned musical activities must first be done without any verbalisation, for the learner to acquire discrimination of sound skills before words are added. After the beat is well established words are added to the beat. Using of the following may develop the learner's memory:

Exhibit 5.6 Words added to a beat

Two groups of learners are appointed to do the exercise.



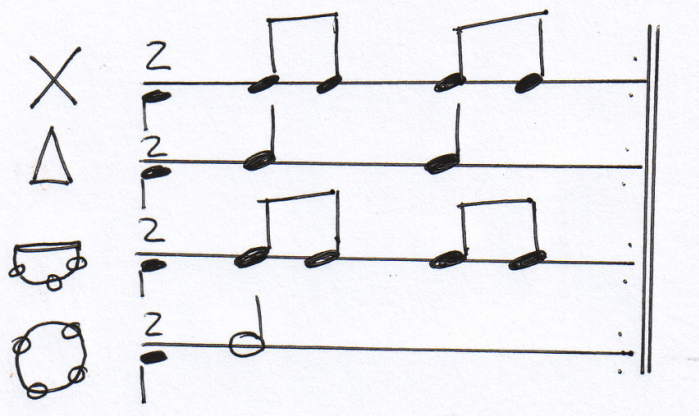


Four sets of sound-makers are prepared by using plastic bottles each filled with different objects; a small stone, rice, two beans, a few small sticks and one left empty. The learners shake them and arrange them from loud to soft. This also may be used for their concentration skills. Pictures are drawn of the sound-makers to be used. When a sound is made, the learner selects the corresponding picture. The same game is then played with the sound makers being hidden.

5.5.5 Visual perception

Musical notation may be used to develop visual perception and discrimination which is also important for learning to read through the phonics approach. Using sound, graphics may be helpful for learners' listening skills because the visual perception together with the auditory perception will reinforce the learning activity. The following examples of rhythmic patterns with non-melodic instruments may be used to reinforce the visual perception together with the auditory awareness development.

Exhibit 5.7 Rhythmic patterns

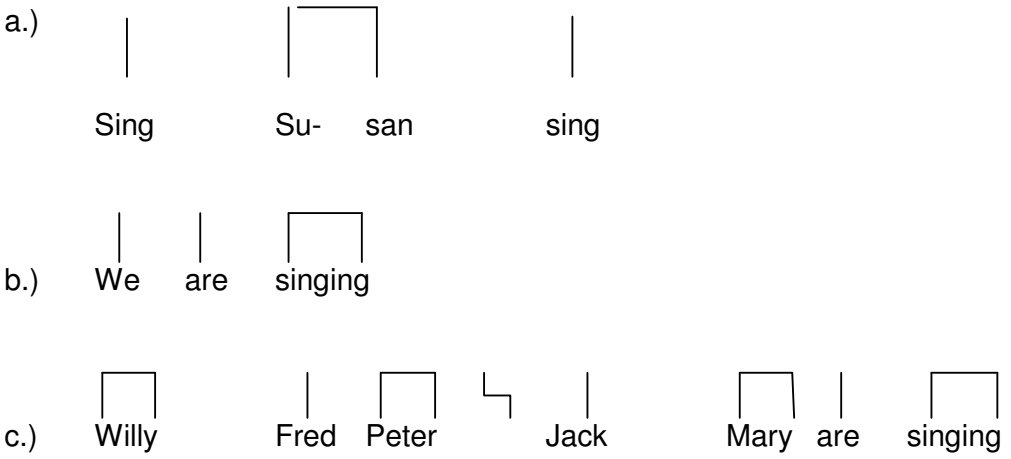


5.5.6 Rhythmic speech patterns

Landsberg et al. (2005: 152) point out that rhythmic speech patterns form part of auditory awareness. Several other studies state that each language has its own peculiar speech pattern and when learners learning to read they must also become aware of the rhythmic speech patterns of their language. In spoken language the learner utters a combination of speech sounds or phonemes and morphemes according to the rules to form words used in such an order that they form sentences.

Using the learners' names in a speech pattern is an activity which the educator may start off with and the learners usually enjoy it a lot. The following is an example of such an activity:

Exhibit 5.8 Speech patterns



5.6 Sound activities addressing phonemic awareness

When selecting words to teach phonemic awareness, normally educators will begin with the phonemes which are easy to pronounce and manipulate and progress towards the more difficult ones. Yopp and Yopp (2000: 135) suggest exercises to accommodate the phonemic awareness development and recommend them in the general stages of a learner's development.

The research by Mraz et al. (2008: 9) support the above findings specifically in the syllables, onsets, rimes and phonemes in sound matching, isolation, substitution, blending, segmenting and deletion tasks. An application of the exercises may be listening to poetry, singing songs and playing alliteration games. Another way of developing phonemic awareness together with the above-mentioned skills, are with the use of alphabet letters in combination with speech sounds and that may enhance the phonic skills as in the following exercises.

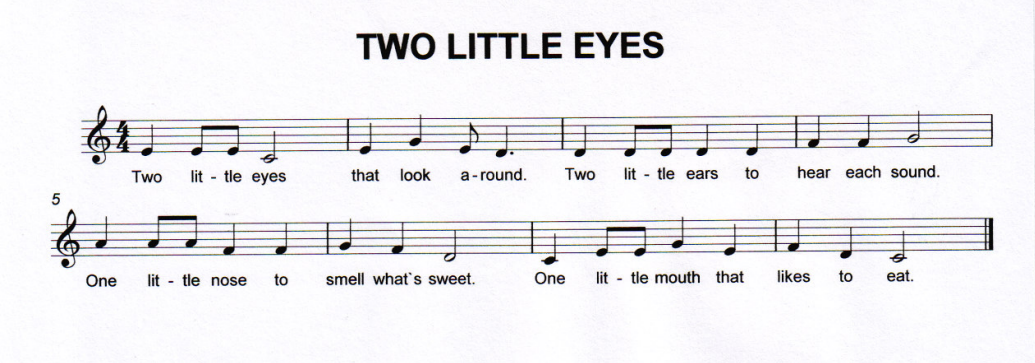
5.6.1 Rhyme

Goswami (2002: 145) agrees that rhyme is a subtle play of words that depends on rhyming sounds. The educator may ask the learners to think of something that rhymes with "*sing"* and the learners may answer: "*ring".* This goes hand in hand with rhythm. The rhyming words at the end of each line are especially important, because a young learner usually notices and appreciates end rhyme. Most learners have an affinity for catchy, sing-song rhyming words and derive much joy listening to them and by enthusiastically joining in. The following is a delightful example of a combination of rhyme and rhythm:

Two little eyes

Two little eyes look around,
Two little ears to hear each sound;
One little nose to smell what's sweet,
One little mouth that likes to eat.

Exhibit 5.9 Two little eyes

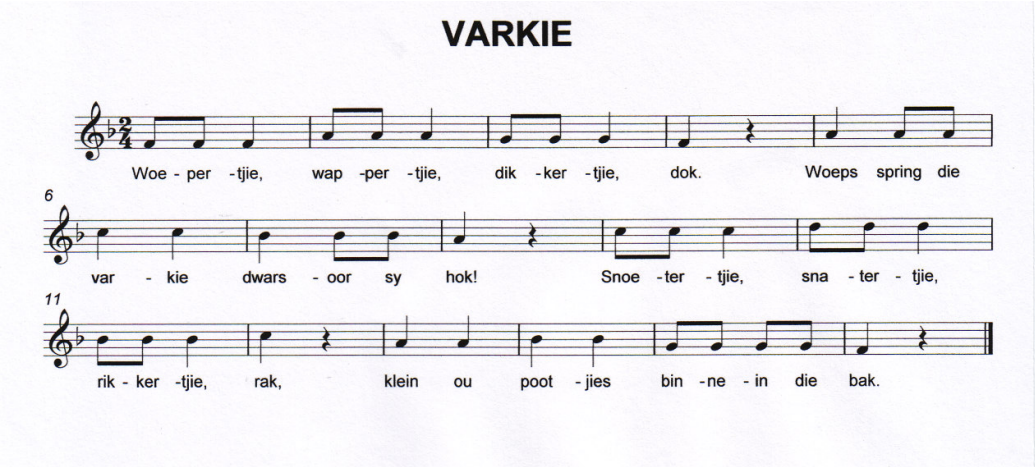


For the Afrikaans learner the following is also a combination of rhythm and rhyme set to the music of a traditional song, (FAK, 1979: 438).

Woepertjie,wappertjie, dikkertjie dok,
Woeps spring die varkie dwarsoor sy hok!

Snoetertjie, snatertjie, rikkertjie, rak,
Klein ou pootjies binne in die bak.

Exhibit 5.10 Varkie



Source: Pistorius.

Mraz et al. (2008: 22) suggest rhyming games with rhyming words to familiarise learners with the sound structure of the language: Learners focus on the story read by the educator and seek for words with specific rhymes as in "The kitchen orchestra". They clap their hands or snap their fingers when they hear the words which rhyme. For this study, the rhyming words will appear at the end of each line. Learners may use non-melodic percussion instruments, instead of body percussion, to identify the rhyming words in the story or nursery rhyme. The following is an example of a story or nursery rhyme with instrumental accompaniment.

The kitchen orchestra
The pepper pot dance *(**triangles play on "dance")***
With the salt pot in a glance ***(triangles play on "glance")***
Hoppity-hiep, hoppity-hop, hoppity-hiep-hop!

The teaspoon kicks ***(rhythms sticks play on "kicks")***
Against the bowl of soup with sticks; ***(rhythm sticks play on "sticks")***

Tinge-ling, tinge-long, tinge-ling a long!
The sugar pot dance ***(tambourines play on "dance")***
With the jug full of milk from France ***(tambourines play on "France")***
Dumpy-dum, dumpy-dam, dum-dam!
The egg lifter scrapes ***(bells play on "scrapes")***
In a pan of egg and flakes: ***(bells play on "flakes")***
Rang-arung, rang-arang, rang-arung-arang!

The spoons jump far
And the knifes jump high,
The forks dance together
In a circle!

The pots and pans (***all the instruments play on "pans")***
Jump with the cans ***(all the instruments play on "cans")***
While the kettles
Are ringing and singing.

Play the rhyming game "I say": You say one simple word and the learner follows with another word that rhymes:

- I say "hat". You say "***pat***"
- I say "free". You say "***me***"

5.6.2 Syllabification

Syllable identification is the easiest way to distinguish units within words. Goldsworthy (2003: 24,190) and Yopp and Yopp (2000: 135) suggest a few activities such as tapping or clapping out the number of syllables in a spoken word, which is an enjoyable way of learning and developing syllable awareness such as:

- clap out the rhythms in nursery rhymes, poems and songs by alternating left and right hands rather than using one hand all the time;

- clap out the rhythms and syllables in the learner's names, food items and toys or activities. An activity to exercise syllable identification is as follows: "Clap twice for Mary's name." The response from the learners must be: /*Ma/* (clap) - /*ry/* (clap);
- during shared reading select a word and clap out the syllables; and
- add new verses to poems and songs maintaining the same rhythm as the original.

5.6.3 Alliteration

According to Madaule (1997: 1) and Dunleavy (1992: 22) reading show three equally important associations with music; namely rhythm, rhyme and repetition. It is through repetition that concepts or ideas are reinforced as indicated in "Old McDonald" below. She states that this is also the ideal for reading development, by the repetition of consonants (alliteration) which can punctuate the rhythm of a piece of music. Letters, words, phrases, lines, refrains, choruses and verses can all be repeated in music. On the other hand when vowel sounds are repeated, it is called rhyme or assonance as in:
Rhyme: *moon, spoon, dune, loon*. (In Afrikaans used: *room, boom, soom, vroom*).
Assonance: *good, food, hoot, stoop* or as in: *toot, toot* of the train. (In Afrikaans used: *groot, loop, brood, sloot*).

Through alliteration games, the learners will develop identification of sounds that are the same at the beginning of words. Well-known songs or tunes may help the learner to identify the initial letter sounds as in the example of "Old McDonald" below. The educator may select a poem for this exercise that contains alliteration or tongue twisters like: *She sells sea shells by the seashore.*

A poem may be repeated several times to the learners and then the learners point out words that start with the same sound. They must identify the words as they are.

In order to let the learners explore more sounds, the same beginning sounds may be replaced with others. Learners may also create alliteration phrases or sentences using the first letters of their own names and the sounds of their own names begin with for example:

- Peter, Paul, pointer, painter;
- Fred fried freckled frogs;
- Susan sang a silly song.

Well-known songs or tunes may help the learner to identify the initial letter sounds. The traditional song "Old McDonald" may be useful: The learners are asked to identify the initial sounds in the words: basket, bug and Bill. Their response should be */b/.*

The following is an example of alliteration set to music to the tune of "Old McDonald had a farm":

- /b/ is the sound that starts these words,
- basket, bug and Bill
- /b/ is the sound that starts these words,
- basket, bug and Bill
- With a /b/ - /b/ here and a /b/ - /b/ there
- Here a /b/ - there a /b/, everywhere a /b/ - /b/
- /b/ is the sound that starts these words, basket, bug and Bill.

5.6.4 Onset and rime

Savage and Stuart (2006: 34) and Mercer and Mercer (2001: 293) explain onset and rime as the process of splitting syllables into onsets and rimes where an onset forms the part of the syllable and precedes the vowel, for example*: " l"* for "*link"* and "*bl"* in "*blink".* The rime is the rest of the syllable for example: "*ad"* in "*dad"* and "*oom"* in "*broom".* It is to be noted that all syllables must have a rime but not all syllables have an onset for example: *"and, off* and *up".* Browne (2007: 110) gives a few examples of exercises to use in the developing of learners' onset and rime skills:

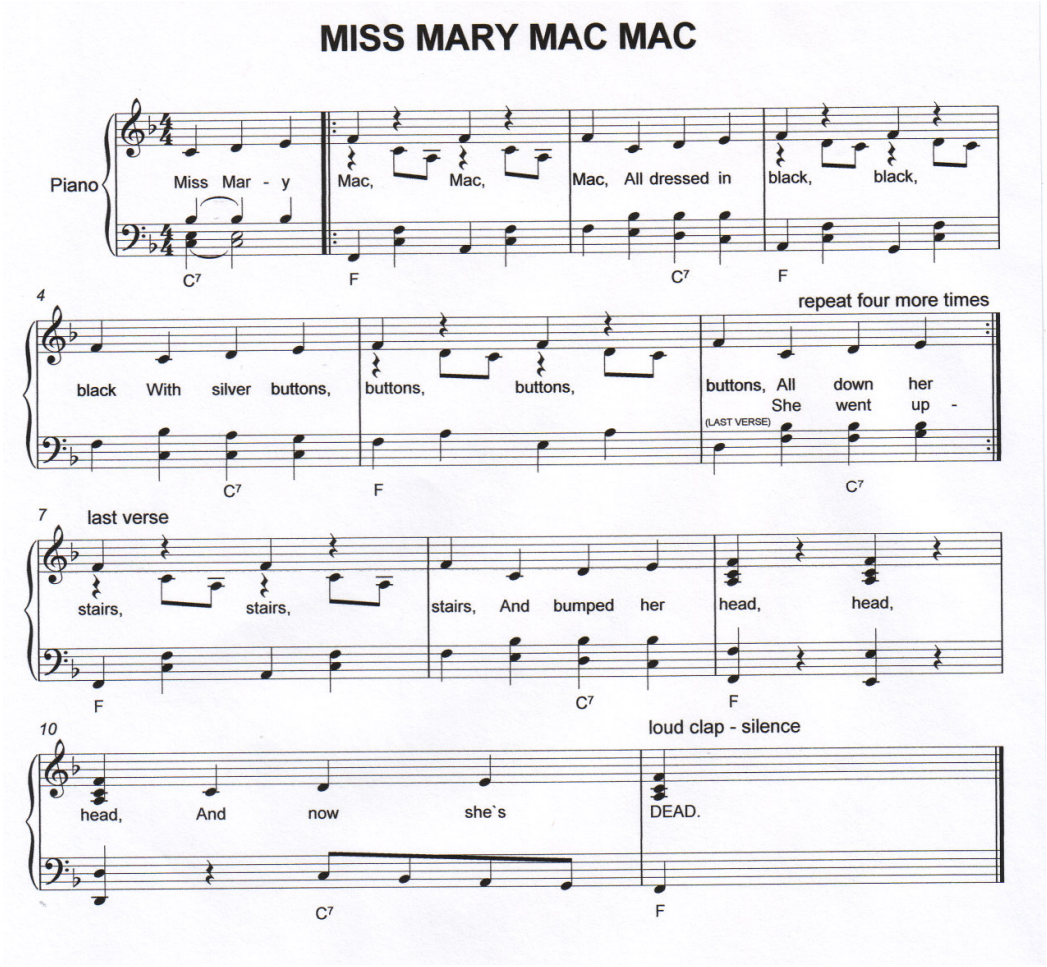
- sing songs together to foster awareness of rhyme;
- read song stories that contain strong rhyming patterns;
- use rhyming words from songs to look at onsets and rimes;
- play "*I spy"* as a rhyming game, set to music, looking for something that rhymes with a given word. Learners may use percussion instruments to reinforce the rhyming words from the song;
- play "*odd one out*" while singing a song, using two rhyming and one non-rhyming word;
- sort pictures of objects according to their rimes while singing a song; and
- provide learners with cards, some with onsets and some with rimes, which were taken from a familiar song, and challenge them to make up recognisable words while they sing the song.

An example and illustration with music to reinforce the above skills of rime is as follows: After a short poem was read to the learners, they sing along and then play with percussion instruments only on the rime words as in "Miss Mary Mac," which is arranged to fit the activity.

Miss Mary Mac

Miss Mary *M-ac, M-ac, M-ac,*
All dressed in *bl-ack, bl-ack, bl-ack*,
With silver *b-uttons, b-uttons, b-uttons*,
All down her *b-ack, b-ack, b-ack*.
She cannot *r-ead, r-ead, r-ead,*
She cannot *w-rite, w-rite, w-rite*,
But she can *s-moke, s-moke, s-moke*,
Her father's *p-ipe, p-ipe, p-ipe*.
She went *upst-airs, st-airs, st-airs,*
And bumped her *h-ead, h-ead, h-ead,*
And now she's DEAD.

Exhibit 5.11 Miss Mary Mac



Source: Okki-tokki-unga (1992: 12)

5.6.5 Sound blending

Mraz et al. (2008: 19) and Barrs (1994: 57) advocate that phonemic awareness strategies through various activities have all been found effective through research. An example of such an activity may be as follows:

The learners have to combine individual sounds to form a complete word. The educator first gives a clue to the required word and then sounds out the word. To reinforce the sound and sound memory, learners are required to identify a word from a picture displayed.

An exercise where the learners have to blend individual sounds while clapping in rhythm using rhythm sticks to accompany the rhythmic blending of the individual sounds of the words is useful to develop their phonemic awareness skills. An example in a ¾ rhythm while saying the words:

Say the word	p/a/t	m/a/d	h/o/t
3/4----------			
Play with sticks	p/a/t	m/a/d	h/o/t

5.6.6 Sound segmentation

By segmenting the individual sounds in a given word, the learners may develop their phonemic awareness skills. Mraz et al. (2008: 24) use a sound box as an effective tool for learners to use when segmenting sounds while developing phonemic awareness. Sound boxes have been found to be particularly useful for the learner with reading difficulties.

Required materials:
Markers for learners to place in each of the sound box squares.
Picture cards or a list of words for the learner to say.

Procedure:
Place a drawing or card containing a series of boxes in front of the learner
Show the learner a picture of an object or say a word; "*cap"* or "*cake"*. Ask the learner to repeat the word and to stretch out or segment the sounds that he/she hears in that word. Let the learner clap, slap or snap the fingers on each sound he/she made to enable the learner to also reinforce the auditory development. After establishing the phoneme awareness the learner may use non-melodic instruments in order to enhance reading development.

For visual development and phonic skills development, the learner has to place a marker into each box as he or she says each part of the word, for example, /*c/a/p/* or */c/a/k*/. It is important to note that the boxes represent the

sounds in words, not the number of letters. *Cake*, for example, has three sounds but four letters.

Exhibit 5.12 Sound box

c	a	p
c	a	k

The exercise may be extended once the learner gains competency in segmenting words containing three sounds; he may then progress to four sounds such as *track, crush* or *pest.*

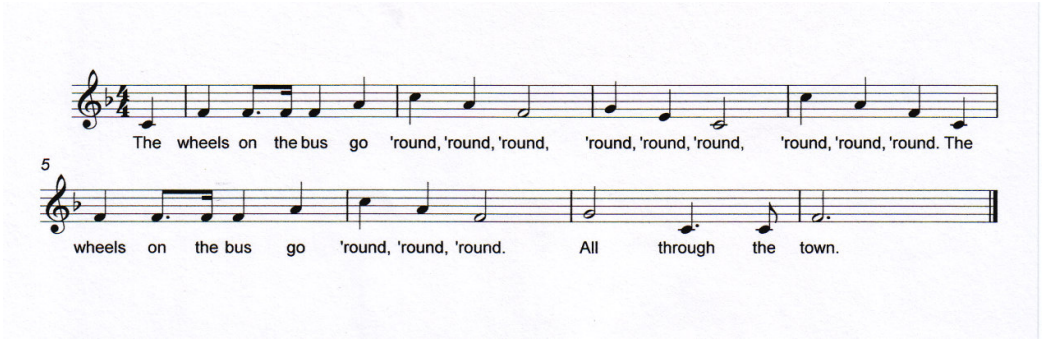
5.6.7 Sound substitution

Sound substitution is the adding or subtracting of sounds from an existing word. Learners may be asked: "What word do you get when you take away the "n" from "*nose*"? The learners should reply "*ose*'. To add sounds to make words, the educator may say. 'Add a */ l /* to /-id *l*. What word does that make?' The reply from the learners should be: "*lid*".

To enhance the above skills by using a musical exercise, the learners may sing the song, "The wheels on the bus". The learners then play different instruments, while not singing the suggested sounds, in order to replace the end words of the song which suggest the sounds made by the wheels, the horn, wipers, babies, bell and the windows. This will reinforce the substitution and subtracting of sounds as when learning to read.

The wheels on the bus go round, round, round, round, round, round,
round, round, round.
The wheels on the bus go round, round, round, all through the town.

Exhibit 5.13 The wheels on the bus



Source: Birkenshaw-Fleming, 1989: 118.

2. The horn on the bus goes beep, beep, beep….
3. The wipers on the bus go swish, swish, swish…..
4. The babies on the bus go wah, wah, wah….
5. The bell on the bus goes ding, ding, ding…..
6. The windows on the bus go up and down

5.6.8 Sound and sound poems

According to various studies and specifically those by Mraz et al. (2008: 28) and Clark (1997: 14), young children are responsive to the imitative suggestive play of sound, not only in rhyme but also sounds which create mental pictures. One can almost see the busy bee, flying from flower to flower in the following extract:
"I'm busy, busy," said the bee.
"I shan't be home for dinner or for tea."

Another melodious play of words, combined with a lively rhythm, makes "*Hey diddle-diddle"* a nonsensical but well-liked rhyme:

Hey-diddle-diddle, the cat and the fiddle,
The cow jumped over the moon.

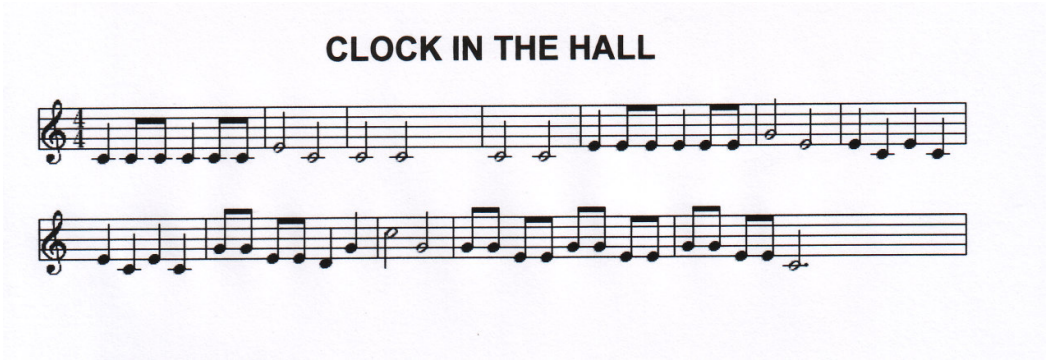
Other examples of sound, rhythm and rhyme which learners enjoy are as follows:

Chop, chop, choppity-chop,
Cut of the bottom,
And cut off the top.

This exercise is to teach the learners to explore the many different ways they may provide the sounds in the poem. Accompany this chant in as many ways as possible, for example with appropriate rhythm and instruments at the sound-words.

What does the clock in the hall say?
Tick, tock, tick, tock.
What does the clock in the room say?
Tick, tick, tick, tick, tick, tick, tick, tick.
What do little watches all say?
Tick-a, tick-a, tick-a, tick-a, tick-a, tick-a, tick.

Exhibit 5.14 The clock in the hall



The following poem lends itself to different sound experiences in that learners explore a way to produce the implied sounds:

Dip-dap,
Dripping tap.

Lubble-ubble,
Saucepan bubble.

Hissing-whissing,
Steam a-fissing.

Slishing-sloshing,
Dirty washing.

Titter-tatter,
Raindrops patter (Clark, 1997: 43).

5.7 Stories in rhyme

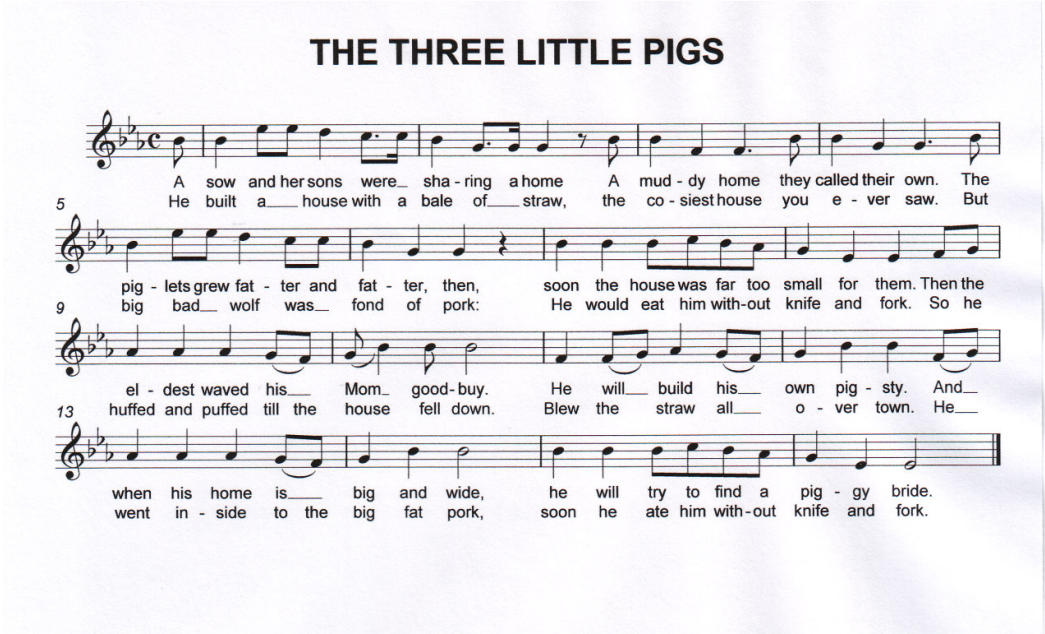
Clark (1997: 28) suggests that a child's favourite verse or rhyme is often one that tells a story. The story element, as much as the end rhyme and rhythm, accounts for the everlasting popularity of old rhymes, although many are now old fashioned, dealing with customs long outdated.

Story rhymes also relate to a wide variety of events and situations, real and fantastic. These story rhymes, with music, may be used for comprehension exercises. An example of a story which may be useful as a rhyme activity and also to develop reading fluency skills is the story of "The three little pigs" (Holloway, 1984: 28). The following story uses non-melodic instruments for creating sound effects in order to develop listening, sequencing and concentration skills.

The three little pigs
A sow and her sons were sharing a home.
A muddy home they called their own.
The piglets grew fatter and fatter, then,
soon the house was far too small for them.
Then the eldest waved his Mom goodbuy.

He will build his own pigsty,
and when his home is big and wide.
He will try to find a piggy bride.
2nd Verse
He built a house with a bale of straw,
the coziest house you ever saw.
But big bad wolf was fond of pork;
he would eat him without knife and fork.
So he huffed and puffed till the house fell down,
blew the straw all over town.
Now piggy cannot find his piggy bride.

Exhibit 5.15 The three little pigs



Souce: Holloway, 1984.

5.8 Humour and nonsense

Children need to get rid of tension and seriousness, and what better way than to laugh. Mostly learners who experience difficulties in reading are not motivated and suffer from low self-esteem. With these exercises; “My hat has

three corners" and the song in Exhibit 5.16, they may relax and enjoy learning through music. Most importantly, they do not fail these musical exercises as they are in a learning process.

My hat has three corners

My hat, it has three corners,
Three corners have my hat.
And if it didn't have three corners,
It wouldn't be my hat.

Exhibit 5.16 On Saturday night

Source: It's time for music.

5.9 Synthesis

Learners must be made aware of sounds and the meaning of them. They must be able to listen attentively and effectively, that means with concentration and with internal motivation.

CHAPTER 6

RESEARCH METHODOLOGY

6.1 Introduction

The main aim of this study is to investigate the effectiveness of the use of music and related activities as an intervention strategy to address the reading difficulties of Grade 2 home language learners and implemented on Afrikaans speaking learners. The question that initiated this study is: "How can a music-based programme be implemented as an intervention strategy in the language development process of learners with reading difficulties?"

Through the empirical study the researcher aims to: Investigate the use of music activities as part of an intervention programme to improve reading skills such as phonics, of learners who have reading difficulties. It is envisaged to address the reading skills of a group Grade 2 Afrikaans speaking learners through participation in an intervention programme of which music activities form the basis. Such activities aimed at enhancing phoneme awareness through sound discrimination, phonics through rhyming words in poems and memory testing when learning new poems set to music as well as using non-melodic instrumental activities. Reading (rhyming) words, non-melodic instrument playing, concentration on listening to musical sound, eye movement when reading rhyming words and the cognitive development must not be underestimated. These skills are crucial for a young learner learning to read (refer to paragraphs 2.2; 2.10.3; 5.3).

The researcher aims to prove that a well-planned intervention and learning strategy through music activities can be used to develop the reading skills in learners who have reading difficulties. Grade 1 and 2 educators should also be able to utilise the intervention programme proposed in this study in order to support these learners.

This intervention programme is in line with the inclusive education policy (paragraph 1.2) in that every learner has unique characteristics, interests, abilities and learning needs and also the constitutional right to education and must therefore be given the opportunity to achieve and maintain an acceptable level of learning, despite any intervening difficulties.

This study acknowledge the notion of Thomas and Loxley (2001: 118) that in a responsible inclusive education system, achieving the goals of learners successfully may be guaranteed only by supporting the diverse learning needs of all learners. It is clear that some learners may require more intensive and specialised forms of support to be able to develop to their full potential. It is possible by means of a small group of individual learners as a case study, to gain a deeper insight into the specific learner's situation and difficulties.

This study accepts the diagnostic assessment strategy (paragraph 4.2.3) with continuous formal and informal monitoring of learners to indicate the individual strengths and needs and to assist educators in providing enrichment or support where required. This is necessary for the educator to plan and manage educational support for learners in need. Information from diagnostic assessment enables the educator to intervene by offering alternative learning strategies. According to Bursuck and Damer (2007: 142); Johnson (2006: 170) and Jennings, Caldwell and Lerner (2006: 78) the emphasis must be on:

- identification of learners' strengths and weaknesses;
- implementation of learning support; and
- provision for additional teaching and learning activities.

The result of the above should be that the learning experience may be individualised.

6.1.2 Case study as research method

As mentioned in paragraph 1.7.3.4 a case study as method of data collection is chosen for the research to determine how the exercises and guidelines given in this chapter may be adopted to compile the reading programme to support specific learners with their unique reading difficulties. The aim of the empirical research is to determine the application of music as an early intervention strategy when addressing reading difficulties of Grade 2 learners. The case study discussed in this research is designed to illustrate the success and value of the programme as well as the progress of the learners during reading intervention sessions.

6.2 The music intervention programme

Through a detailed literature study of the development of reading and the acknowledgement that a relationship exists between this and music and related activities, the researcher decided to design an intervention programme to address the reading difficulties of Afrikaans speaking Grade 2 learners. As can be seen from the discussions of the factors (Chapter 4) that influence the reading ability and characteristics of learners with reading difficulties, problems the learners face often needed more comprehensive intervention. Based on this philosophy and motivated by the possibility that a music intervention strategy may be successful, the researcher decided to explore the above-mentioned factors by means of empirical research.

After the identification of the participants, the programme was implemented over a period of 19 sessions. The sessions spanned from the first day to the last day of the second school term. The reason for this was because the researcher believes that a break between sessions may influence the outcomes of the programme negatively.

6.2.1 Methodology used in the case study

According to the theory it is important to gain general information on each learner in order to define a profile of the learner (De Vos et al., 2002: 275). For this study, the researcher gathered the background information of each possible participant by means of semi-structured informal interviews from their class educators (paragraph 1.7.3.1). The factors which may have an influence on a learner's reading success and that were taken into consideration are indicated in the theory (paragraph 4.3).

Age and grade: This enables the educator to select the appropriate reading material. It also gives an indication whether reading anomalies presented by the learner should be considered as problems or not, as well as the cognitive level at which the learner needs support.

Reading age: The reading age gives an indication of the level at which the learner is able to read and of the reading material to be used during support and therefore needs to be determined.

Physical factors: Physical factors such as the learner's general health, vision, hearing, motor skills and speech should be considered and investigated before initiating support. Any problem in one or more of these areas should be referred to a medical practitioner or other professional.

Home background: From information gained regarding the home circumstances it is possible to determine whether the learner is emotionally stable or fluctuating. The quality of exposure, motivation and intellectual stimulation at home also gives an indication of the learner's general knowledge. This information determines the methods which can be used and the content of the text to be selected for the learner.

Emotional state: The background information regarding the emotional state of the learner is gained from the educator's observations in the classroom and playground. This indicates the way in which the learner should be

approached. Praise and success experiences can restore self-confidence. In many cases, once the reading difficulties are overcome, the emotional problems also disappear (see Annexure A).

After the interviews the researcher used the following criteria to further identify learners for the case study.

6.3 The case study: Purposeful sampling

According to McMillan and Schumacher (2001: 401) "purposeful sampling requires that information be obtained about variations among the subunits before the sample is chosen. The researcher then searches for information-rich key informants. These samples are chosen because they are likely to be knowledgeable and informative about the phenomena the researcher is investigating."

The reason for adopting the case study approach was to gain a deeper insight into the specific learner's situation and difficulties. Furthermore, case studies recognise the uniqueness of each individual learner (De Vos et al., 2002: 279).

The learners were then identified and asked to complete a baseline assessment by the researcher using the ESSI-reading and spelling tests, (see Chapter 6.7) and 14 learners were identified from the five Grade 2 classes.

The researcher initially included all fourteen learners in the programme. After three sessions it was evident that the group is too large. From this group, a group of seven was selected, specifically because they exhibited one or more of the mentioned reading difficulties. The criterion for identifying participants in the case study was that the researcher wished to include at least one learner having one or more of the following reading difficulties, namely lack of:

- lack of phonological awareness skills;
- lack of phonic skills;
- lack of decoding skills;

- lack of listening skills;
- lack of sound discrimination skills; and
- lack of concentration and memory skills.

This final group was of the same age group, five of them were boys and two were girls. The group included a twin, a boy and a girl. The learners are Afrikaans home language learners and therefore the music sessions were conducted in Afrikaans. The consent of the parents was obtained for the learners to participate in the programme by signing a consent form (see paragraph 1.7.3.3). Pseudonyms were used in order to maintain the learners' anonymity (see paragraph 1.7.3.3).

6.4 Ethical aspects

De Vos et al. (2002: 63) state that ethical guidelines are a set of moral principles that are suggested by an individual or group and widely accepted. Ethics serve as a standard and the basis on which each researcher conducts himself.

Harm can be done to experimental subjects or in this case the individual learners included in the case study by in a physical or emotional manner (McMillan & Schumacher, 2001: 422). The obligation rests with the researcher to protect the learners from physical discomfort and emotional harm which is often more difficult to predict. The researcher is ethically obliged to not expose her learners to physical or emotional harm of which she may be aware. Informed consent ensures the full knowledge and cooperation of subjects, while also resolving, or at least relieving, any possible tensions, aggression, resistance or insecurity of the subjects (De Vos et al., 2002: 65).

The main focus is to gain accurate and complete information so that subjects (school, parents and learners) will fully comprehend the investigation and consequently be able to make a voluntary, thoroughly-reasoned decision about their children's possible participation.

6.5 Validity

Validity addresses these questions: Do researchers actually observe what they think they observe? Do researchers actually hear the meanings that they think they hear? In other words, validity of qualitative designs is the degree to which the interpretations and concepts have mutual meanings between the participants and the researcher (McMillan & Schumacher, 2001: 407).

6.6 Outcomes of the interviews with educators

As indicated, the first step in identification of learners with reading difficulties was interviews with the class educator. The following background information of each learner was collected.

Learner: Susan
Age 8y2mnths

Physical factors

Susan is a healthy girl with no physical handicaps such as sight, hearing or movement difficulties. She is one of a twin and there is a big age difference between them and the two older siblings.

Home background

The parents are not actively involved in the twin's day to day education. There is evidence that Susan looks neglected. Because Susan never talks about her home life, it is not clear whether she comprehends her present situation or not. Susan does not participate in any activities at school.
Susan cannot read or spell most of the Grade 2 words and struggles with reading.

Social/cultural conditions

Her parents have their own business. According to the mother, the business is doing well. It is obvious that not much money is spent on Susan's clothes and school requisites.

Emotional state

Susan is:

an introvert;

a shy girl who is seldom in conflict with her peers;

is insecure and not willing to face challenges: in group activity she sits with her jacket over her head;

according to her educator, she shows signs of hyperactivity; and

needs a lot of encouragement to complete tasks.

She does not always complete tasks successfully and need lots of encouragement.

Could not read at the beginning of Grade 2 and had to sound words first before she could read them.

Learner: Jack

Age 8y2mnths

Physical factors

Jack is a healthy boy with no physical handicaps. He is one of a pair of twins, the other being Susan, therefore has the same background as Susan.

Home background

Jack is a problematic boy at home according to his mother. There is evidence of neglect (his school clothes are always untidy). Jack does not participate in any school activities.

Jack has severe reading difficulties. Jack finds it difficult to sound the words, recognises whole words while reading.

Social/cultural conditions

His parents are business owners as mentioned above.

Emotional state

Jack is:

an introvert;

a shy and very emotional boy;

struggles with his school work and shows signs of hyperactivity;

has difficulty to sound or spell most of the words in Grade 2;
not able to complete classroom assignments; and
Jack has very poor listening skills.

Learner: Mary

Age 8y4mnths

Physical factors

Mary is very often absent from school. She does not participate in any school activities. Her appearance is neat and she is obviously well cared for. Mary appears to be a happy girl. She has one older sister and one younger sister.

Home background

Mary's mother is English and the father Afrikaans. Prior to the 3rd quarter of Grade 1, Mary attended a private English primary school.

Her Grade 2 educator repports, that Mary struggles with reading and writing because of her foundation in an English school. When reading Mary utters words that do not correspond with the text. She cannot read the words nor is she able to sound out most of the words.

Social/cultural conditions

Her father is an aircraft refurbisher; her mother is a housewife. Her mother used to work at a pre-primary school.

Emotional state

Mary:

tends to be absent with no reason;
appears to be a happy girl;
struggles with reading and concentration skills; and
she is emotionally immature.

Learner: Peter

Age 8y

Physical factors

Peter appears to be a healthy boy but has a physical speech handicap and lcks fine motor skills. He is always neat and is obviously well cared for. He is a friendly boy and very talkative despite his speech problem.

Home background

His parents have marital problems. The children are exposed to this and are therefore emotionally disturbed;

Peter did not do well in Grade 1, especially with his language development but was transferred on condition of support in Grade 2. The Grade 2 educator is concerned about his progress in literacy and Peter may have to repeat Grade 2.

Emotional state

Peter:

shows a lack of confidence and has a fear of failure;

has poor concentration and listening skills; and

needs constant encouragement.

Learner: Willy

Age 8y1mnth

Physical factors

Willy's school attendance is very good. He appears to be a healthy boy and he is the younger of two boys. His older brother is 13 years old. Willy does not participate in any activities after school.

Home background

Willy attended another primary school prior to Grade 2. The change of schools was because of changed personal circumstances of the father.

Social cultural conditions

Willy's father is a musician. His mother is a preschool educator.

Emotional state

Willy:

tends to cry a lot and has not adapted well to his new school;
struggles with concentration;
likes to act a lot;
has a good memory; and
gets confuse with some sounds and letters like b/d and p/q.

Learner: Fred

Age 8y3mnths

Physical factors

Fred appears to be a healthy boy is obviously well cared for. He has no physical difficulties. Fred's class educator mentioned that he is on medication for hyperactivity but there appears to be no improvement.

Home background

Not much information of the home environment available. Fred is always neat and is obviously well cared for.

Social/cultural conditions

Fred's parents are employed. Fred is in the care of his grandparents after school. He is fond of his Oupa and Ouma.

Emotional state

Fred:

shows a lack of concentration;
shows signs of hyperactivity;
very talkative which disturbs the other classmates;
cannot await his turn; and
has poor self confidence, specifically regarding his reading disability.

Learner: Mike

Age 8y4mnths

Physical factors

Mike appears to be a healthy boy;
Mike is the older of two boys; and
he was diagnosed with ADHD and is on medication.

Home background

The father is a technician and his mother is a data-typist. Mike's father and his twin brother were both diagnosed with ADHD and had to repeat Grade 4. It appears that his reading difficulties may be of generic origin.

Social/cultural conditions

His parents are presently financially impaired. Mike is in the care of his grandparents after school. They appear to be emotionally supportive of Mike.

Emotional state

Mike:

struggles with concentration;
has reading difficulties and has a problem to comprehend;
has a fear of failure;
is restless and easily distracted; and
he needs constant encouragement.

General comments:

From the interviews it was clear that no one of the learners shows physical or mental disabilities which are important for this research study. However, according to the interviews and background information, all seven the learners included in the case study show a lack of the following:

- emotional security;
- phonemic, phonological and phonic skills;
- listening and concentration skills; and
- reading ability such as fluency and comprehension.

6.7 Base-line assessment

A base-line assessment for the identification of the learners (see Chapter 4) was conducted on the 16th April 2009 as well as semi-structured interviews with class educators.

The purpose and use of the ESSI-reading and spelling test was not primarily identification of learners with possible reading difficulties, but as a verification tool, and to have an objective assessment tool to determine the success of the intervention programme (see Chapter 1).

This reading and spelling test is a standardised test specifically for the South African learner whether English or Afrikaans speaking (Esterhuyse, 1997: 1-16). The test will take the form of spelling words and reading test in Afrikaans (The test programme is also available in English).

The spelling tests took place as a group activity while the reading tests were conducted, on an individual basis. The S2-spelling words and the L2-reading words of Grade 2 level were used. The spelling words were dictated loudly and clearly, without any change of voice and repetition of the words. The learners were required to write the word on a numbered answering sheet. For the reading assessment exercise, individual learners were requested to read the words as indicated on the list in a fluent manner while the researcher recorded her observations. These observations were listed on separate assessment charts for each learner as indicated below.

S2 SPELWOORDE	**S2 SPELLING WORDS**
1. blom	hunt
2. das	drum
3. stap	ship
4. braai	door
5. spring	stick
6. warm	apple

7. lemoen	mouth
8. honger	fork
9. sneeu	bread
10. busse	table
11. geluk	sound
12. pad	belt
13. kwaad	plate
14. bloeisel	rang
15. hondjie	please
16. paleis	beside
17. bakkery	nail
18. alleen	neat
19. onkruid	puzzle
20. verfraai	thumb

L2 LEESWOORDE	**L2 READING WORDS**
1. trein	look
2. tafel	jump
3. brief	swim
4. eier	lunch
5. skulp	money
6. terwyl	because
7. meeu	carpet
8. bietjie	ladder
9. poeier	kite
10. magneet	picnic
11. beitels	towel
12. vinger	noise
13. enige	study
14. artikels	breath
15. steenbras	tune
16. bure	huge
17. kole	creature

18. dame courage
19. affêre especially
20. spelerig language

The researcher compiled an assessment result table and an assessment and observation sheet to indicate the spelling and reading assessment outcomes of each learner.

The researcher recorded the spelling and reading assessment score for each participant in the assessment result table, each scored out of 20, resulting in a total score out of 40 for the pre-spelling and –reading as well as the post-spelling and –reading assessments. The results of the researcher's analysis of the assessment outcomes for each learner in the case study, was recorded on an assessment and observation sheet as indicated in the assessment of reading and spelling (see paragraph 4.2.4.1). This sheet indicates the outcomes on a scale from 1-4 as follows:

1=not achieved 2=partially achieved 3=achieved
4=outstanding achievement

This information was used to determine the progress of each learner during the music intervention programme. After analysing the results of the base-line assessment the following were the results. The learners' specific needs were also recorded.

Table 6.1 Results of base-line assessment-16 April 2009

	Learner	**1: Very weak**	**2: Weak**	**3: Average**	**4: Excellent**
Vocabu-lary: Word knowledge letter reversal, context, de-	Susan		Makes letter and word reversals		
	Jack	Letter/word reversals			
	Mary	Confuses words/letters and word reversals			
	Peter	Letter/word reversals Poor pronunciation			
	Willy	Letter/word reversals.Poor			

coding		context/decode skills			
	Fred	Letter inversals/word reversals			
	Mike	Letter/word reversals			
Fluency (flow) Pauses, hesitations	Susan	Pauses/hesitates at words			
	Jack	Poor fluency.Hesitates/pauses			
	Mary	Long pauses/repetition			
	Peter	Stumbles/repeats/hesitates			
	Willy	Pauses/hesitates			
	Fred	Poor context/decode			
	Mike	Hesitates/pauses a lot			
Reading compre-hension	Susan	Poor comprehension			
	Jack	Do not want to read			
	Mary	Poor comprehension			
	Peter	Poor comprehension			
	Willy	Poor comprehension			
	Fred	Poor comprehension			
	Mike	Poor comprehension			
Audible communication **self-esteem**)	Susan		Shy/low self-esteem		
	Jack	Low self-esteem			
	Mary	Very low self-esteem			
	Peter	Low self-esteem, speech difficulty			
	Willy	Low self-esteem			
	Fred		Talkative/poor concentration		
	Mike	Low self-esteem / concentration			
Spelling (Oral/ writing) Phoneme/ Phonics	Susan		Poor phoneme awareness, phonics		
	Jack	Poor phoneme awareness / phonics			
	Mary		Poor phoneme awareness, phonics		
	Peter	Poor phoneme/phonics			
	Willy	Poor phoneme/phonics			
	Fred	Poor phoneme/phonics			
	Mike	Poor phoneme/phonics			

As is evident from the above, the learners' underlying reading skills are very weak to weak. It is also important to note the emotional difficulties these learners have to cope with because this is a developmental factor (Chapter 4) which is an early indicator of reading difficulties.

6.8 The course of the music intervention sessions

The researcher uses phonological awareness and phonics to address reading difficulties. Her music intervention programme consists of phonological awareness and phonics as the core for reading ability (see Chapter 3). With this in mind and successful reading comprehension as the goal, it is intended that the music activities show positive results in learners who participate in the intervention programme.

Music intervention sessions were held twice a week, for 45 minutes per session and executed over of 19 sessions. The sessions were held during the last period of the school day, in a room away from the hustle and bustle of the school.

Each session is based on the theory discussed, including a poem written on a chart (see visual and auditory memory (paragraphs 5.4.4; 5.4.5), later set to music, and accompanied by the researcher on the piano. It also included rhythm exercises using non-melodic instruments (see rhythm in paragraph 5.11) as a set of alphabetic letters comprising the short and long vowels as well as consonants which were used to construct words (paragraph 3.3.1).

The sessions were structured according to early reading development strategies and the teaching of phonics (see paragraph 3.3.1). The 19 sessions were planned to accommodate gradual progression towards the development of phonics in reading through an increased level of abilities.

Phonological awareness was emphasised to address reading difficulties as fully discussed in Chapters 2, 3 and 4. The music intervention programme

was based on the core of auditory discrimination skills, phonological awareness and phonics and specific music activities were used to address these skills (Chapter 5).

Choksy (1991: 4) states in an earlier study involving music and self-image that another important area in teaching is that of improving the learner's self-image, (paragraph 4.3.2) and music may play an important role in supporting those learners to gather new information more readily.

Details obtained from the literature study shows that there has been a lot of research done in the past on the role of music in facilitating learning in other areas of the curriculum (Diamantes et al., 2002: 114), such as for the auditory, visual, cognitive, affective and motor systems. There is ample evidence to show that learners who feel good about themselves learn more readily than those whose self-images are below average (see paragraph 5.8 about humour and nonsense).

6.8.1 Content format

Underpinning principles of the music intervention programme, which were discussed in detail in Chapter 5, are the following:

- activities that focus on rhyme;
- activities that focus on syllable units;
- activities that focus on onset and rime;
- activities that focus on phonemes;
- activities that focus on discrimination of sounds; and
- activities that focus on the emotional development.

To summarise listening skills, which will be addressed in the well-planned music instruction programme, the researcher concluded the following:

- the child must concentrate: this will depend on the degree of interest;
- the child must understand what he/she is listening to: the child needs help in the initial recognition of the sound and compiling an accurate

memory bank for sounds that are near or far away, high or low, long or short, etc); and

- the child must learn to remember what it has heard- discrimination, comparison and sorting are difficult with sounds because they easily fade away.

Through the following listening skills the learner will gain increasing control of learning to read which will be the core of the music intervention programme:

- auditory awareness of the presence of sound;
- auditory discrimination or the ability to distinguish between certain sounds; and
- auditory sequence and memory or the ability to remember sounds in their correct sequence and to reproduce these sounds.

CHAPTER 7

IMPLEMENTATION OF THE MUSIC INTERVENTION PROGRAMME

7.1 Introduction

Based on the literature study and motivated by the possibility that a music intervention programme may be successful to address reading difficulties, the researcher decided to explore these factors by means of this empirical research.

Listening attentively (extending the concentration span) and responding to an extended sequence of instructions, is the key to learning. Through music and related activities, learning to read may be more successful because most learners enjoy music.

7.2 Programme

First session-21 April 2009
Purpose of session

This session concentrated on the awareness by the learner of different sounds. The session will address the following:

- auditory awareness: the ability to recognise the presence of sound;
- auditory discrimination, which is the core of mastering phonics (paragraph 2.8);
- enhancement of self-esteem by experiencing success and enjoyment (see paragraph 5. 3 for indication of low-self-esteem); and
- listening and concentrating skills whch is the core of learning (paragraph 2.4).

Procedure

Environmental sounds

The participating learners lay with closed eyes on their backs while they listened to different sounds. The learners had to discriminate between sounds coming from either inside or outside the classroom and to state their observations.

The environmental sounds were other learners walking and running, duff calls, a car passing by, adult footsteps in the corridor, laughter from the playground and educators talking to each other while walking by.

Recorded sounds

A few familiar sounds were recorded, such as a doorbell ringing, a church-bell ringing, a rooster crowing, a puppy dog barking and a cat meowing. The learners had to identify them through listening carefully and imitating them.

What is in the container? Soft and loud sounds

Eight plastic containers (pill boxes) were used. Seven of them were filled with different substances or objects such as rice, beans, small sticks, small stones, pencil shavings, small bells and pieces of paper. The other container was empty. The containers were arranged in order from the softest to the loudest sound.

Room tap

As the learners sat on the carpet with closed eyes, they had to recognise the tapped sounds. The educator tapped objects around the room such as the chalkboard, desk, window, door, pencils against each other and books. This activity required listening and concentration skills.

Find a sound that is…

Using the above activity for this activity as well, the learners had to indicate which sound is;

smooth;

rough;

happy;
sad; and
hard.

Rhythm

Non-melodic percussion instruments were used in this exercise to expose the learners to different rhythmic patterns. They had to listen carefully and to remember the sound patterns heard. The learners had to repeat the rhythmic patterns. This exercise is used to develop concentration skills as well.

Findings

Learner: Susan

Susan initially became reticent, evidently since she pulled her jacket over her head. She revealed poor rhythmic skills during the first session. She was under duress when reading to her educator, and consequently her reading was not fluent.

Learner: Jack

Jack cooperated but revealed poor rhythmic skills during the first session. Evidently Jack was not able to discriminate between different sounds according to his answers given in his listening exercises.

Learner: Mary

Mary was very shy initially. She did not co-operate fully during the first session. Mary appears to lack concentration and listening skills and has poor rhythmic skills. This explains Mary's reading difficulties and problems with phonemic awareness.

Learner: Peter

Peter co-operated well and enjoyed the session in spite of his incoherency consequent on his speech difficulty. He revealed poor rhythmic awareness which may be the reason for his reading difficulties.

Learner: Willy

Willy co-operated spontaneously and enjoyed the session although he has difficulty with the rhythmic activities. He revealed auditory awareness difficulties which may be the reason for his poor reading ability.

Learner: Fred

Fred was over-enthusiastic, enjoyed himself and co-operated well. His exuberance, however, caused him not to concentrate well on the exercises. Fred lacks concentration and listening skills and reveals poor rhythm skills. His auditory awareness difficulties may be the reason for phonemic awareness difficulties.

Learner: Mike

Mike could not sit still and concentrate on the exercises and revealed very poor auditory awareness skills. Poor rhythm was revealed which may be the reason for his reading difficulties.

Findings through observation

All seven of the learners ultimately enjoyed the exercises and became relaxed with time. They experienced difficulty in the rhythmic exercises as well as the auditory awareness activities which may be an indication that they have phonemic difficulties in reading and need support in this area. The learners have poor concentration skills and hopefully will improve with the music intervention programme. The learners looked forward to the next session.

Second session-23 April 2009

Purpose of session

- this session concentrated on the enhancement of the listening and concentration skills- listening and concentration go hand in hand in reading successfully and by seeing the words and hearing them while singing. This enhances the visual and auditory skills of the learners;
- eye movement exercise in an indirect way; and

- self-confidence is an important factor in reading which will be developed through music activities and by referring to the learners by name.

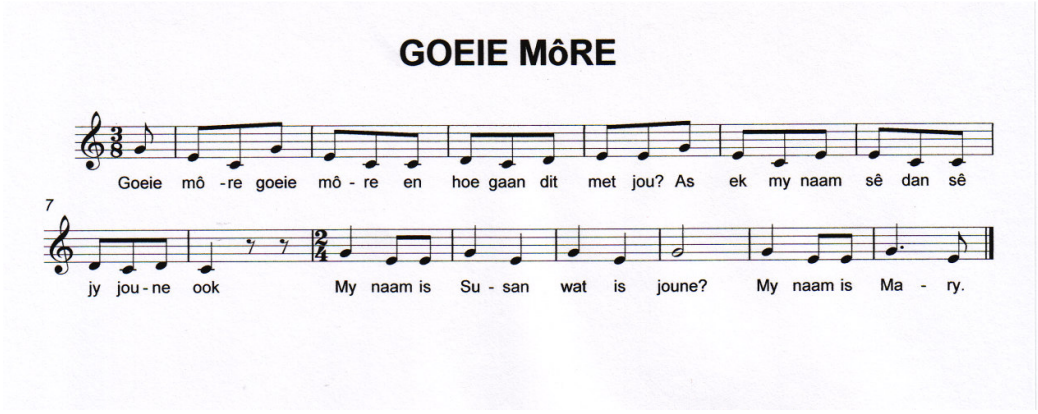
Procedure

The second session began with a greeting song because games and group activities may be used to introduce learners to one another in an enjoyable manner.

a) The song “Good morning” (Goeie môre) was played on the piano while all the learners sat in a circle. The words of the song were pointed out on a chart to the learners while they listened to the words and music;

b) The learners kept a steady beat throughout by softly patting their knees or alternating patting and clapping.

Exhibit 7.1 Good morning/Goeie môre



c) The song ”Goeie môre” was first sung. Thereafter the learners chanted in turn to each other “My name is Susan. What is yours?” followed by the reply and so forth around the circle.

d) The learners clapped out their names rhythmically while singing the cueing song. When they were familiar with the rhythm the activity was transferred to

non-melodic percussion instruments triangles, tambourines, sleigh bells and egg-shakers.

e) Words of the song were pointed out. With this cue, the words were broken dwon into syllables and clapped.

goeie – two syllable
môre – two syllables
Susan – two syllables
Fred – one syllable
wat – one syllable
going – two syllables
nothing – two syllables
Sally – two syllables
Pat – one syllable
what – one syllable

Findings through observation

Learner: Susan

Susan initially withdrew but later responded well. She was very disruptive and became distracted by all the instruments.

Learner: Jack

Jack struggled a lot to listen and to participate in the activities. He could not remember his cues and had to be reminded continually how to use the instrument properly. He revealed difficulty in the clapping of syllables and was slow to sing his name.

Learner: Mary

Mary was very reticent initially but at the end of the activity she appeared to enjoy the session a lot. She easily fell in with the singing but struggled a bit with the syllable clapping and playing. She had to be assisted.

Learner: Peter

Peter enjoyed the session again this time but had difficulty in the syllable-clapping activity. With assistance he could manage the beat with ease. His speech difficulty handicapped him when singing but it appeared not to bother him at all.

Learner: Willy

Willy participated well and enjoyed the song very much. Initially he struggled with the rhythmic activities but after receiving assistance he managed the beat very well.

Learner: Fred

Fred enjoyed himself a lot and typically over-reacted most of the time. He could not keep quiet and listen attentively when to play and sing. This is mainly a disciplinary problem which has a negative effect on his concentration.

Learner: Mike

Mike could not sit still in the first session but during this session he co-operated well. He appeared to enjoy the music-making activity.

Session 3-28 April 2009

Purpose of session

- the following few sessions concentrated on the vowels: a, e, i, o and u- this session started off with the /a/ vowel sound;
- this session concentrated on the short vowel /a/;
- phonemic awareness and concentration skills;
- rhythm;
- auditory awareness, memory; and
- blending sounds into building words.

Procedure

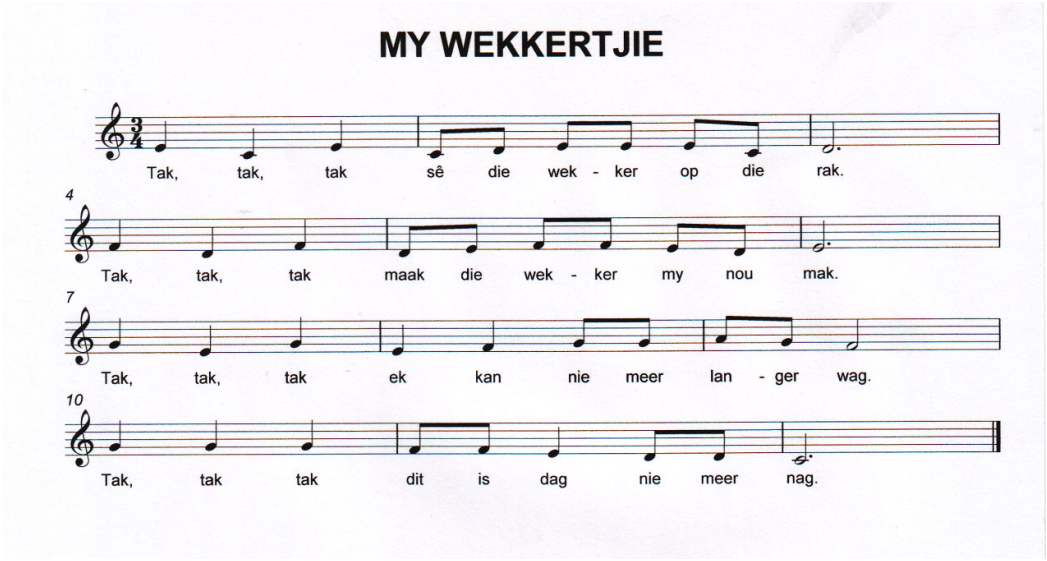
The vowel was not introduced to them but they were expected to recognise it spontaneously.

a) Learners sat in a semi-circle to be able to interact while seeing the words of the poem which as shown to them on a chart. The music and the words were learnt simultaneously until they knew them well.

My wekkertjie
Tak, tak, tak
sê die wekker op die rak.
Tak, tak, tak
maak die wekker my nou mak.
Tak, tak, tak
ek kan nie meer langer wag.
Tak, tak, tak
dit is dag en nie meer nag.

b) The poem was set to music and the learners had to learn to sing it accompanied by a piano. The exercise was first demonstrated after which the learners had to read and sing the words as they were pointed out on the chart.

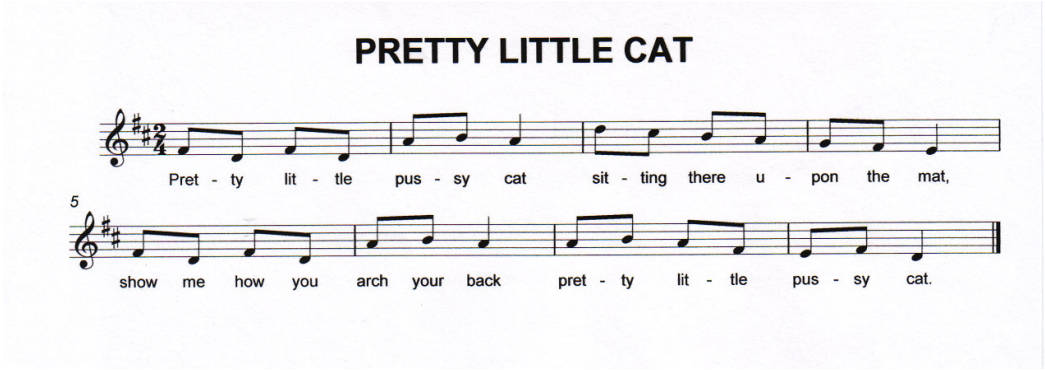
Exhibit 7.2 My wekkertjie



For English speaking learners the following poem set to music may be used with vowel /a/ session.

My pretty little cat
Pretty little pussy cat,
Sitting there upon the mat,
Show me how you arch your back
Pretty little pussy cat.

Exhibit 7.3 My pretty little cat



c) After familiarising them with the words and the song, questions and instructions are directed to the learners and this aimed at phonemic awareness skill development as in:
"Which vowel do you hear in this song?" and
"Find all the /a/ words and point them out".

d) Learners were asked to clap on the beat and to sing the song "My wekkertjie" together to familiarise them with the rhythm. When familiar with the beat each learner was given a non-melodic instrument which they had to play when the words with the /a/ vowel sound was point out to the chart.

e) The /a/ vowel words were coloured to make the exercise easier.

My wekkertjie
Tak, tak, tak
sê die wekker op die rak.
Tak, tak, tak
maak die wekker my nou mak.
Tak, tak, tak
ek kan nie meer langer wag.
Tak, tak, tak
dit is dag en nie meer nag

f) To reinforce the words in the poem, various rhythm and different pitches were introduced to them which they had to respond to. The following exercise, which entails clapping and slapping, will help them to keep a steady beat and to extend their memories. This activity was also used in a 4/4 and 2/4 beat.

Exhibit 7.4 Rhythm

Clap 3 4		XXX		XXX	XXX
slapping	XXX		XXX		XXX

g) The following exercise was introduced to the learners to develop auditory awareness skills, memory and concentration. First the learners clapped with open eyes, followed by having their eyes closed.

Exhibit 7.5 Open and closed eye rhythm

Clap by memory	XXX				
Soft clap in ¾ time				XXX	
Clap loud		XXX			
Slap			XXX		XXX

h) The next exercise concentrated on rhyming words to replace the end words in the poem with the /a/ vowel sounds. The purpose of this exercise is for the

learner to become acquainted with rhyme by hearing and repeating rhyming words such as the following:

Replace: "rak" with "lak",

Replace: "mak" with "vak",

Replace: "wag" with "sag"

Replace: "nag" with "mag" and used as many rhyming words as possible such as dat, sat, pak, kat, nat, wat, mat, rat, bad, kap, pak, pad.

For the English language learner words like cat, pat, dad, mad, sat, fat, hat, dam, rag, ham may be used.

i) This is an exercise where the learners have to blend individual sounds while clapping with rhythm using rhythm sticks to accompany the rhythmic blending of the individual sounds of the words. This was introduced to the learners in order to develop their phonemic awareness skills.

/r/a/k/=rak /m/a/k/=mak /w/a/g/=wag /n/a/g/=nag

clap /r/a/k/ /m/a/k/ /w/a/g/ /n/a/g

3/4

sticks /r/a/k/ /m/a/k/ /w/a/g/ /n/a/g/

j) When the learners were familiar with blending individual sounds while playing with rhythm sticks, they proceeded to other rhyming words. They were asked to give another word with the /a/ vowel which was segmented into individual sounds while beating with the rhythm sticks.

Findings through observation

The learners struggled a little with the blending and segmenting of individual sounds since they were not familiar with this in class. They tended to use alphabet letters instead of the phonemes. On the positive side, it was observed that the learners enjoyed the entire session.

Session 4-30 April 2009

Purpose of the session

- This session concentrated on the /e/ vowel:
- continuity of the vowel sounds, concentrating on /e/;
- working memory; and
- confidence/self-esteem.

Procedure of the session

This session followed the same pattern as the previous sessions.

The exercises of the previous sessions were recalled to memory. This was done to ensure continuity of the sessions, at the same time manifesting the enthusiasm of the participants

a) Again without mentioning the new vowel to be learnt a new poem was introduced. The learners had to read the words on the chart as they were pointed out.

Ses op my bes

As ek verjaar is ek net ses,

juffrou sê dan doen ek my bes.

Ek tel ses, ses, ses, ses, ses,

nes juffrou sê ek doen my bes.

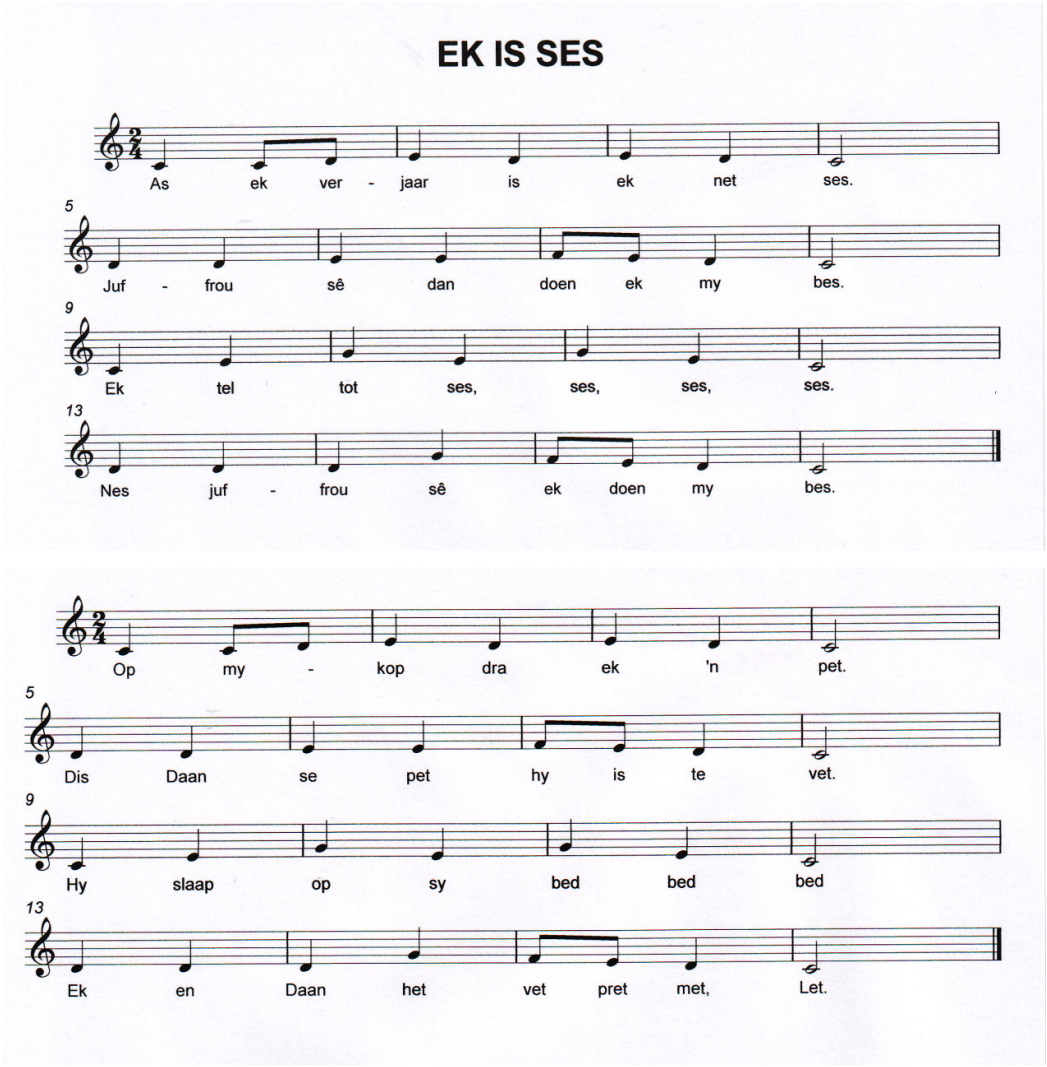
Op my kop dra ek 'n pet,

dis Daan se pet hy is so vet.

Hy slaap op my bed, bed, bed,

ek en Daan het vet pret met Let.

Exhibit 7.6 Ek is ses



b) For the next exercise, the learners used triangles to keep the beat while saying the words in the whole word manner as follows:

Exhibit 7.7 Triangle rhythm

4 4 Triangles	1 2 3 4 ses x x x	1 2 3 4 bes x x x	1 2 3 4 ses x x x
4 4 triangles	1 2 3 4 pet x x x	1 2 3 4 vet x x x	1 2 3 4 bed x x x
3 4 triangles	1 2 3 ses x x pet x x	1 2 3 bes x x vet x x	1 2 3 ses x x bed x x

For the English language learner, these words may be replaced as indicated in the exercise below.

I met a little hen, her name is Jen.
I dropped my hen in her little den,
When ten ugly men, try to chase my hen,
I ran away with the hen and her den.

hen 2 3 4 *den 2 3 4* *met 2 3 4*

ten 2 3 *men 2 3* *Jen 2 3*

c) Having completed the above exercise, the learners had to find their own words to rhyme with the "e" sound. *The English language learner may use the following words used in the exercise; hen, men, ten, and den. They may use rhyming words such as; let, get, set, pet, vet.*

d) The learners had to use their phonemic awareness skills to do the following: The segmenting of individual sounds:

met = /m/e/t/ les = /l/e/s/

ses =/s/e/s pet = p/e/t/

e) The blending of individual sounds:

/m/e/t/ = met /l/e/s/ = les

/s/e/s = ses /v/e/t/ = vet

f) The segmenting: onset-rime:

bed =/b/-/ed/ les =/l/-/es/

het =/h/-/et/ bes = /b/-/es/

g) The blending: onset-rime:

/m/-et/ = met /l/-es/ = les

/s/-es/ = ses /h/-et/ = het

Session 5-5 May 2009

Purpose of the session

- This session concentrated on the vowel sound /i/:
- phonemic awareness, phonics;
- rhythm;
- rhyming words;
- syllables;
- memory; and
- emotions/enjoyment.

Procedure of the session

Once again, the previous work was reviewed before new work was introduced. With this firmly established the new vowel sound /i/ was introduced. In this session two poems were set to music.

a) The new poems' words were read to the learners which they had to repeat. The new poems words were as follows:

My hen pik

My hen pik aan 'n mieliepit,

Pik, pik, pik, pik, pik.

In die boom is daar 'n mik,

Ek hoor iets tik, tik, tik

Vissie in die water

In die water swem 'n vissie

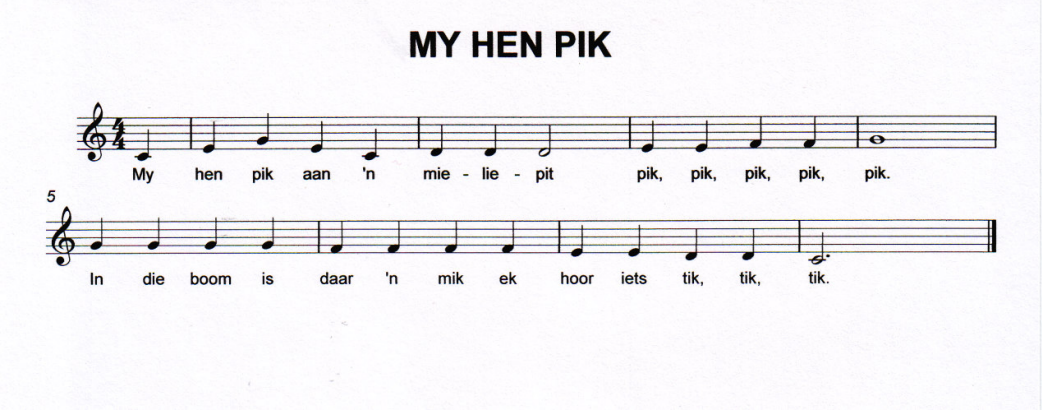
En aan sy lip is 'n lissie.

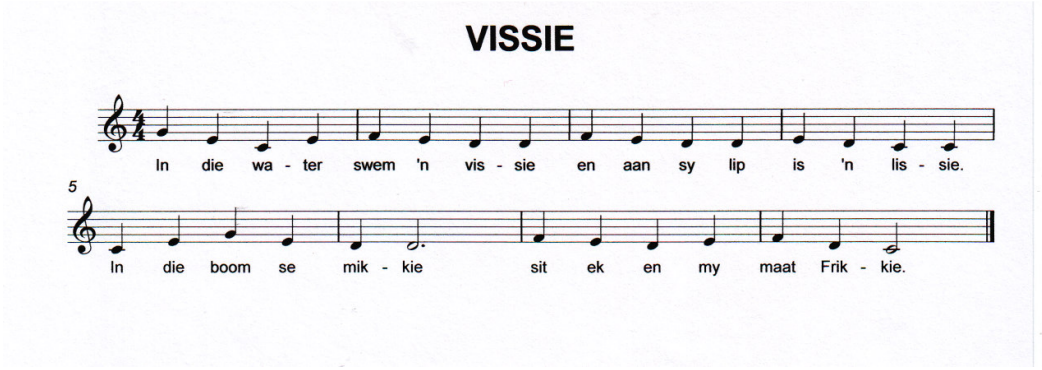
In die boom se mikkie,

Sit ek en my maat Frikkie

b) The melodies were played on the piano while the learners followed the words on the chart until they were familiar with the words. The music is set out below:

Exhibit 7.8 My hen pik / Vissie





c) A variety of non-melodic instruments were used to accompany the songs. The learners had to play only on the /i/ vowel words. The purpose of this exercise is to lay a strong foundation of rhythm with words. The song "Pik 'n mieliepit" was used because it contains only one syllable words with "i". This was followed by the song "Vissie in die water" which contains two-syllable words which the learners had to accompany on the instruments accordingly.

d) Again the learners had to find other rhyming words to replace the "i" words in both the songs.

For the English language learner, the following poem may be introduced to become familiar with the two-syllable words and the /i/ vowel sound.

This is a pig		*This is a piggy*	
With a pink wig.		*With a pink wiggy*	
He fits in a tin		*he fits in a tinny*	
That's lying in a bin.		*That's lying in a binny.*	
One syllable word	*pig*	*two syllable*	*pig-gy*
	wig		*wig-gy.*

Fndings through observation

As the learners left the room at the end of this session, they spontaneously sang the songs which were a positive indication that they enjoyed the session. Although all seven the learners co-operated well, there is still areas in need like their attentive listening and concentration skills.

Session 6-7 May 2009

Purpose of the session

- This session concentrated on the /o/ sound:
- working memory;
- emotions by using nonsensical words;
- concentration skills;
- visual and auditory awareness skills; and
- blending and segmenting of words.

Procedure of the session

The following two poems were introduced, the second one of which one contains two syllable words. The vowel introduced was the /o/ sound. Some words used were nonsensical which the learners enjoyed very much. The poems were a bit longer in order to extend the learners memories and gradually progress to a higher level of abilities.

Kos in die bos

Kiepie kiepie groen is die mos,

hier is lekker kos in die bos.

Maar jy moet jou kuikens lok,

baas en koning van die hok.

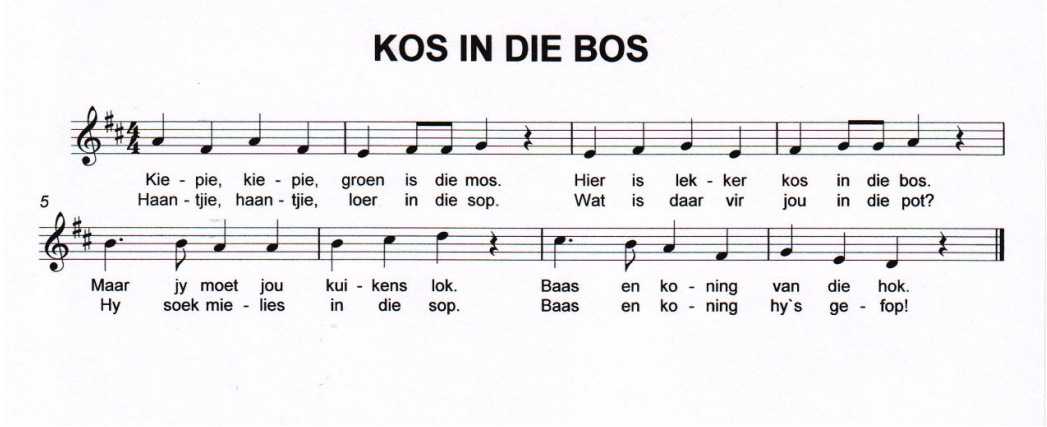
Haantjie, haantjie loer in die sop,

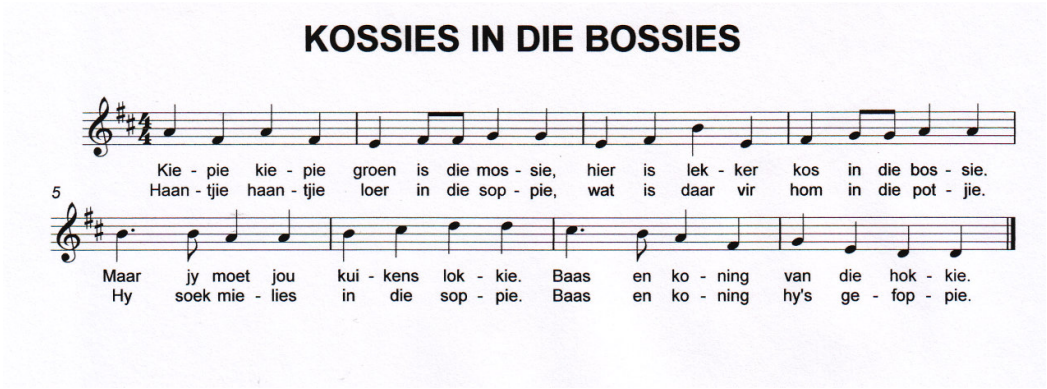
wat is daar vir hom in die pot.

Hy soek mieleis in die sop,

baas en koning hy's gefop.

Exhibit 7.9 Kos in die bos





b) After listening to the tune of the song, the learners started to sing the song with the words on the chart.

For the English language learners the following may be used:

Frog on the log

On a big, big log
sat a speckled green frog,
fell over the log
with another little frog.
And on and on they joggy
Far away jump the froggy.

c) The learners had to sing the song until everyone was familiar with the tune and the words. The learners had to listen to it several times while “reading” the words.

d) Word-cards were handed out with the rhyming words of the songs “Kos in die bos” and “Kos in die bossie”, written on it, while the learners sang the song, they had to hold up the rhyming words when the particular word appeared.

e) When everyone was familiar with this exercise they were given separate sentences from the poems written on cards, which they had to place in the correct order as they sang the song.

f) Because repetition is of utmost importance for memory development, these two songs were repeated before the next activity.

g) Each learner was given a few separate letter-cards in order to build their own rhyming words, and replace the rhyming words of the two songs just learnt, in order to develop phoneme awareness skills. At first only three letter words with the /o/ sound were used like; *sop, kos, hok, pot* and *bos*.

h) In order to develop segmenting and blending skills, the following exercises were used:
Rhyming: What word rhymes with “*kos*”? An answer is “*los*”.

Phoneme deletion: What word would be left if the /k/ sound was omitted from *“kos”?* The answer is “*os”.*
Phoneme segmenting: What sounds do you hear in the word “*mot*”? The learners should answer */m/o/t/.*

The English language learner may use the words mop, cot, pot, hot, nod, rod, got, jog, log. Rhyming words for the English language learner may be frog/bog and jog/log.

i) As soon as the learners were familiar with this activity, they progressed to the two syllable rhyming words with the same exercise as before for example: bossie, kossie, lokkie, foppie, mossie, soppie and hokkie.
English: froggy, joggy, loggy.

j) To conclude the session, the songs were played together with the percussion instruments according to the beat of the song.

Findings through observation

After session six a detailed observation assessment is as follows:

Learner: Susan

Susan co-operated very well today. She participated in all the activities with confidence. Her phoneme awareness improved a lot and she thrives on praise. Improvement during the course of the programme was observed.

Learner: Jack

Jack revealed difficulty to listen attentively and to concentrate on an activity. He struggled with his phoneme awareness and withdrew when not successful. He needs to be encouraged throughout the session. With assistance he could managed to keep the beat in the rhythm pattern with ease. By the end of the session he displayed a feeling of self-achievement.

Learner: Mary

Mary enjoyed the activities. She did very well in the phoneme awareness activities and was at ease with the rhythmic exercises. She participated throughout the session.

Learner: Peter

Peter co-operated very well and enjoyed the session. He showed confidence in the phoneme awareness activities. It was observed that Peter improved positively in his listening and concentration skills.

Learner: Willy

Although Willy participated in all the activities, a quiet mood was observed in this session. He was praised for acknowledgement, his good work and for his progress with the instruments.

Learner: Fred

Initially Fred was over-enthusiastic which resulted in him being confused during the phoneme awareness activity. After a while Fred became more relaxed and did well in the phoneme awareness activity. He awaited his cue and sang along enthusiastically which was out of his normal behaviour pattern.

Learner: Mike

Although initially Mike did not want to participate in the singing exercise, he later enjoyed the phoneme awareness activity. It was observed that he is showing improvement in his concentration skills and that he thrives on positive praise.

Session 7-12 May 2009

Purpose of the session

This session concentrated on:

- a new vowel /u/;
- phonemic awareness skills;
- phoneme deletion: onset and rime;
- rhythmic awareness in words through the music;
- auditory awareness-discrimination of sounds;
- the purpose of this exercise was for the learners to become acquainted with fluency and concentration which are the core for successful reading;
- fluency and concentration;
- working memory; and
- emotional development. The purpose of this exercise was to reinforce their confidence and self-esteem because initially they lacked these attributes.

Procedure of the session

The session started off with a new poem, the aim of this session being to reinforce the sound-to-letter action by using words pointed out to the learners

which they had to sound out. The new vowel sound /u/ was introduced to the learners on a chart.

Die windjie ruk

Rukke, plukke ruk en pluk,

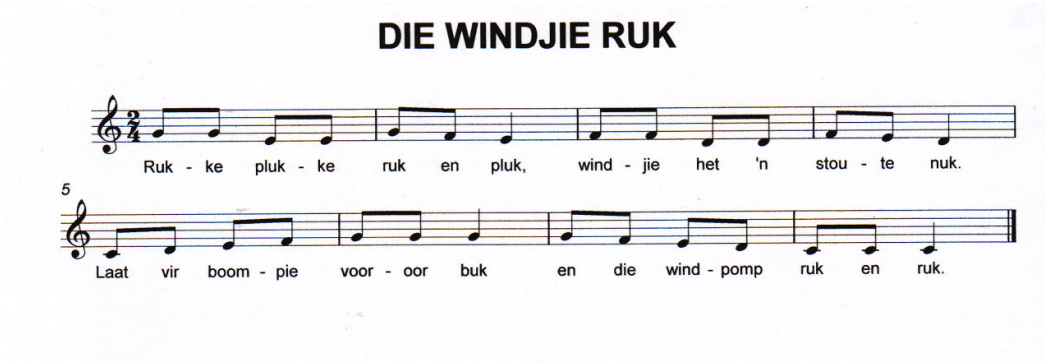
windjie het 'n stoute nuk.

Laat vir boompie vooroor buk

en die windpomp ruk en ruk.

a) After establishing the words of the new poem, the learners read the words. Individual learners were then asked to read the poem. Then the poem which was set to music was introduced.

Exhibit 7.10 Die windjie ruk



b) The learners responded easily to the song with piano accompaniment. They immediately started singing along.

For the English speaking learners, the following poem may be used in the /u/ sound session:

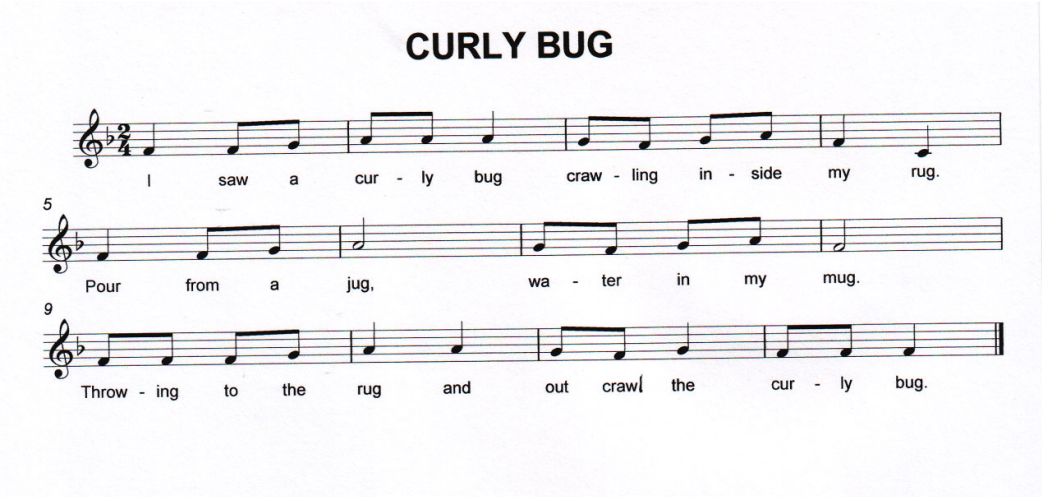
The curly bug

I saw a curly bug

Crawling inside my rug

Pour from a jug
Water in my mug
Throwing on to the rug
And out crawls the curly bug (arranged by the researcher).

Exhibit 7.11 Curly bug



c) After familiarising the learners with the words and the song, questions and instructions were directed to the learners like:
"Which vowel do you hear in this song?" The learners should respond with the /u/ vowel sound.

d) The learners clapped the rhythm together while swinging their arms in a march-rhythm. Instruments were passed out and the learners played according to the 2/4 beat of the song.

e) The learners were asked to alternate instruments with corresponding words with the /u/ vowel sound and a replacement rhyming word. For example: Triangles played the word "*pluk*" and the bells played a replacement word like "*sluk*". The tambourines had to play the word "*nuk*" and the rhythm sticks beat the replacement word "*buk*", etc.
f) After being familiarised with the activity they used dynamics with the rhyming words. The learners played loudly (accented) on the first beat, while

saying the word; the second beat played softly, without saying the word, as indicated below.

Exhibit 7.12 Play softly and loudly

Play and say loud	Play soft only
pluk	X=triangle
nuk	X=bells
sluk	X=sticks
ruk	X=clapper
buk	X=egg shaker

g) The purpose of the following exercise is to establish a firm knowledge of phoneme deletion as well as onset and rime development. Learners are taught that words have beginning and end sounds apart from the vowel which is the middle sound.

h) Each learner was given a few cards with the letters to build their own words in order to develop phonological awareness skills. After everyone was familiarised with the words, the learners were required to take away the beginning sound and then to take away the end-sound of each of the words in order to enhance their phoneme deletion skills.

Findings through observation

At first the activities were fairly easy and the learners enjoyed it a lot. Later the activities gradually become a little more difficult but the learners still enjoyed the instrumental part of it. Initially the learners struggled with activity (f) with the dynamics of the instrumental activity therefore the next session will again concentrate on the same skills.

Session 8-14 May 2009

Purpose of the session

The next few sessions focused on the long vowel sounds like */aa/, /ee/*, */oo/* and */uu/.* The purpose of this session was to:

- extend the learners' memories and also to revise the short vowel sounds;
- this session concentrated on the */aa/* sound; and
- this activity was to reinforce the interaction of the visual and auditory skills which are very important in learning to read, specifically to develop fluency.

Procedure of the session

Once again the previous session was reviewed before new work was introduced. With this firmly established, the new session started.

a) Afrikaans learners have difficulty with the long vowel sounds because they tend to use the shorter form of these sounds like for example; "*gan*" instead of "*gaan*" and "*dar*" instead of "*daar*".

The English language does not contain the long */aa/* vowel sound. The English language uses the vowel /*a*/ as a short and long sound in words like "*fat"* with a short /*a*/; the word "*far"* with a long /*a*/; "*cat"* with a short /*a*/ and the word "*car"* with a long /*a*/ vowel sound.

b) As in the previous sessions, the learners started with the poem and read together while the words were pointed out on the chart.

Haas op die plaas

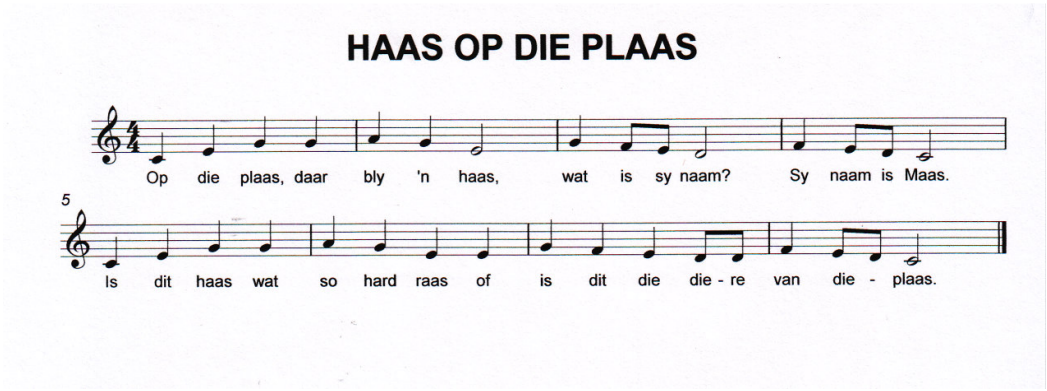
Op die plaas daar bly 'n haas,

wat is sy naam, sy naam is Maas.

Is dit haas wat so hard raas? of,

is dit die diere van die plaas?

Exhibit 7.13 Haas op die plaas



c) After the words were well memorised the learners sang the song to the accompaniment of the piano.

d) Rhythmic patterns were introduced to the learners. They started with a waltz rhythm, which is in 3/4-beat as follows:
The learners counted together while clapping the beat 1, 2, 3:

on count one:	clap above the head
on count two:	clap in front the body
on count three:	clap against a friend's hands.

e) The next exercise was built on the above rhythmic activity, but this time they used words from the poem. Words were written on separate cards and as the card was held up, the learners recited while clapping and maintaining a steady beat. This was done with the same word with each clap and then after this rhythm was well established they had to repeat the exercise but with different words like:

on count one:	clap above the head and say "*haas*"
on count two:	clap in front of body and say "*Maas*"
on count three:	clap against a friend's hands and say "*plaas*".

f) The learners repeated the above activity but this time they substituted the words of the poem with other rhyming words. Every learner had a turn to find a rhyming word and then they clapped the rhythm together.

g) The following activity with examples of rhythmic patterns were clapped by each learner. First they did the activity without the words.

h) Then the learners had to use the same rhythmic patterns but this time they had to add words to the rhythm.

Exhibit 7.14 Rhythmic patterns

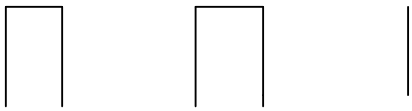
a)

Kom Wil--ly kom

b)

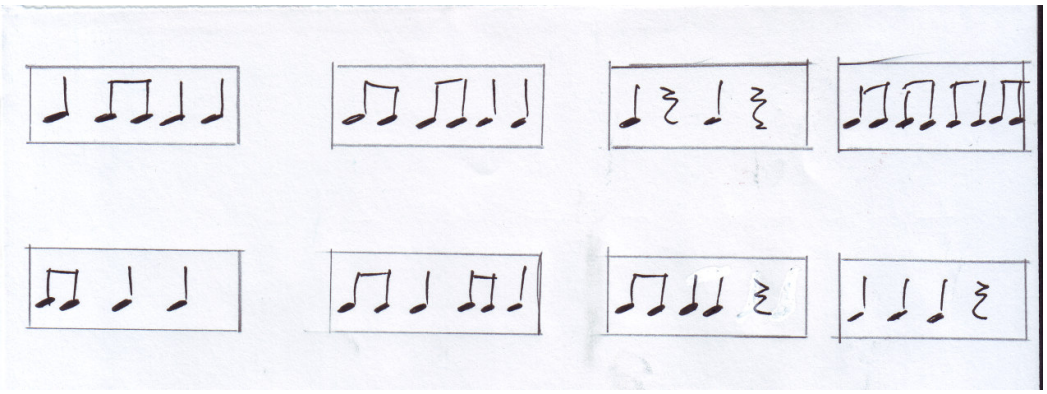
Ons is vro--lik

c)



i) As soon as the learners were familiar with the rhythmic pattern activity and while they sat in a circle, they were issued with several cards each with a different rhythmic pattern on it. The learners had to clap the rhythms starting with the first learner with his pattern and they progressed until everyone had a turn.

Exhibit 7.15 Rhythmic patterns



Observation

The last activity for the session was an enjoyable exercise and everybody had fun. The rhythmic patterns with words added to them, created chaos because everybody wanted to say words together. After a decision was made to nominate one learner at a time, the activity became more structured.

The learners responded spontaneously and were quick to answer. It became clear that all the learners enjoyed the music activities. Positive participation from all the learners during the activities was observed. The learners' phoneme awareness skills, memory and their concentration skills showed improvement.

Session 9-14 May 2009

Purpose of session

- The purpose of this session was to introduce the long vowel sound */ee/.* The previous well-structured procedure was used:
- phoneme awareness;
- phoneme counting;
- auditory discrimination; and
- listening skills.

Procedure of session

a) A new poem was introduced to the learners which was set to music and sang with piano accompaniment. While they sat in a semi-circle they read the words as they were pointed out on the chart in order to develop their visual skills.

Ek hou van lees

Ek hou van lees,

'n storie oor kees.

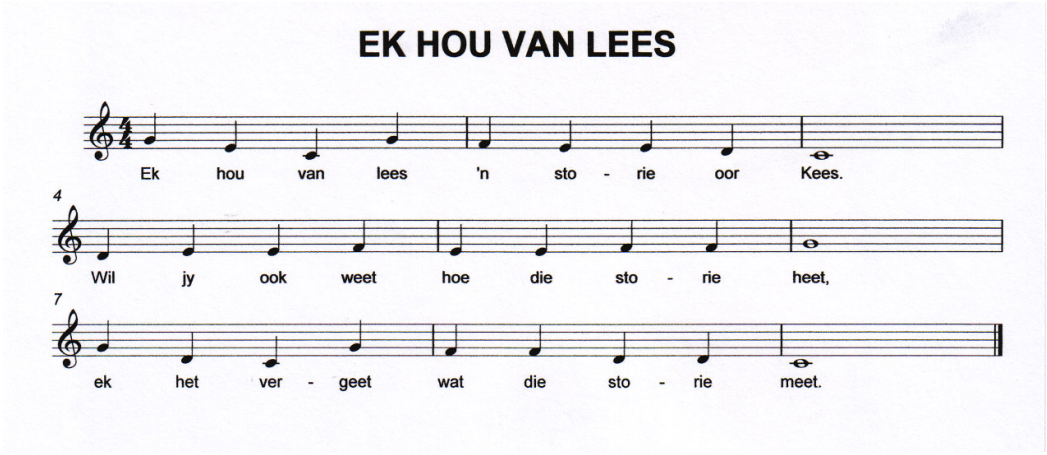
Wil jy ook weet,

wat die storie heet?

Ek het vergeet,

wat die storie meet.

Exhibit 7.16 Ek hou van lees



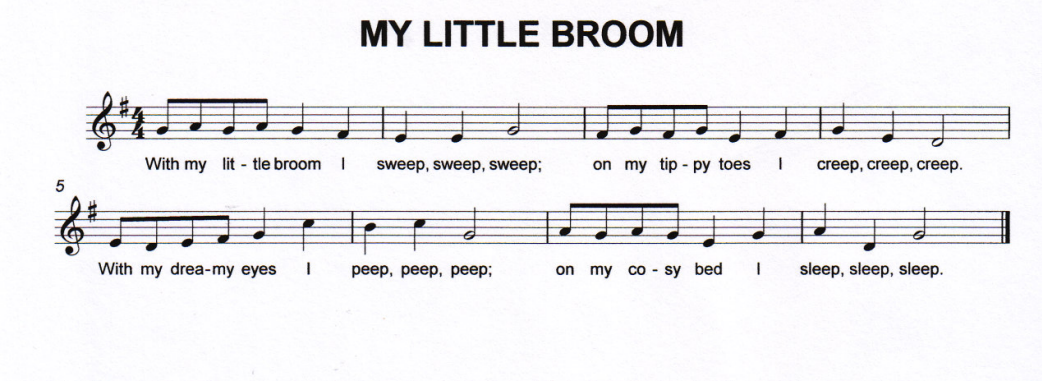
b) Percussion instruments were used by each learner as accompaniment. After they became familiar with the song, they had to find other rhyming words for this poem such as; vreet, gees, mees, weeg, deeg, leeg.

The English language learner may use rhyming words like feel, peel, heel, deep and keep as replacements in the following poem, set to music:

My little broom

With my little broom I sweep, sweep, sweep;
On my tippy toes I creep, creep, creep.
With my dreamy eyes I peep, peep, peep;
On my cosy bed I sleep, sleep, sleep.

Exhibit 7.17 My little broom…



c) The purpose of the next exercise was to concentrate on the auditory discrimination as well as phoneme awareness skills. In order to establish a firm understanding of phoneme deletion skills, the following exercises and instructions were introduced to the learners.

"Take away the first sound of each word and say what is left";

Afrikaans			**English**		
lees	becomes	x-ees	peel	becomes	x-eel
kees		x-ees	heel		x-eel
heet		x-eet	keep		x-eep
meet		x-eet			
weeg		x-eeg			

d) Phoneme counting: "How many sounds do you hear in the word "*heet*"?
The response from the learners should be "three sounds". The learners had to do the same with all the rhyming words from the poem and they had to add their own /ee/ words to take part in this activity.

e) Sound-to-word matching: "Is there a "*h*" in "*heet*"?-Yes.

"Is there a "*w"* in "*weer*"?-Yes.

The learners had to find more words to do this activity but still keep in mind the /ee/ sound words.

f) The learners were issued with non-melodic instruments on which they had to play the */ee/* words in the following way:
The 3/4-rhythmic beat: 1-2-3- on the word "l/ee/s"

g) The purpose of the following exercise was to develop auditory discrimination skills. After the learners listened to a given word they had to reply by playing according to the exhibit below. This ended the session.

Exhibit 7.18 Words with rhythm

Word	**Bells** **1**	**Tambourine** **2**	**Sticks** **3**
lees	l	ee	s
kees	k	ee	s
vrees	vr	ee	s
seep	s	ee	p
leef	l	ee	f

Session 10-19 May 2009

Purpose of the session

This session concentrated on:

- working memory;
- emotional expression: enthusiasm, competitive and fun;
- phonological discrimination;
- enhancing more advanced listening skills;
- phoneme awareness: segmenting and blending of sounds;
- auditory discrimination; and
- concentration.

Procedure of the session

The exercises of the previous sessions were recalled from memory. This was done to ensure continuity of the sessions, at the same time reviving the enthusiasm of the participants. The competition element of this made it fun for the learners. They had to see who could remember the most songs from the previous sessions but in the correct context. They have to progress from the /a/ up to the /ee/ sounds.

a) With the previous exercises well-established, the learners progressed to the new letter-sound combination being the long vowel */uu/* as in the following words.

vuur	muur	duur	gluur	suur	stuur

b) The purpose of this exercise was to reinforce phonological discrimination skills employing decoding exercises. Letter cards were used in building up and breaking down of words. After firmly establishing the concept of decoding, percussion instruments were used by the learners as follows:

For example using the word *"muur*": Triangle played loudly on the phoneme */m/* softly on the vowel sounds */uu/* and loud on the last phoneme */r/.* The learners had to do the same with all the words from the list above.

c) A new poem was introduced to the learners, following the words on the chart.

Teen die muur

Die klokhorlosie teen die muur,

vertel ons van die uur.

Terwyl die wysers mekaar skuur,

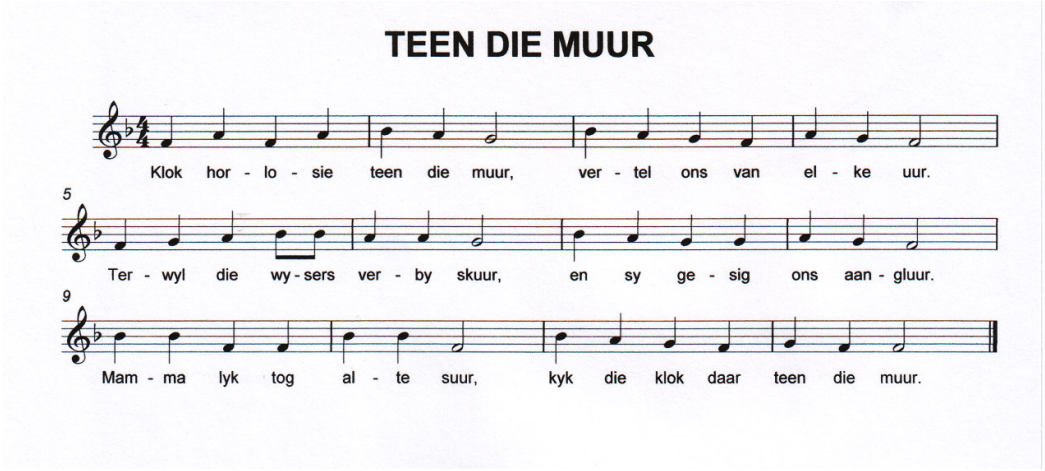
En sy gesig ons aan gluur.

Mamma lyk tog al te suur,

kyk die klok daar teen die muur!

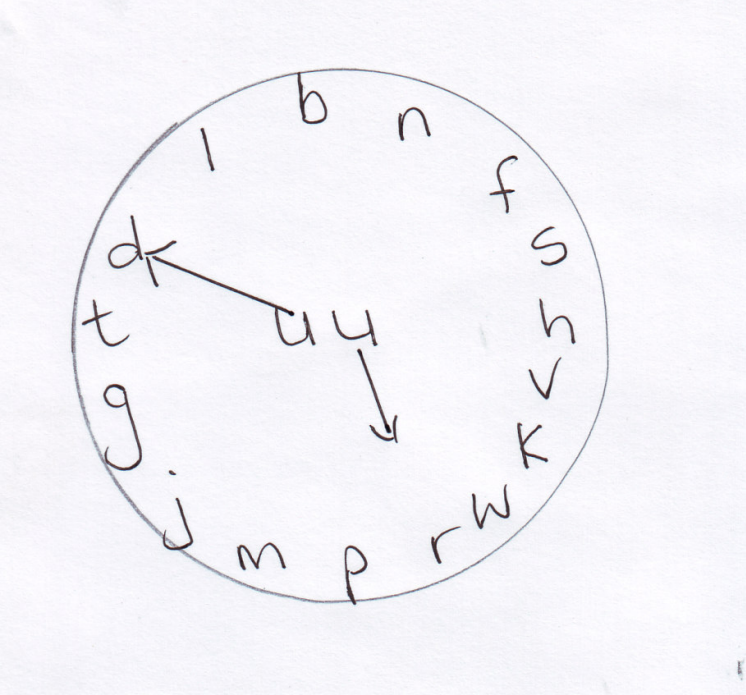
d) The poem was set to music and while the learners listened, the song was sung to them by the educator.

Exhibit 7.19 Teen die muur



e) The learners were introduced to a clock chart with the letter sounds on the periphery of the circle and the */uu/* sound in the middle of the clock. The hands of the clock indicated the beginning and end sounds of a word that they had to compile. This exercise was introduced in order to establish phoneme awareness skills by segmenting and blending of phonemes.

Exhibit 7.20 Word-clock



f) The purpose of the following exercise was to develop auditory discrimination and concentration skills. This was made possible by using triangles, tambourines and bells while the learners had to play on each word of a poem followed by the rhythm sticks to represent the "tick-tock" sound rhythm of a clock in a steady beat. This then ended the session.

Die klokhorlosie teen die muur, ***(learners act: tiek-tok)***

vertel ons van die uur.***(learners act: tiek-tok)***

Terwyl die wysers mekaar skuur,**(learners act: tiek-tok)**

vertel hy ons van die uur.***(learners act: tiek-tok)***

Mamma se gesig is suur,***(learners act: tiek-tok)***

kyk die klok daar teen die muur!***(learners act: tiek-tok)***

Session 11-21 May 2009

Purpose of session

The purpose of this session was to introduce the long /oo/ sound. The learners had to concentrate on:

- eye movement;
- concentration;
- listening skills;
- fluency; and
- rhythm.

Procedure of session

a) While listening to rhyming words, the learners indicated the /oo/ sounds' appearance at the end of each line by pointing at them. The learners had to familiarise themselves with the words, after which they clapped every time they got to the /oo/ sound words.

Oom Soon

Oom Soon sit in die boom,

toe breek die boom

toe val oom Soon

en breek sy toon,

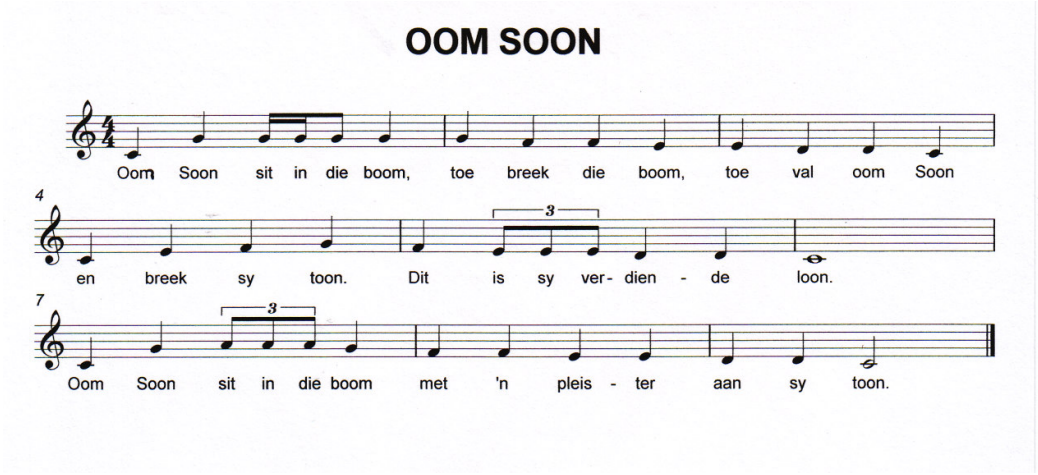
dit is sy verdiende loon.

Oom Soon sit in die boom

met 'n pleister om sy toon

b) The words of the poem was set to music and the learners sang the song together while reading the words from the chart.

Exhibit 7.21 Oom Soon



The following English words may be used as replacements for the Afrikaans words: soon, moon, broom, groom.

b) In this exercise words were replaced by similar rhyming words by using body percussion in a 2/4 steady beat as illustrated in the following activity.

Exhibit 7.22 Rhythm

Clap	Soon					XX	
2							
4							
Slap			XX		oom		

Clap			toon		XX		
2							
4							
Slap	XX					boom	

c) In the following exercise body percussion in a 2/4 steady beat was used with the rhyming words in the poem.

Exhibit 7.23 Words in the poem

Learner	Action	Words in the poem
1and 2	clap	and say the word-"toon"
3and 4	snap	and say the word-"boom"
5and 6	slap	and say the word-"oom"
7	clap	and say the word-"hoor"

d) The purpose of the following activity was to progress to a more advanced exercise in which concentration and listening is the core. Colours were used to indicate the action of the body percussion. As soon as this pattern was established, the coloured words were replaced by non-coloured words.

Exhibit 7.24 Action with words

Learners	Action	Word	Action	Word
1	clap	toon	snap	boom
2	snap	oom	clap	hoor
3	clap	koop	snap	loop
4	snap	ook	clap	soos

e) Having learnt the words and the tune of the song, the learners, while singing the song, accompanied all the /oo/ sound words on instruments. The words with the /oo/ sounds were then isolated from the poem, using 4/4 beat rhythm and the 3/4 beat rhythm followed by the more advanced 2/4 beat rhythm. As indicated in the activity below, the 2/4 beat rhythmic activity, demands quick actions which entails fluent reading.

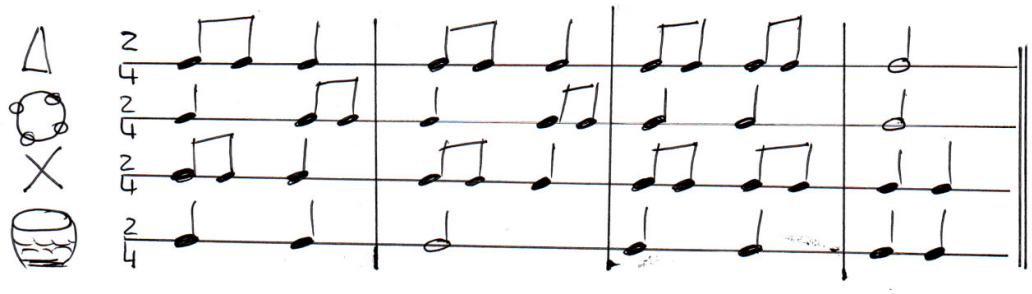
Exhibit 7.25 Rhythmic activity

4	clap	toon	2 3 4	boom	2 3 4	groot	2 3 4
4			X X X		X X X		X X X
3	clap	toon	2 3	boom	2 3	groot	2 3
4			X X		X X		X X
2	clap	toon	2	boom	2	groot	2
4			X		X		X

The learners were required to maintain a steady beat. *The English language learner may use words like spoon, broom, pool, soon.*

As soon as this activity was well established, the learners have to use percussion instruments as indicated below, to reinforce the visual perception together with their auditory awareness skills and when this was well established, the session was concluded.

Exhibit 7.26 Rhythmic pattern:Visual and auditory perception



Session 12 and 13-26 and 28 May 2009

Purpose of session

The purpose of this session was to concentrate on the following:

- in order to enhance visual discrimination and auditory skills in the reading development of learners, a musical concept was introduced using a chart with rhyming words;
- while reading the poem from the chart the learners' eye movement develops;
- listening and concentration with the playing of rhythmic patterns; and
- the learners' reading fluency.

Procedure of session

a) In this session the new sound /ui/ which most Afrikaans speaking learners have difficulty with was introduced. The activities were spread over two sessions in order to establish the musical concepts firmly.

b) The activity concentrated on the sounding of the /ui/ sound by the educator and pronunciation of various words, while the learners then repeated it to enable them to establish the specific sound.

Exhibit 7.27 Visual discrimination with rhyming words

"ui"-klank	**"ui"-klank**
muis	huis
vuil	muil
luis	ruil
vuis	huil
ruik	duif

c) A discussion on the pronunciation of the sound */ui/* was followed by the familiarisation of the two poems below from a chart, which was also set to music.

Kat en muis

'n Kat sê eendag vir 'n muis,

kom speel hier met my in die huis

Nee dankie sê die slimme muis,

by katte voel ek glad nie tuis.

Apestreke

Neusie snuit, mondjie fluit,

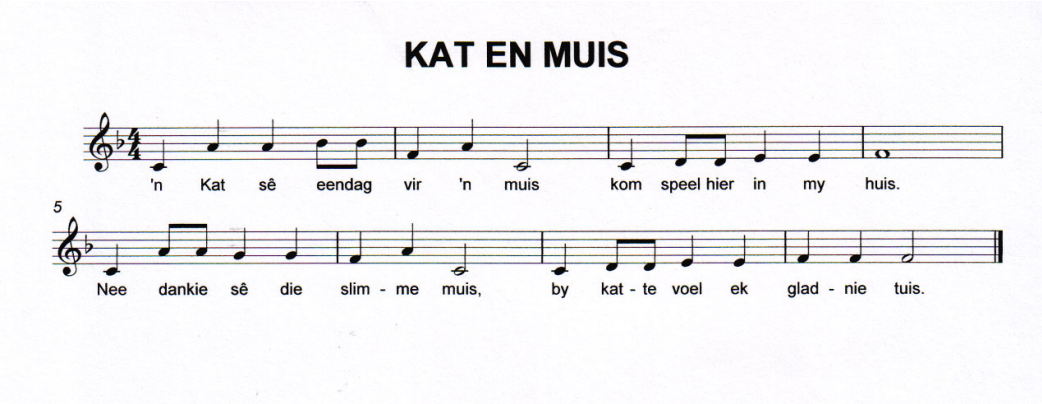
netjies op die aap se snuit.

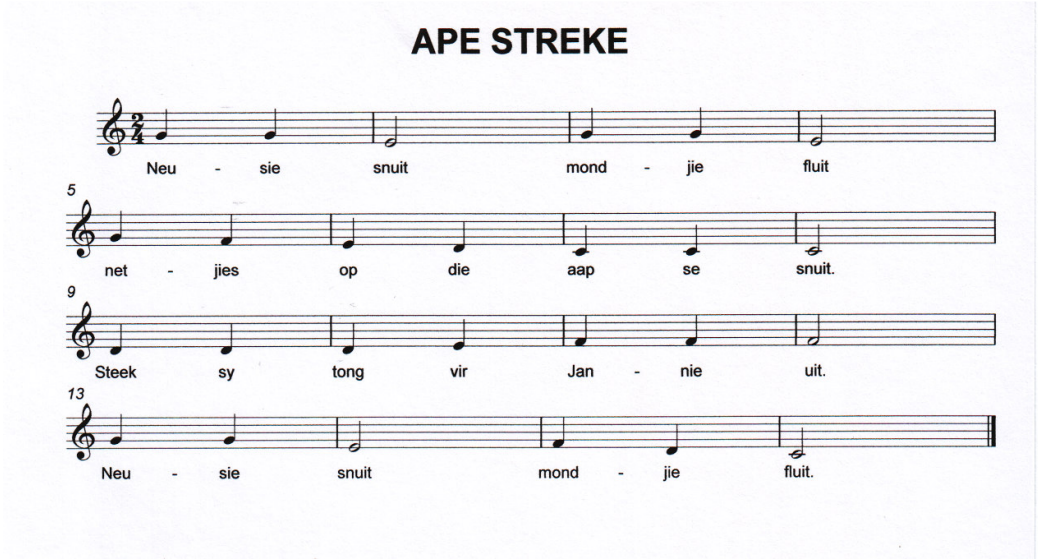
Steek sy tong vir Jannie uit,

neusie snuit, mondjie fluit.

d) After the words of the poem were established, the poem was set to music and was introduced to the learners by the educator. They learned the song while singing along and the learners have to follow with reading the words on the chart.

Exhibit 7.28 Kat en muis/Ape streke





e) The purpose of the following exercise was to develop the learners' concentration skills. Colour-coded words in the activity below were introduced while being pointed out on a chart. The learners had to do the actions indicated. Once the rhythm was established, the learners progressed to a more difficult level without colour-coded instructions.

Exhibit 7.29 Body percussion

1.	klap	muis	klap
2.	snap	huis	snap
3.	slap	tuis	slap
4.	klap	vuis	klap

Activity	Action	Word	Action	Word
1.	klap	muis	snap	huis
2.	snap	tuis	klap	vuis
3.	klap	huil	snap	uil
4.	snap	ruik	klap	duif

f) After a steady rhythm was established, the activity was then transferred to non-melodic instruments such as triangles, rhythm sticks, tambourines and

egg shakers. The learners had to use the instruments instead of the body-percussion together with the reading of the words as above.

g) The purpose of the following activity was to develop eye movement as well as concentration skills which are crucial in learning to read fluently. The learners were divided in groups of two, each group having different instruments as indicated in the activity below. This activity concluded this session.

Exhibit 7.30 Words with instrumental playing

Beat / **Instrument**	**1** (say the word)	**2**	**3**	**4**
Triangle Picture	muis	play	play	play
Sticks picture	huis	play	play	play
Tambourine Picture	tuis	play	play	play
Egg shakers Picture	vuis	play	play	play

Session 14-2 June 2009

Purpose of session

This session concentrated on the following:

- listening and concentration skills;
- auditory discrimination skills; and
- phoneme blending, segmenting and deletion skills.

Procedure of session

All the previous poems and songs were repeated in this session, before the learners moved on to the new sounds introduced in this session.

a) This exercise focused on the /ou/ sound which is a difficult sound for Afrikaans learners to write and spell correctly. The learners read together while the words were followed on the chart.

Nes bou

Kiewiet het 'n nes gebou,

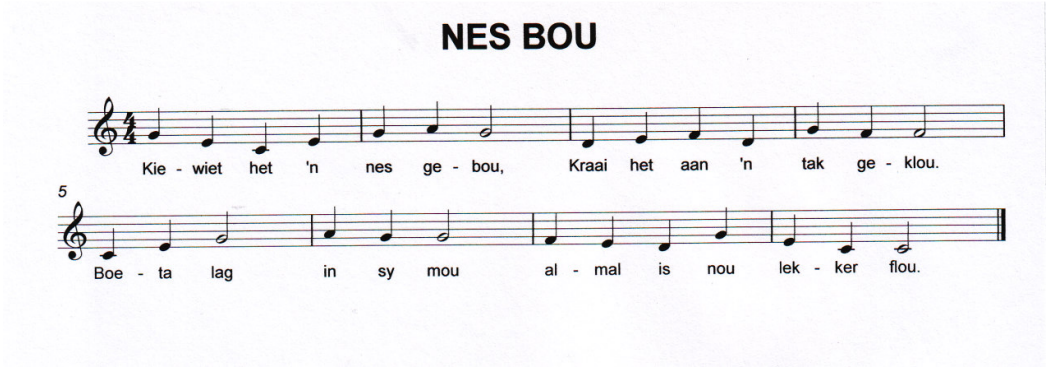
Kraai het aan 'n tak geklou.

Boeta lag in sy mou,

Almal is nou lekker flou.

b) After the learners were familiarised with the words and their rhyming families, the poem was set to music. The learners sang along with piano accompaniment while they followed the words on the chart.

Exhibit 7.31 Nes bou

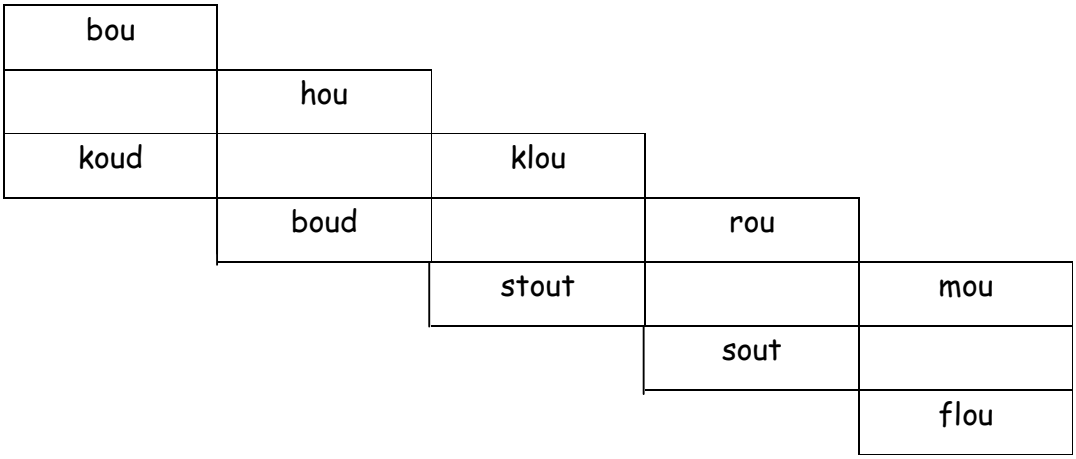


c) The learners were required to replace the words with similar rhyming words. *The letter sound /ou/ is not pronounced the same in English as in Afrikaans therefore the letter combination /ou/ in English is used in words like out, about, round, found, ground, pound, sound.*

d) The learners played non-melodic instruments to a steady beat with piano accompaniment, after the song was well established and while they followed

the words on the chart. As soon as they were familiar with this activity, they sang the song and only played on the rhyming words.

Exhibit 7.32 Rhyming words



e) Percussion instruments were used in a steady beat in the following activity. The learners were required to say the word on the first beat and played on the second and third beats only as indicated in the next activity. The exercise used a 3/4 beat which is a waltz rhythm.

Exhibit 7.33 The waltz rhythm

Picture of Instrument	Word 1	Beat 2	Beat 3
Triangle	boud	x	x
Rhythm sticks	klou	x	x
Tambourines	grou	x	x
Egg shakers	flou	x	x

f) The following activity focused on phoneme awareness skills by blending individual sounds. Learners were asked questions and instructions were given such as: "What word would you have if you put these sounds together

/kl /ou/ ?" The answer should be "*klou*". The learners were required to use *phoneme blending* skills with as many words as possible.

g) *Phoneme deletion*: Learners were asked: "What word would be left if the /*gr*/ was taken away from "*grou*?" The answer should be /*ou/.* An English example is *ground=/gr/-/ound/ or sound=/s/-/ound/.*

h) The last exercise for the session was the blending of sounds as follows: "What word would you get when you blend the following sounds */f/l/ou/?"* The answer should be "*flou".* "What would you get if blend the following */st/ou/t/*?" The answer should be "*stout*". The learners were required to use as many similar words as possible.

Findings through observation

It was interesting to observe the learners' enjoyment of this exercise. This was fun for everyone. They were very relaxed compared with the earlier sessions where all of them lacked confidence.

Session 15-4 June 2009

Purpose of session

The purpose of this session was:

- to introduce the Afrikaans rhyme "Zoem, zoem, zoem" which was used to establish rhythmic sureness. The sound they learned was the /oe/ sound;
- to develop auditory awareness as well as auditory discrimination skills as they played their instruments at the appropriate moment, differentiating between the sounds;
- listening and concentration skills;
- to develop motor skills; and
- to develop reading fluency while reading the instrumental rhythmic patterns.

Procedure of session

a) The poem was introduced to the learners while the words were pointed out on the chart. The learners recited the poem repeatedly until they were familiar with the words (FAK, 1986: 443).

Zoem, zoem, zoem Source: McLachlan (FAK 1986: 443).

Zoem, zoem, zoem, bytjie vlieg alom.

Hy soek al die helder kleure, kanferfoelie, soete geure.

Zoem, zoem, zoem, bytjie vlieg alom.

Zoem, zoem, zoem, bytjie vlieg alom.

Suig die sappies uit die rosie, bloeisel van die appelkosie.

Zoem, zoem, zoem, bytjie vlieg alom.

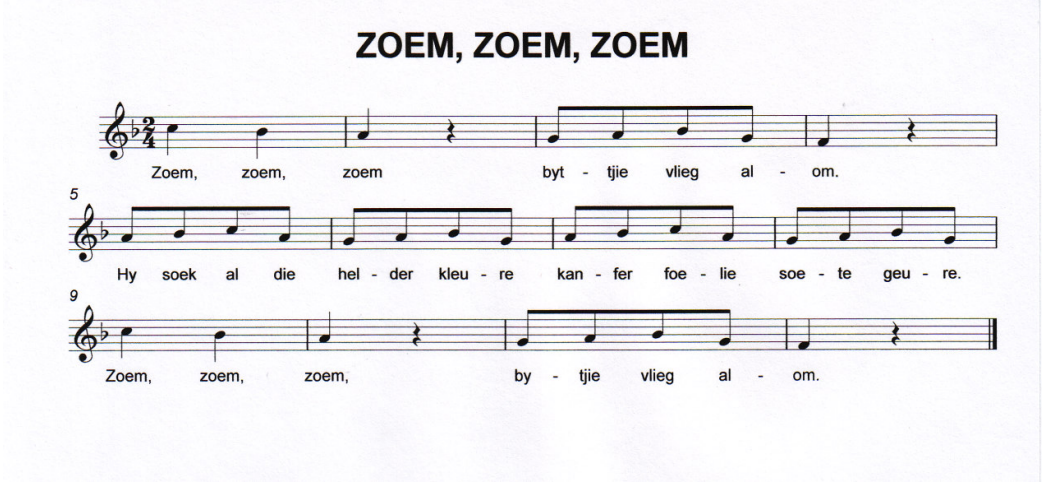
Zoem, zoem, zoem, bytjie vlieg alom.

Uit die blomme fris en fleurig maak hy heuning, soet en geurig.

Zoem, zoem, zoem, bytjie vlieg alom.

b) After the words of this poem were well established, the song was introduced to the learners by the educator while they had to listen with concentration. Then it was their turn to learn the song.

Exhibit 7.34 Zoem, zoem, zoem



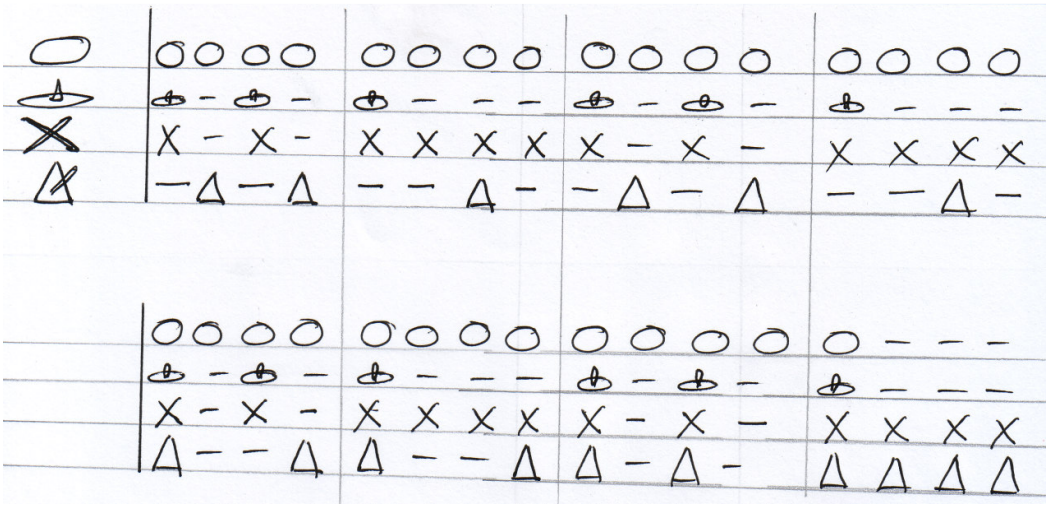
c) Paper flowers were stuck on the walls of the room after which the learners moved about the room, as if flying, touching the flowers and buzzing like bees. While they were moving about, they had to sing along.

d) The rhyme song above became more effective with the addition of instruments. Triangles were used on “Zoem, zoem, zoem”, rhythm sticks on “bytjie vlieg alom” while tambourines were used on the second line of every verse.

e) Once the learners mastered the actions and words, they used the blending and segmenting exercise with the letter cards, with the */oe/* sound words and rhyming words. Letter-cards, with separate letters were handed to each learner and they blend and segment the sounds of the rhyming words.
The equivalent letter-sound in the English language is /oo/, as in book, look, shook.

f) The next musical rhythmic pattern was used while singing the above song: “Zoem, zoem, zoem”. The rhythms were shown by using pictures of different instruments. This ended the session.

Exhibit 7.35 Instrumental rhythm pattern



Observation

Learner: Susan

Susan concentrated well throughout the session. Her blending of letter-sound activities had improved a lot.

Learner: Jack

Jack had shown tremendous improvement in his concentration skills and enjoyed the activities with the instruments. He needed help with some of the rhythm activities but showed improvement in blending of letter-sounds.

Learner: Mary

Mary's self-esteem had developed well. Her letter-sound recognition as well as her rhyming and blending skills had improved satisfactorily.

Learner: Peter

His letter-sound blending had improved a lot and he enjoyed the instrument activities tremendously.

Learner: Willy

Willy familiarised himself well with the letter-sound blending and his concentration skills had improved satisfactorily.

Learner: Fred

Fred had improved a lot in his concentration skills as well as in his confidence. Although he was still talkative during the activities, he waited for his turn and followed instructions. His letter-sound blending had improved satisfactorily.

Learner: Mike

Improvement in Mike's concentration and confidence were observed. His letter-sound blending had shown improvement and he showed less hyperactivity than in past exercises.

Session 16-9June 2009

Purpose of the session

- In order to establish the /oe/ sound more firmly, this session was a repetition of previous activities and concentrated again on the /oe/ sound:
- rhythm;
- listening and concentration;
- visual and auditory discrimination;
- fluency;
- working memory; and
- comprehension.

Procedure of session

a) A new poem was introduced to the learners. They followed the words on the chart while the educator first read the words while the learners had to read the words aloud afterwards.

Koe-ke-doe-del-doe

Haantjie klap sy vlerkies toe,

En sê: Koe-ke-doe-del-doe.

Haantjie waarom tog so vroeg?

Ag ek is tog so moeg.

Eenmaal nog roep ek jul toe,

Koe-ke-doe-del-doe!

b) The poem was introduced line by line, with each line acted out by a different instrument. The purpose of this exercise was to enhance reading fluency, visual and auditory discrimination skills. With the use of instruments, the learners' reading and rhythm were addressed.

Triangle: Haantjie klap sy vlerkies toe,

Tambourine: En sê: Koe-ke-doe-del-doe.

Sleigh bells: Haantjie waarom tog so vroeg?

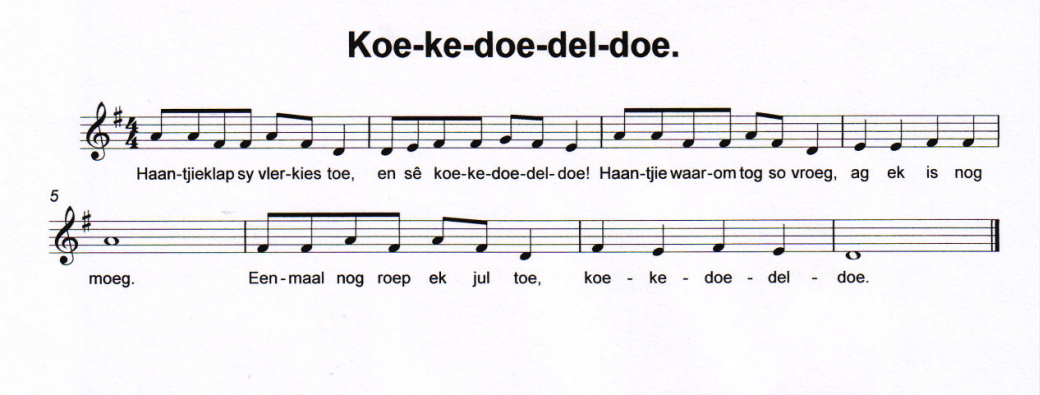
Rhythm sticks: Ag ek is tog so moeg.

Triangle and tambourine: Eenmaal nog roep ek jul toe,

Bells and sticks: Koe-ke-doe-del-doe!

c) Then the poem, which was set to music as a song, was sung by the learners until they comprehended the whole song. In order to introduce the learners with dynamics such as loud and soft, each instrument was played on the end rhyming word according to the picture preceding the word. This also ended the session.

Exhibit 7.36 Koe-ke-doe-del-doe



Picture of triangle***: (softly)*** Haantjie klap sy vlerkies toe

Picture of tambourine***: (loudly)*** En sê: Koe-ke-doe-del-doe !

Picture of sleigh bells***: (softly)*** Haantjie waarom tog so vroeg?

Picture of rhythm sticks***: (loudly)*** Ag ek is tog so moeg

Pictures of traingle and tambourine***: (softly)*** Eenmaal nog roep ek jul toe

Pictures of bells and sticks***:(loudly)*** Koe-ke-doe-del-doe!

Session 17-11 June 2009

Purpose of this session

This session concentrated on:

- The revision of the previous work in order to entrench phonological awareness skills:
- the purpose of the session was to introduce a song with the main purpose of concentration and listening skills development;
- the poem set to music, was the development of auditory sequencing which deals with the ability to reproduce a sequence of sounds in the correct order;
- visual and auditory discrimination development as well as concentration;
- the demand on auditory memory; and
- developing a sense of phrasing in music as well as sentence recognition in reading development.

Procedure

a) The learners had to practice the poem first by reading the words while the educator pointed to the words on the chart.

Ons orkes

Neem jul instrumente daar,

speel dan almal lekker saam.

A) Stokkies speel so tok-tok-ke tok-ke-tok.

B) Tamboeryne klop-klop-pe klop-klop.

C) Tromme slaan rom-te-dom, rom-te-dom-dom-dom.

D) Driehoekies ting-ting-e-ling, ting-e-ling-e-ling.

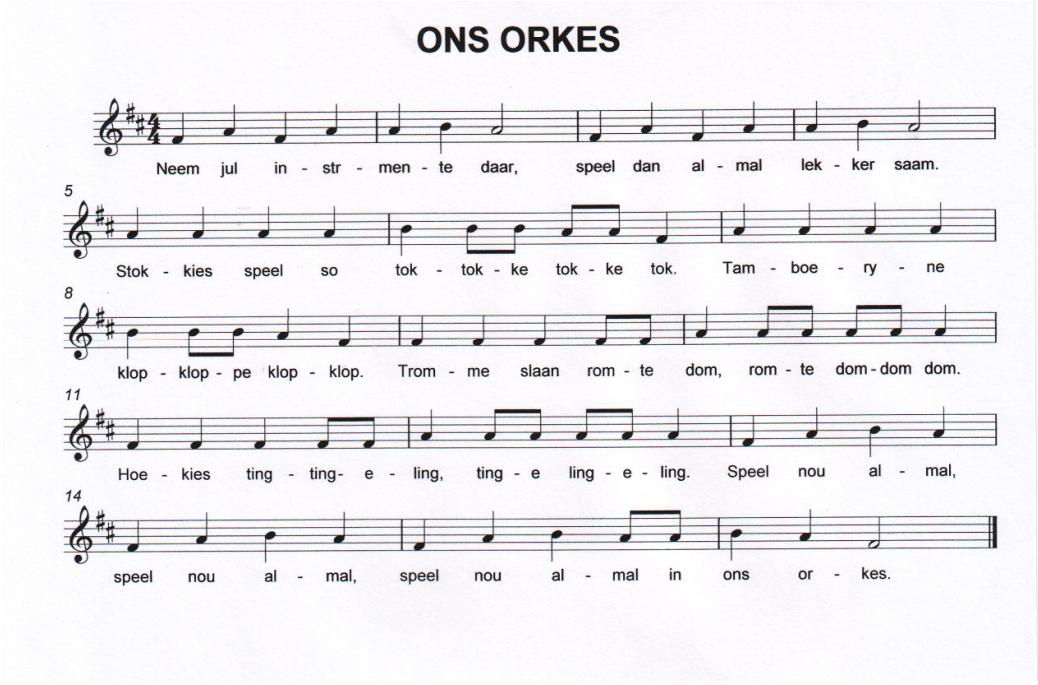
A-C) Speel nou almal, speel nou almal,

speel nou almal in ons orkes.

b) After being well established, the poem, which was set to music, was introduced by the educator who sang it first to them, while the learners listened attentively and followed the words on the chart.

c) The learners were required to repeat this song below with as many instruments as possible.

Exhibit 7.37 Ons orkes



d) The purpose of this activity was to practice the poem, set to music, with different instruments. Learners were divided into four groups, each with a different instrument as indicated in the song: A=sticks, B=tambourines, C=drums and D=triangles. Each learner was required to concentrate on the word which was his/her cue to play.

Learners were required to find rhyming words for the "instrumental-sound-words" in the English poem below.

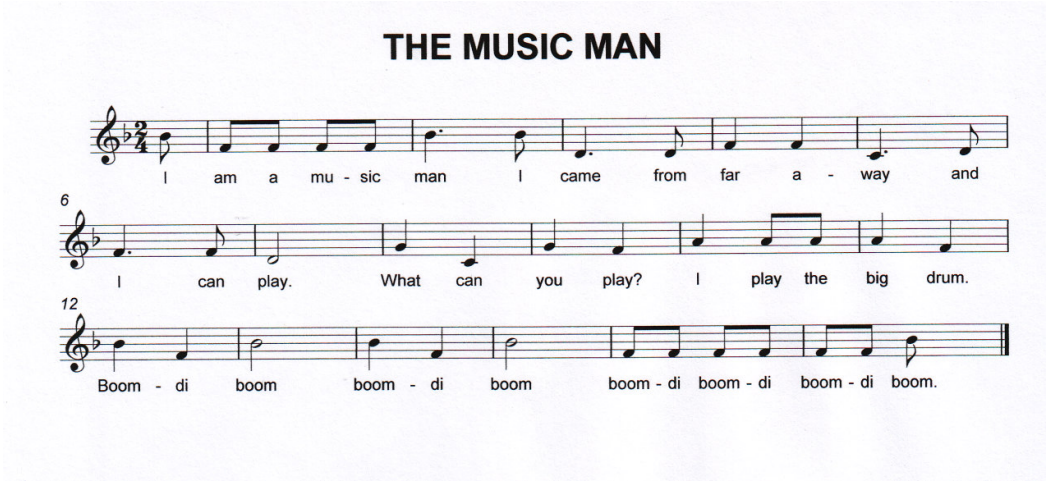
The music man
I am a music man,
I come from far away,
And I can play.
What can you play?

I play the big drum.
Boom-di, boom-di, boom-di-boom,
Boom-di- boom, boom-di-boom,
I am a music man,
I come from far away,
And I can play.
What can you play?

I play the trumpet.
Toot-ti, toot-t, toot-ti-toot.
Toot-ti, toot-ti, toot-toot.

I am a music man,
I come from far away,
And I can play.
What can you play?

Exhibit 7.38 The music man



Findings through observation

This song was used with success in the session. The music story played an integral part in this reading development exercise. It became clear that all the learners enjoyed the music activities. Positive participation from all the learners during the activities was observed. The learners' phoneme awareness skills, memory and their concentration skills showed improvement.

With the reading of rhythmic patterns and the reading of the poems in all the sessions, the learners showed tremendous improvement in their reading fluency skills.

Session 18-18 June 2009

Purpose of this session

The purpose of this session was:

- to provide a story for appreciation- music may provide an important stimulus for reading and story appreciation;
- for the learners to concentrate on story telling as an important tool for reading fluency, sequential skills development and comprehension;
- for the learners to listen to a story and to be able to tell the beginning and end of the story and to be able to use music activities with the story;
- to provide a music story which consists of sequenced events;
- to provide a music activity to reinforce sequencing, while playing non-melodic percussion instruments;
- to established rhythm and rhyming; and
- visual and auditory development.

Procedure of this session

a) The following music story was read to the learners. It was expected that they listen attentively to be able to tell the beginning and end of the story.

The learners have to listen while the educator read the poem. After the poem was read to them, the educator asked a few questions about the poem.

Die drie varkies (Holloway, 1984: 28)

'n Vark en haar seuns woon saam in 'n huis.

Dis hul paleis, hier voel hul tuis.

Die varkies word vetter van al die smul,

Gou-gou is die huis te klein vir hul.

Die oudste varkie sê "totsiens!" Hy gaan vir hom 'n huisie bou.

En as hy klaar is met die huis soek, soek soek hy vir 'n varkie vrou.

Hy bou toe 'n huis van 'n bondel stooi,
Die strooi is rooi en sy huis is mooi.
Maar wolf wil ook in die huis kom woon;
Varkie wil vir hom nie binne nooi.
Die ou wolf gaan staan en hy blaas blaas blaas
Blaas, blaas blaas met 'n groot geraas.
Die strooi trek hier en die strooi trek daar,
Gou-gou is die oudste varkie klaar.

Die tweede vark bou 'n huis van hout,
Van stok en klei sy huis is mooi.
Maar wolf wil ook in die huis kom woon;
Varkie wil vir hom nie binne nooi.
Die ou wolf gaan staan en hy blaas, blaas, blaas
Blaas, blaas, blaas met 'n groot geraas.
'n Stok trek hier en 'n stok strek daar,
Gou-gou is die tweede varkie klaar.

Die derde klein varkie is baie slim
Hy bou 'n baksteen huisie mooi,
Maar wolf wil ook in die huis kom woon.
Varkie wil vir hom nie binne nooi.
Die ou wolf gaan staan en hy blaas, blaas, blaas,
Blaas, blaas, blaas met 'n groot geraas.
Hy blaas so hard maar die huisie hou,
Daardie huis is baie sterk gebou.

Die wolf kom toe op die huis se dak,

Begin met die skoorsteen af te sak.

Die kookwater pot staan onder hom,

Daardie wolf is sommer baie dom.

Die ou wolf skree "Eina! Dit brand so seer!

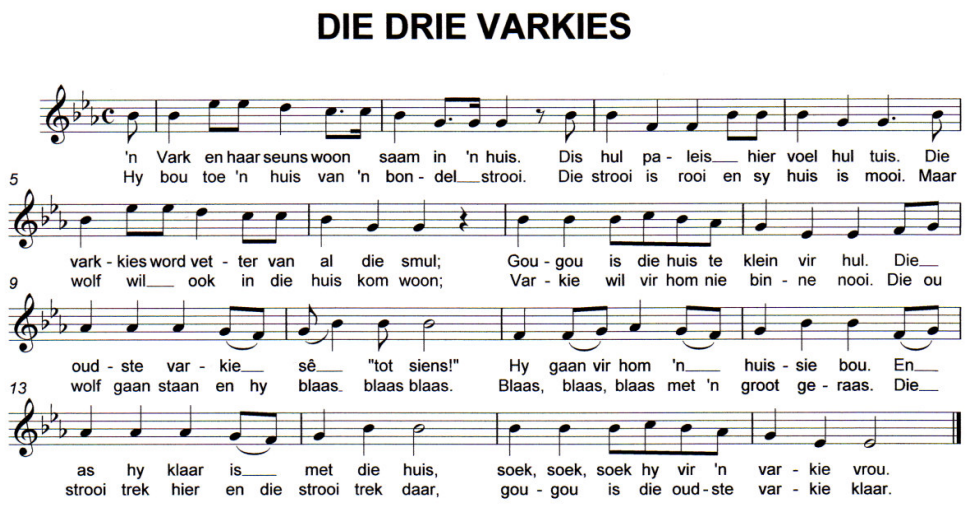
Help my tog ek kom nie weer!"

Hy tjank nog so toe kook hy gaar,

Nou is daardie stoute wolf ook klaar.

b) The reading-story song was sung to the learners by the educator. The learners sang the song several times with piano accompaniment while reading the words from the chart. This is an effective way to teach reading because the words and rhythm have already been learned through the poem.

Exhibit 7.39 Die drie varkies

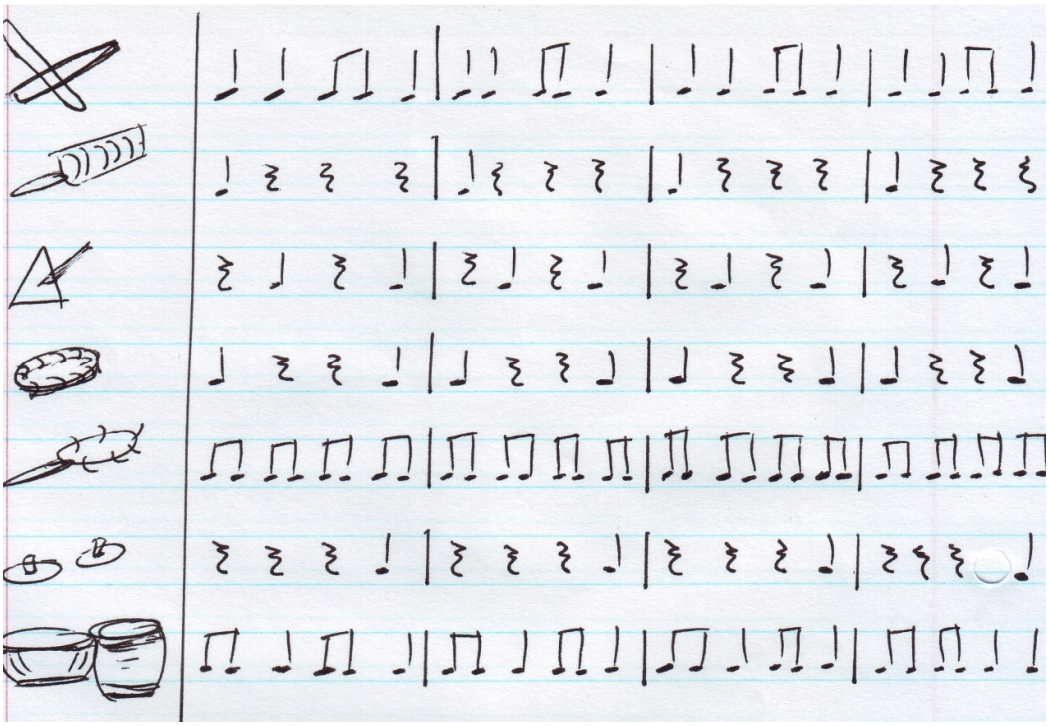


c) While reading the words on the wall chart, learners were required to complete the lines of lyrics with some words omitted from a list of rhyming words from the song.

d) The following activity used the sequencing of instrument playing. All learners sat in a circle holding their instruments:
First learner: “I had a band and in my band there was a drum.” The learner then played his drum.
Next learner: “I had a band and in my band there was a drum and a pair of rhythm sticks.”
The first learner plays the drum and the second learner plays the sticks simultaneously and so on for the remainder of the instrument sounds to the limit of the learners’ ability to memorise. The learners were required to repeat this activity.

e) When a few instruments have been introduced, a small ensemble was formed and some of the songs were orchestrated by the learners. The orchestration was placed on a chart by the educator and the learners were able to read and play along.

Exhibit 7.40 Orchestration



Session 19-23 June 2009

Purpose of this session

- This session focused on the music story:
- the purpose of this exercise was to develop visual and auditory awareness skills;
- listening and concentration
- fluency and comprehension skills; and
- auditory perception and discrimination skills.

Procedure of this session

a) The next poem was introduced to the learners as a story, which the educator first read to them. They had to listen attentively and with concentration.

b) The learners sat quietly in a circle and were required to listen to the story-song after which they read the words together while following the words on the chart.

c) After the poem was repeated the learners sang the song as set out below, together with piano accompaniment

Kamalielies ons is Eskimo's(I.B. Poo, "Three little fishes", 1950).

Kom speel kamalielies ons is Eskimos
En ons woon in Eskimoland.
Ja, kom verbeel jou ons is daar,
Gee my jou Eskimo hand.
Orals sien jy sneeu en ys,
So voel 'n egte Eskimo tuis.
Jy is nou my Eskimo maat,
En ons twee Eskimos moet nou praat.

Refrein:

Ha-ka, ha-ka, hiekie, hiekie, hoekoe, hoekoe hê!

Badja, badja, biedjie, biedjie, boedjoe, boedjoe, bê!

Ma-ka-la-ka, miekieliekie, moekoeloekoe lê!

Dis kamalielies wat Eskimos sê!

Kom ons speel kamalielies ons is Eskimos

Geklee in 'n Eskimo drag, van kop tot tone in 'n pels.

'n Diervel heerlik en sag.

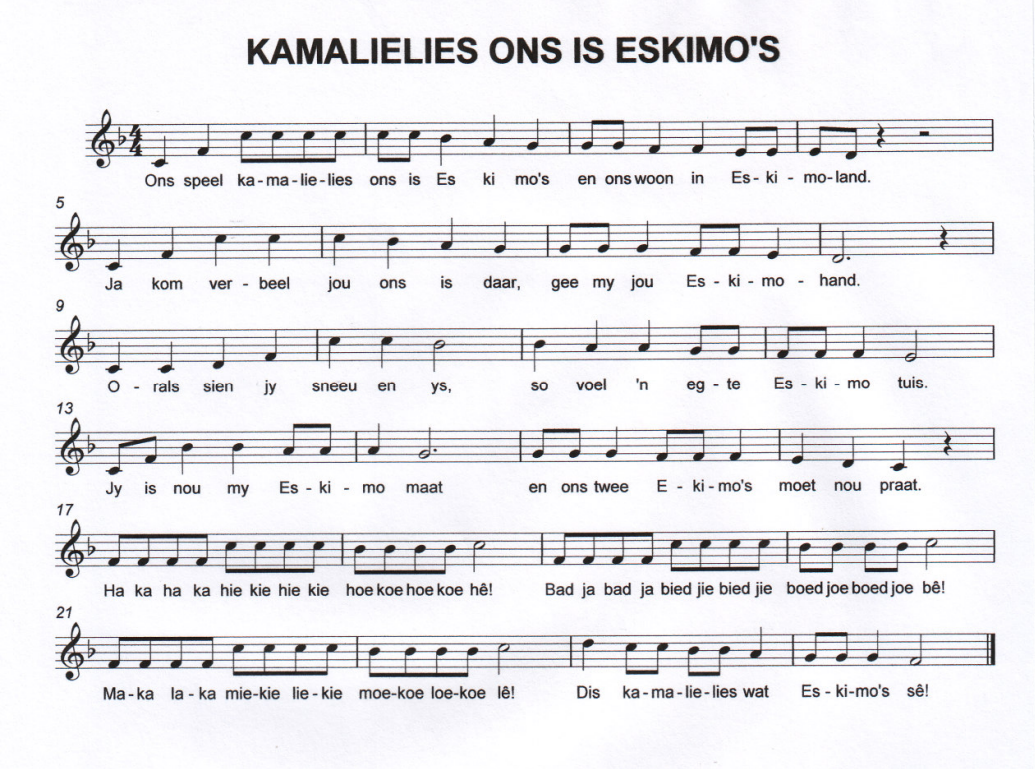
In 'n sakkie op jou rug sit 'n Eskimo baba

Lekker warm in sy pels terwyl hy abba

Die sakkie is oulik, warm en sag

En orals ry die outjie saam elke dag:

Exhibit 7.41 Kammalielies ons is Eskimo's



d) The learners had the opportunity to perform the sounds from the refrain of this song using a variety of percussion instruments. With this activity they explored sound until a more structured way of making sound was introduced to them.

Observation

The learners enjoyed this activity tremendously because of the freedom experienced through creating their own sounds. It was observed that the learners' memory and concentration, as well as visual and auditory discrimination skills had significantly improved. Therefore, the possibility that music may be used as a supportive intervention programme showed potential through these structured and well-planned activities.

Summative assessment

As the intervention sessions with the learners reached its termination, the learners were assessed again by means of the same base-line assessment done prior to the sessions. The results follow with green as pre-test and yellow as post-test results.

Table 7.2 Final test results: base-line assessment

	Learner	1: Very weak	2: Weak	3: Average	4: Excellent
Vocabu-lary: Word knowledge letter reversal, context, de-coding	Susan		Makes letter and word reversals	Context improved	
	Jack	Letter / word reversals	Improved		
	Mary	Confuses words / letter and word reversals	Improved		
	Peter	Letter / word reversals Poor pronunciation		Very good	
	Willy	Letter / word reversals.Poor context / decode skills		Much better context / decode	
	Fred	Letter inversals / word reversals		Phonics improved	
	Mike	Letter / word reversals		Improvement	
Fluency (flow) Pauses, hesitations	Susan	Pauses / hesitates at words		Good fluency	
	Jack	Poor fluency.Hesitates / pauses	Less pauses / hesitations		
	Mary	Long pauses / repetition	Fluency improved		
	Peter	Stumbles / repeats / hesitates		Relaxed	
	Willy	Pauses / hesitates		Positive improvement	
	Fred	Poor context / decode		Confident fluency	
	Mike	Hesitates / pause a lot		Fluency better	
Reading compre-hension	Susan	Poor comprehension	Comprehension / attention		
	Jack	Do not want to read / needs support still			
	Mary	Poor comprehension	Better comprehension		
	Peter	Poor comprehension	Better comprehension		
	Willy	Poor comprehension		Better comprehending	
	Fred	Poor comprehension		Relaxed / comprehension	
	Mike	Poor comprehension	Comprehension		
Audible communi-cation **self-esteem**)	Susan	Shy/low self-esteem	Much better		
	Jack	Low self-esteem	Self-esteem improved		
	Mary	Very low self-esteem	Better self-esteem		
	Peter	Low self-esteem / speech difficulty		Self-esteem improved	
	Willy	Low self-esteem		Self-esteem	

				improved	
	Fred		Talkative / poor concentration	Talks a lot / improved concentration	
	Mike	Low self-esteem / concentration		Needs motivation	
Spelling (Oral/ writing) Phoneme/ Phonics	Susan		Poor phoneme awareness/phonics	Improved	
	Jack	Poor phoneme awareness / phonics	Phonemic / phonics		
	Mary	Poor phoneme awareness / phonics	Phoneme / phonics Better		
	Peter	Poor phoneme / phonics		Phoneme/ phonicsimproved	
	Willy	Poor phoneme / phonics		Marked improvement	
	Fred	Poor phoneme / phonics		Phoneme / phonics improved	
	Mike	Poor phoneme / phonics		Phoneme / phonics improved	

7.3 Results of the intervention programme

The findings confirm the effectiveness of the pilot intervention programme used in the case study. A workable programme, used in the various sessions, was developed which was able to show progress in the phonemic awareness development. This had focused on:

- rhyme;
- syllable units;
- onset and rime;
- phonemes; and
- discrimination of sounds.

The findings of the investigation, based on the seven individuals of the case study, into the use of music and related activities as an intervention strategy for Grade 2 Afrikaans home language learners with reading difficulties are as follows:

- observation and interviews with the class educators, the base-line assessment and summative assessment of the seven learners of this case study showed that there was an improvement in their memory and listening skills;
- auditory discrimination and sequencing skills developed perceptibly;
- spoken language, phoneme awareness, phonics and phonological skills played a critical role in learning to read. The understanding of phonics and the relation between phonics and reading was confirmed;
- learners with reading difficulties benefit from structured phonics instruction that is integrated in a music strategy intervention programme;
- a music intervention programme, using non-melodic instruments showed positive outcomes for the learner because a firm letter-sound relationship is absolutely essential for the young reader, with reading difficulties;
- by applying the new word knowledge, exploring and internalising, with phonics at the core, the learners could gradually achieve greater facility and independence with reading and eventually with writing;
- the structure of the programme made the learners more secure and improved their self-esteem;
- because the sessions were well structured, the learners developed their abilities to acquire a vocabulary and improved their word recognition: Poem recitals, poems set to music using rhyming words as well as the use of short vowels, long vowels and consonant digraphs proved to be useful interventions; and
- variation of activities, within the same framework, created an enjoyable atmosphere, stimulated curiosity and experimentation with language in a purposeful context and kept the contents of the sessions interesting and lively. By providing repeated opportunities for learners to apply the letter-sound relationships through the music activities, enabled them to improve their reading skills.

The learners developed their reading skills through a gradually progressive programme to a level which hopefully will give them an advantage later in

reading fluency activities. It is clear that an early intervention programme cannot be approached superficially, but that a holistic approach which is systematic and integrated is the most advantageous. By implementing a curriculum with an early intervention programme it is possible to provide support to learners with reading difficulties within an inclusive education system.

7.4 Further findings revealed by the programme

The researcher's conclusions at the end of the pilot intervention programme lead to recommendations regarding the application of this programme. Although the programme showed positive outcomes for learners with reading difficulties such as lack of:

- phonological awareness skills;
- phonic skills;
- decoding skills;
- listening skills;
- sound discrimination skills; and
- concentration and memory skills.

- it is recommended that the 19 sessions be increased to 40 sessions and for reasons for continuity that the frequency be increased from twice a week to thrice a week, especially for Grade 2 learners;
- 19 sessions, with a frequency of twice a week may be sufficient for Grade 1 learners who have reading difficulties as they are only in the early stages of reading development;
- the researcher found the lenght of each session, namely 45 minutes, long enough, because of the inherent difficulties of these learners to concentrate;
- this programme has the potential to be used as a reading strategy for a larger group with reading difficulties. For this in-depth study the aim was, however, to gather information on the target learners and

therefore the researcher chose a manageable sample of seven learners as a case study;

- the main aim of the programme was learner-centred and therefore each session was structured and planned a week in advance to enable the researcher to concentrate on gathering information for the session. This included making provision for the repetition of activities, or to reinforce certain developmetal skills; and
- the researcher determined that the purpose, process, phonological activities and music content of all the sessions resulted in successful outcomes.

Motivated by this language-rich environment, the seven participating learners all showed noticeable gains in language development as well as musical and social skills. The research study revealed that the suggested early music intervention programme and related activities are effective as an instruction strategy for learners with reading difficulties.

7.5 Synthesis

The beauty of music and the effect it has on our lives and those who struggle with reading, can only be enhanced, not diminished, by seeking answers to the how's and why's of the utilisation of music.

For learners music is primarily a source through which they may discover new and exciting sounds and ways in which the learners may manipulate it. This correlates with the way a person learns to read, namely through the discovery of sounds (phonemes) and the various ways to use them.

Therefore, the researcher proved the link between music and learning to read to be used as an intervention strategy to enable the learner with reading difficulties to achieve success.

CHAPTER 8

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

The main aim of this study was to investigate the effectiveness of the use of music and related activities as an intervention strategy to address the reading difficulties of Grade 2 home language learners. The question that initiated this study was "How can a music-based programme been implemented as an intervention strategy in the language development process of learners with reading difficulties?"

Research tells us that when learners understand how the sounds of spoken language are blended together to create words, their capacity to learn how to read improves. Furthermore, the best way for learners to learn about how the sound system of language works is to play and experiment with sounds.

8.2 Findings: literature study and application

From information gathered in the literature study, educator interviews before and after the intervention programme, and from observations during the case study of the individual learners combined with the results of the pre- and post-tests, it may be concluded that the following factors influence the reading development, teaching, reading assessment and the early intervention involving young learners with reading difficulties in an inclusive education system.

8.2.1 Spoken language develops through listening skills

It is well established that sound processing in spoken language is a precondition for the development of reading skills (paragraph 2.4). Theorists

such as Mraz et al. (2008: xii-xv); McIntosh et al. (2007: 268); Catts and Kamhi (2005: 3); Snowling (2005: 55) and Muter (2004: 665) have found that research in several fields including cognitive psychology, medical, linguistics and education, has expanded our understanding and knowledge of how learners learn to read and why some learners experience difficulty in reading.

Landsberg et al. (2008: 120) and Yopp and Yopp (2000: 5) agree that the process involved in listening and reading are similar because critical criteria for speech decoding are pitch, loudness and duration which are the primary building blocks of words. They support other theories that the young child has to listen to spoken language and its sound patterns to be able to learn to speak and, ultimately, to read.

According to the studies of Landsberg et al. (2005: 371) and Le Roux (2002: 22) for the young learner to gain increasing control of the ability to read the following listening skills are important:

- auditory awareness of the presence of sound;
- auditory discrimination or the ability to distinguish between certain sounds; and
- auditory sequence and memory or the ability to remember sounds in the correct sequence and to reproduce these sounds.

Le Roux (2002: 96) therefore states that auditory perception is the mental registration of a sensory stimulus and learning to read demands a subtle ability to hear similarities and differences between sounds in order to speak, understand and to read. Auditory discrimination is the ability to differentiate similarities and recognise differences between letters and words that sound similar. To listen to music or participate in musical activities also requires similarity differentiation and sound discrimination. The music intervention programme was based on the core of auditory discrimination skills and specific music activities were used to address these skills.

8.2.2 Maturation

According to Davin and van Staden (2004: 82); Oats and Grayson (2004: 87) and Goldsworthy (2003: 23) maturation is characterised by a fixed order of progression wherein the pace may vary, but not the sequence; the stages at which an infant may learn to sit and walk are influenced by maturation.

Oats and Grayson's (2004: 87) stance is that young infants have to reach a certain level of maturity to be able to produce words, no matter what form or kind of stimulation they had received and what teaching methods were used, it is not possible for a infant to talk at the age of six months. Sound production begins at a certain stage of the development process because the beginning of speech is regulated by maturational development of certain physiological and perceptual capacities. Most of these skills develop during the pre-school stage of the child, before formal learning takes place (paragraph 2.2.3).

This study determined that the degree of maturation of the learner with reading difficulties is significant as is well documented in the relevant literature. Early language development occurs in context with other skills, such as cognition, gross and fine motor coordination as well as social interaction.

All seven participants in the study showed a lack of maturation. The music programme was structurally planned to address the maturation of each learner. Development issues that dealt with every aspect of a learner's reading potential were addressed and there were ample opportunities for a learner's reading potential to be optimised. The various developmental stages of the learners' reading abilities were used as guidelines for the music intervention activities.

8.2.3 Gender differences

This study, in line with that of Landsberg et al. (2008: 130) also determine that boys' physical and cognitive development is often slower than that of girls and

Sousa (2003: 30) reveals that girls' brain development may be advanced by one or two years compared to that of boys of the same age.

Randall (2006: 1) claims that there are differences in the way male and female brains process language. Furthermore, girls have more object names in their early vocabulary than boys. Male brains tend to process language in the left hemisphere, while female brains process language in both hemispheres. The case study included boys and girls, two girls and five boys, to be able to make a comparison between the two genders. The base-line assessments of pre- and post-test, the summative assessment together with the observation as well as the interviews with the educators involved before and after the programme, show that the differences of gender and the outcome of the programme confirms the literature studied.

8.2.4 Environmental, social and emotional factors

Jennings et al. (2006: 24-27) and Landsberg et al. (2005: 28) are both of the opinion that reading difficulties result essentially from either environmental or physical factors or a combination of both. Environmental factors include exposure to language in preschool years.

This study supports the notion of McIntosh et al. (2007: 267) that social disadvantage factors in learners from poor family backgrounds may affect reading skills and knowledge of the learners when entering school. Therefore, reading difficulties may be at risk because academic difficulties are associated with an early delay in language development as a result of the learner's background.

There may be several reasons for the emotional distress when a learner has to read, in the presence of the educator and peers. Educators who have to do with learners who have difficulty in reading must realise the importance of this phenomenon, because reading is a cognitive process with an affective component.

This study provides evidence that learners may experience negative psychological and emotional reactions to reading. This was confirmed by the educators during the interviews. This was also the reason for the initial identification of these learners to participate in the case study. Some learners, who struggled with their reading, believed that no matter how hard they tried, their efforts would only lead to failure. Learners with negative self-schemas may totally lose their self-esteem and willingness to read (Chapter 4). The programme showed positive outcomes regarding the learners' emotional and self-esteem development.

8.2.5 Early indicators of reading problems

Through the interviews with the class educators related to the case study, the identification of the learners with reading difficulties could take place and background information was gathered for each individual. Together with the outcomes of the base-line assessment confirmation of the early indicators of reading difficulties could be established.

Various researchers (Kame'enui et al., 2002: 28) have attempted to describe more specifically the types of reading difficulties shown by learners. Educators must be aware of the different components of the reading process to be able to assess those learners who are in need of and to be able to give support to them.

According to Bursuck and Damer (2007: 4), once learners with reading difficulties are behind in Grade 4, it may take an immense amount of effort and resources to catch up. This is why early intervention is necessary between Grade R and Grade 3 for reading success and this concept forms the basis of this research. Therefore, there is the need to identify reading difficulties by means of properly planned assessment strategies. This has to be done as early as possible in a learner's school career so as to provide the necessary support to lessen, if not to prevent reading difficulties.

The case study confirmed the early indicators of reading difficulties as described in paragraph 4.5. The following indicators were observed in various combinations in the participants in this case study and noted in the individual assessments:

- low self-esteem;
- delay in consonant acquisition;
- difficulties with pronunciation;
- difficulties in learning the letters of the alphabet;
- word construction difficulties;
- insensitivity to rhyme;
- recognising words with similar sounds in the beginning
- recognising words with similar sounds at the end; and
- recognising the number of sounds in a word.

The study was designed to address the above learning difficulty indicators as follows:

- low self-esteem may benefit from experiencing success and enjoyment during the music activities;
- delay in consonant acquisition may be addressed through alliteration music-games and repetition of consonants, onset and rime with the use of non-melodic instruments in various activities;
- difficulties with pronunciation may be addressed by using rhythmic speech patterns as development of auditory awareness, such as using each participant's name in a particular activity;
- difficulties in learning the letters of the alphabet may be addressed by using oral and auditory manipulation of sounds in various music activities for learners to understand that words are built up from individual sounds (phonemes) activities such as sound blending, segmenting and substitution using songs and non-melodic percussion instruments were incorporated in the intervention programme;
- word construction difficulties may be addressed by phonemic awareness tasks such as phoneme isolation, identification, categorisation, blending, segmenting and manipulation with the use of various non-melodic instrumental rhythmic acitivities;

- insensitivity to rhyme may be addressed by the development of listening skills through auditory and sequensing discrimination activities, using sound poems accompanied by non-melodic instruments, music instrumental rhythm activities as well as the inclusion of poems set to music (songs) alternating instruments with corresponding words as well as using body percussion for word replacement by similar rhyming words; and
- recognising words with similar sounds in the beginning as well as at the end and recognising the number of sounds in a word may be addressed by developing auditory awareness and discrimination skills- one of the most crucial skills in phonics development by using sound discrimination activities such as non-melodic instrument activities on which they have to play only on either the beginning or end sounds in words.

All the above-mentioned music activities have listening as the core of the programme. Continuous assessment is necessary to fulfil the main purpose of identification in order to address and support those learners in need (paragraph 4.2.3).

8.2.6 Phonological development in learning to read

The researcher agrees with the findings of De Jong (2007: 145); Mann and Foy (2003: 79) and Sousa (2003: 146) that learners who do not have the necessary phonological awareness skills, have difficulty in reading. Phonological awareness is the individual's awareness of the sound structure of spoken language and is an important requirement for successful reading.

Mraz et al. (2008: 127); Goouch and Lambirth (2007: 19); Spear-Swirling (2007: 302); Gray and McCutchen (2006: 325); Catts and Kamhi (2005: 42) and Torgesen (2002: 6-27) note in their studies that there are several fundamental principles in early reading that a learner has to master for developing effective reading skills while, failure to master these during the first

couple of years of reading may result in reading difficulties. These fundamentals include the following:

- words consist of phonemes;
- phonemes are represented by graphemes;
- phonemes can be represented by one or more letters;
- that there can be more than one way to present a phoneme;
- the phoneme-grapheme correspondence;
- the segmentation which helps with spelling;
- the skill of blending which helps with reading;
- words beginning with same sound;
- isolate and say the first, middle and last sounds of a word;
- combine and blend sounds in a word; and
- be able to differentiate a word into separate sounds.

Gray and McCutchen (2006: 326) postulate that phonemic awareness builds on a learner's ability to perceive and manipulate sounds in spoken words. Struggling learners have difficulty in recognising rhyming words and to segment sounds.

However, educators must realise that a given learner who responds favourably to one instructional system may respond very unfavourably to another, because learners are unique. Therefore, Bursuck and Damer (2007: 48) recommend that educators should select strategies to help learners with reading difficulties to successfully cope with phonemes. These fundamentals were included in the intervention programme and music was used as an alternative.

8.3 Music as an intervention strategy

This study can contribute to other research studies as discussed in Chapter 5, namely that the appreciation of music, which consists of sounds, requires the ability to listen. Similarly, learning to read also requires the ability to perceive sounds. Auditory awareness, auditory discrimination and auditory sequencing

are, among other, important components of listening skills that may be used to enhance the learner's reading ability. This study accepts the notion that because learners learn to discriminate between sounds, they will be able to discriminate between letters that form the foundation for reading.

Diamantes et al. (2002: 114) support the notion that learners' language has rhythm and melody by its nature, which are the same as in music. Music enriches the vocabulary and teaches articulation and pronunciation. Diamantes et al. (2002: 116) also define teaching skills necessary for reading such as left to right progression in reading and writing, phrase reading, rhythmic eye movement and the concrete understanding of terms, which correlate with that of music. More specific in this study, are the activities with the use of percussion instruments to develop reading skills.

Most reading selections have four main components. Word recognition skills, comprehension, reading study skills and literary appreciation. These same parts are also found in song lyrics and can be readily observed in the music intervention programme which forms the heart of this study. Maduale (2001: 4) postulates that the translation of a visual into auditory image is necessary for reading aloud and the reverse for writing. Therefore, phonological awareness is essential in reading and writing and requires a clear perception of the acoustic content of words.

According to research studies by Madaule (2001: 4) rhythm has an important place in the decoding and/or word recognition rather than letter identification. The similar elements of both music and oral or written communication may be used with success to make language and reading more enjoyable and motivating for learners.

Several studies done over a period of time found that music plays an integral role in education and learners' daily activities in order to develop cognitive and physical skills. To reinforce these recommendations, the researcher emphasises the use of music and related activities as an intervention strategy to address phonic skills in learning to read.

8.3.1 Music intervention programme: Conclusion and findings

The researcher determined that listening is the ability to concentrate on sounds in general and on speech in particular with the proposed music intervention programme. Language develops with the auditory input and ends with the formation of a mental concept represented by the word (paragraph 2.4).

Music as an intervention programme was presented in a logical and interesting way. Music helps to facilitate the feeling of accomplishment and improve the self-esteem of the learners. Learners show evident pleasure when they have successfully completed a cognitive demanding activity.

The increasing difficulty of the instrumental play activities in this programme helps immensely to develop the learners' listening and concentration skills, eye movement ability when reading, fluency and comprehension skills as well as stimulating the brain functions involved. This is vitally important for learners with reading difficulties.

The potential of a music-related intervention programme to address reading difficulties may be summarised as follows:

- the learners develop self-esteem;
- there is an improvement in the acquisition of vocabulary and word recognition skills;
- the learners' memory, listening and concentration skills develop positively;
- the learners' auditory discrimination skills improve perceptibly;
- their auditory sequencing skills develop positively;
- their phonemic awareness skills such as sound blending, segmenting and deletion improve noticeably;
- their phonological awareness skills such as syllables, onset and rime improve; and
- the learners' eye movement and reading fluency shows improvement.

It may be concluded that music plays an important role as an early intervention programme.

The following, as set out in the research question were investigated through a thorough literature study and conduction of a case study:

1. The possibility of compiling exercises and guidelines for a music programme to be introduced to learners with reading difficulties in mainstream education.
2. The inclusion of exercises and guidelines in the programme to enable the teacher to cater for the widest possible spectrum of developmental processes relation to reading.
3. A way of compiling guidelines and exercises for: rhyme, onset and rime, phonemes, sound discrimination, phonological awareness, phonics, listening skills, memory, concentration, eye movement, cognitive development and emotional development, in order to ensure an optimal intervention strategy.
4. A way of making provision in the programme for each learner's problems, needs and abilities.
5. The possibility of building a diagnostic and summative assessment component into the programme that would enable the teacher to identify the reading areas as well as the underlying factors causing reading difficulties.

8.4 Concluding marks

8.4.1 Recommendations for educators

To enable the educator to assist learners with reading difficulties in an inclusive education system, educators must know that:

- first of all assessment of reading skills are important to identify those learners with reading difficulties early in their school career;
- phonemic awareness has been identified as a significant predictor of a learners reading success in the initial years of learning to read;

- phonemic awareness instruction is possible and that it may contribute to future achievement in reading and spelling;
- they must provide opportunities for learners to interact within a visual/auditory-rich environment;
- they must provide language activities that focus on the form of spoken and written language together with music as an auditory awareness development programme;
- they must re-think the overwhelming use of visual worksheets instead of more audio-visual instructions in literacy;
- they have to re-evaluate their current stagnant teaching practices; and
- the earlier learners get intervention or support with their reading difficulties, the sooner they will develop to the fullest extent of their capabilities and reach an improved level of reading.

8.4.2 Recommendations for primary schools

It is recommended that:

- ongoing professional and further development in language skills for all the Foundation Phase educators is necessary- professional development influences instructional practices, which in turn affect learner achievement;
- schools must provide facilities for educators who are trained to support learners with reading difficulties as well as the professional teaching of music;
- educators must actively engage in assessing, observing and responding to the learning and development of their learners;
- well-educated and trained educators in reading and music should be accommodated in schools as reading and music therapists, to give support to those learners who need help;
- schools may regularly hold a series of professional development sessions on each of the major components of literacy instruction and the use of music as part of such development; and

- schools must make provision for compensation of support educators, such as music and reading specialists.

8.4.3 Recommendations for the Department of Education

The researcher whishes to make the following recommendations to the National Education Department that:

- special services must be based at schools- there is a need for support and intervention by specially qualified supporters to assist the educators of all primary schools, specifically in the areas of language and music development; and
- the department should adopt a policy that prospective Foundation Phase educators should be trained to specialise in the teaching of reading to be able to use and implement various strategies. This must be grounded in research-based practices.

8.4.4 Recommendations to the parents

Parents are not always sure about how or what to do to help their children with their reading difficulties. Rather than providing parents with a lot of tasks and advice at once, they should gradually be provided with information to build and develop their children's reading skills. The following advice may be useful to parents who wish to assist their children with their reading problems:

- take notice when the child speaks or reads to the parent;
- to use a story and offer an explanation of how to read the story to reinforce the phonemic and phonological awareness concepts;
- the parents should show interest in books;
- parents should sing songs and recite poems with their children and play word games;
- tell the child stories;
- make reading and writing an enjoyable activity at home during free time as well as with their child's homework; and
- to take appropriate action the moment that the educator reports reading difficulties.

8.5 Future research and possible limitations

For future research the researcher suggests the following. These were also found to be possible limitations of this study:

- because a case study was used as research strategy, a limited number of only seven learners could benefit from this preliminary intervention programme. However, the programme may be used in the wider context of an inclusive education system;
- the music intervention programme was introduced at one school and was conducted over one school term due to time-constraints. The ideal for this support programme should be to have it implemented in different contexts or schools, over a longer period of time; and
- further research should be conducted to further develop and evaluate the effectiveness of music as an intervention strategy in learning to read earlier than Grade 2 in the learner's school career and as a follow-up strategy in learning to read in Grade 2.

8.6 Synthesis

This investigation comprises an exploratory study into the need of support to learners in their reading development and how music and related activities may be used to address the reading difficulties of these young learners as an early intervention strategy.

When all educators recognise the value of music as an integral and essential part of the curriculum, we will see more opportunities arising for all learners to be successful. We must begin to use the information at hand from the cognitive sciences.

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ANNEXURE A

INTERVIEW WITH EDUCATOR	
Learner name:	Age:
Physical factors	
Home background	
Social/cultural	
Emotional state	
Reading status: 1.Phonological awareness; 2.Listening skills; 3.Concentration and memory skills; 4.Word knowledge; 5.Reading fluency and comprehension.	

ANNEXURE B

Consent letter

I hereby grant permission that…….in Grade 2, may take part in the intervention programme to enhance reading difficulties.

I, as parent/guardian, am aware that any information that is obtained regarding my child will be regarded as anonymous and confidential and such information will be used solely for research purposes.

……

Parent/gardian